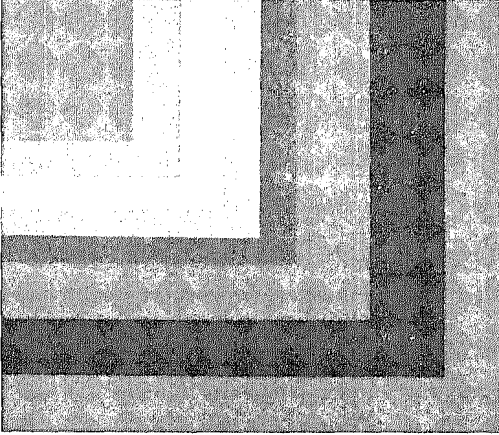


EGIC
39- Um 3Ad
4:983

1982—83 General Catalog

University of Nevada Reno





Univ. Nevada Library

JUL 30 1982

GOVT. PUBLS. DEPT.

Agriculture
Arts and Science
Business
Education
Engineering
Home Econ
Medicine
Mining
Nursing
Graduate Studies

**Catalog
1982-83**



Volume LXXIV

Contents

	Page		Page
General Information	3	Criminal Justice	95
Organization of the University	3	English	95
University Calendar	6	Foreign Languages and Literatures	97
University Terminology	9	Geography	98
About the University		History	99
History	10	Journalism	100
Accreditation	11	Library Science	101
Colleges, Degrees and Majors	11	Mathematics	101
Intercollegiate Athletics	12	Military Science	101
University Research and Services		Music	104
University of Nevada System	13	Philosophy	105
University of Nevada Reno	13	Physics	106
Affiliated Organizations	20	Political Science	107
Federal Agencies	21	Psychology	109
Admission Information		Recreation and Physical Education	110
Application and Requirements	22	Social and Health Resources	111
Credit by Examination	26	Social Work Programs	111
Graduate Requirements	32	Preprofessional Programs	112
Transfer Within University System	32	Health Education Programs	112
Regulations for Determining Residency for Tuition	33	Sociology	113
Registration and Records		Speech and Theatre	115
Advisement	36	College of Business Administration	117
Registration	37	Accounting and Information Systems	119
Student Categories and Classification	39	Economics	121
Grades and Examinations	39	Managerial Sciences	122
Academic Standards and Regulations	41	College of Education	127
Requirements for Graduation	43	Counseling and Guidance Personnel Services	131
Undergraduate Degrees	44	Curriculum and Instruction	132
Transcript of Record	45	Educational Administration and	
Regulations for Student Records	46	Higher Education	132
Fees and Expenses	49	Educational Foundations and Media	132
Student Services and Activities		College of Engineering	134
Counseling and Testing	52	Civil Engineering	136
Housing	53	Electrical Engineering	137
Food Services	54	Mechanical Engineering	138
Jot Travis Student Union	54	Engineering Technologies	139
Student Health Service	55	School of Home Economics	141
Special Programs	55	School of Medicine	146
Financial Aid	56	Medical Technology	146
Veterans Service Benefits	63	Speech Pathology and Audiology	147
Career Planning	63	Four-Year Medical Program	148
Student Government and Organizations	65	School of Mines	152
Interdisciplinary and Special Programs	68	Chemical and Metallurgical Engineering	153
College of Agriculture	76	Geological Sciences	155
Research and Extension	76	Mining Engineering	159
School of Agriculture	76	School of Nursing	161
Instructional Divisions	77	Graduate School	164
School of Veterinary Medicine	87	Course Information	176
College of Arts and Science	88	Course Offerings	177
General Information	88	University Faculty	282
Anthropology	91	Campus Map	312
Art	92	Campus Buildings	314
Biochemistry	92	Index	315
Biology	92		
Chemistry	94		

The UNR General Catalog describes anticipated programs, courses, and requirements, but these are subject to modification at any time to accommodate changes in university resources or educational plans. The catalog does not constitute a contractual commitment that the university will offer all the courses or programs described. The university reserves the right to change programs, courses, requirements, and fees during a student's period of study, to limit enrollments in any course, and to require a student to withdraw from the institution for cause at any time.

The University of Nevada Reno is an Equal Opportunity Employer, and does not discriminate in race, creed, color, sex, age, national origin, handicaps, or veteran's status in any programs or activities which it operates. The affirmative action officer is responsible for coordinating all compliance efforts and for investigating complaints.

The university is authorized under federal law to enroll nonimmigrant alien students.

General Information

Where to write:

(name)
(department)
University of Nevada Reno
Reno, NV 89557

Where to Call: (area code 702)

Directory Information	784-1110	Dean of Students	784-6196
ASUN Office	784-6589	Employment	784-4666
Admissions and Records	784-6865	Continuing Education	784-4851
Athletics/Sports	784-4878	Fees and Expenses	784-6662
Colleges (deans' offices)		Financial Aid	784-4666
Agriculture	784-6611	Graduate School	784-6869
Arts and Science	784-6155	Health Service	784-6598
Business Administration	784-4912	Housing	784-6107
Education	784-6905	Information Office/News Bureau	784-4941
Engineering	784-6925	Scholarships/Awards	784-6827
Home Economics	784-6975	School Relations	784-4865
Medicine	784-6001	Sierra Nevada Job Corps Center	972-5627
Mines	784-6987	Special Programs	784-6801
Nursing	784-6841	Summer Session	784-4062
Counseling and Testing	784-4648	University Events	784-4893



Organization of the University

Board of Regents

Robert A. Cashell (Chairman)	Reno	Lilly Fong	Las Vegas
John R. McBride (Vice Chairman)	Las Vegas	Dorothy S. Gallagher	Elko
James L. Buchanan II	Las Vegas	Christ N. Karamanos	Las Vegas
Frankie Sue Del Papa	Reno	John Tom Ross	Carson City
June Frances Whitley	North Las Vegas		

University of Nevada System

Chancellor, Robert M. Bersi, Ph.D.
 Vice Chancellor for Finance and Administration, Mark H. Dawson, M.S.
 Vice Chancellor for Academic Affairs, Vacant
 Director of Computing Center, Niels H. Anderson, M.B.A.
 Director of University Press, Robert P. Laxalt, B.A.
 General Counsel, Donald F. Klasic, J.D.
 Secretary of Board of Regents and Assistant to Chancellor, Bonnie M. Smotony

University of Nevada Reno

President, Joseph N. Crowley, Ph.D.

Vice President for Academic Affairs, Richard O. Davies, Ph.D.

Vice President for Business, Kenneth D. Jessup, M.S.

Vice President for Public Affairs, Richard T. Dankworth, Ed.D.

Dean of Student Services, Roberta J. Barnes, Ph.D.

Director of Intercollegiate Athletics, Richard M. Trachok, M.A.

University Marshal, Alex di C. Dandini, Ph.D.

Vice President for Academic Affairs,
Richard O. Davies, Ph.D.

Dean of Agriculture, Bernard M. Jones, Ph.D.

Associate Dean, Rupert G. Seals, Ph.D.

Agricultural and Industrial Mechanics, Ronald E. Squires, Ph.D.

Agricultural Communications Service, Lawrence M. Kirk, B.S.

Agriculture and Resource Economics, Gordon L. Myer, M.S.

Animal Science, Charles F. Speth, M.S.

Biochemistry, Ronald S. Pardini, Ph.D.

Integrated Pest Management, Harry G. Smith, Jr., Ph.D.

Plant, Soil, and Water Science, DeWayne Gilbert, Ph.D.

Renewable Natural Resources, Paul T. Tueller, Ph.D.

Veterinary Medicine, R.E.L. Taylor, D.V.M.

Dean of Arts and Science, Paul Page, Ph.D.

Associate Dean, William P. Wallace, Ph.D. (Acting)

Anthropology, Warren d'Azevedo, Ph.D.

Art, Edward Martinez, M.A.

Biology, Edgar Kleiner, Ph.D.

Chemistry, Richard Burkhart, Ph.D.

Criminal Justice, Stan Barnhill, J.D.

English, Robert W. Merrill, Ph.D.

Foreign Languages and Literatures, Eugene Grotegut, Ph.D.

Geography, Christopher Exline, Ph.D.

History, Wilbur S. Shepperson, Ph.D.

Journalism, Robert B. Kaiser, M.A.

Mathematics, Robert N. Tompson, Ph.D.

Military Science, Eldon Perdew, Lt. Col.

Music, Perry Jones, Ph.D.

Philosophy, Thomas J. Nickles, Ph.D.

Physics, William N. Cathey, Ph.D.

Political Science, Leonard B. Weinberg, Ph.D.

Psychology, Willard F. Day, Jr., Ph.D.

Recreation and Physical Education, R. Keith Loper, M.S.

Social and Health Resources, Ellen F. Pillard, M.S.W.

Sociology, Lyle Warner, Ph.D.

Speech and Theatre, David R. Scibert, Ph.D.

Dean of Business Administration, Richard E. Hughes, Ph.D.

Assistant Dean, Dennis George, M.B.A.

Accounting and Information Systems, Stephen Moscové, Ph.D.

Economics, Willem Houwink, Ec.D.

Managerial Sciences, Richard Cotter, Ph.D.

Dean of Education, Edmund J. Cain, Ed.D.

Counseling and Guidance Personnel Services, Keith A. Pierce, Ed.D.

Curriculum and Instruction, Teddy R. Tower, Ph.D.

Educational Administration and Higher Education, Edwin S. Dodson, Ed.D.

Educational Foundations and Media, Charles P. Bartl, Ph.D.

Learning and Resource Center, Allen V. Mundt, M.S.

Reading Center, Paul M. Hollingsworth, Ed.D.

Research and Educational Planning Center, Len L. Trout, Ed.D.

Dean of Engineering, Charles R. Breese, Sr., M.S.

Civil Engineering, Bruce M. Douglas, Ph.D.

Electrical Engineering, Bruce P. Johnson, Ph.D.

Mechanical Engineering, James T. Anderson, Ph.D.

Engineering Technologies, William W. Baker, M.S.

Dean of Home Economics, Donna Beth Downer, Ph.D.

Dean of Medicine, Robert M. Daugherty, Jr., Ph.D.

Associate Dean, Owen C. Peck, M.D.

Assistant Dean for Rural Health, DeWitt C. Baldwin, Jr., M.D.

Anatomy/Laboratory Medicine, Lawrence K. Schneider, Ph.D.

Biochemistry/Pharmacology, Ronald S. Pardini, Ph.D.

Family and Community Medicine, Robert E. Mammen, M.D. (Acting Ch.)

Internal Medicine, Ernest L. Mazzafetri, M.D.

Microbiology, Thomas Kozel, Ph.D.

Obstetrics-Gynecology, William Brenner, M.D.

Pediatrics, Burton Dudding, M.D.

Physiology, J.D. Wood, Ph.D.

Psychiatry and Behavioral Sciences, Ira Pauly, M.D.

Speech Pathology and Audiology, Stephen C. McFarlane, Ph.D.

Surgery, Ralph DePalma, M.D.

Dean of Mines, James V. Taranik, Ph.D.

Chemical and Metallurgical Engineering, Eugene Miller, Ph.D.

Geological Sciences, Lawrence T. Larson, Ph.D.

Mining Engineering, Danny Taylor, M.S.

Dean of Nursing, Marion Schrum, Ed.D.

Dean of Graduate School, John E. Nellor, Ph.D.

Dean of Continuing Education, Neal A. Ferguson, Ph.D.

Assistant Dean, Charles Muse, Ed.D.

Community Development, Adele Somers, Ed.D.

Conferences and Institutes, Charles Muse, Ed.D.

Regional Programs, Edward L. Senner, Ph.D.
Summer Session, Independent Study, Neal A. Ferguson, Ph.D.
Regional English Language Center, Lee Thomas, M.S.

Director of Admissions and Registrar, Jack H. Shirley, Ed.D.
Assistant Director of Admissions, Barry S. Davidson, Ed.D.
Associate Registrar, Charles V. Records, M.Ed.

Director of Communications and Broadcasting, Daniel J. Tone, M.A.

Director of Institutional Studies, Owen A. Knorr, Ph.D.

Director of Libraries, Harold J. Morehouse, M.L.S.
Associate Director, Ruth H. Donovan, B.L.S.
Basque Studies Program, William A. Douglass, Ph.D.

Collection Development Librarian, Milton T. Wolf, A.M.L.S.

Oral History Project, Mary Ellen Glass, M.A.

Public Services Librarian, Anne Edwards

Special Collections Librarian, Robert Blesse, M.A.

Administrative Services Librarian, Dorothy Rice, B.S.L.S.

Affirmative Action Officer, vacant

Vice President for Business,
 Kenneth D. Jessup, M.S.

Budget, Virginia Kersey

Controller, Daniel L. Pease, B.S.

Director of Central Services, John Schuon, B.S.

Director of Personnel Services, Robert D. Jeffers, M.Ed.

Director of Physical Plant, Brian Whalen, B.S.C.E.

Director of Purchasing, M. James Jeffers, Jr., B.A.

Chief of Police, Keith A. Shumway, B.A.

Food Service, Saga Food Service

Vice President for Public Affairs,
 Richard T. Dankworth, Ed.D.

Director of Alumni Relations and Records, Cecelia St. John, M.Ed.

Director of Atmospherium/Planetarium, Arthur W. Johnson, Jr., B.M.

Director of Development, Steven D. Harrison, Ph.D.

Director of Information, Terrie Nault, M.A.

Director of School Relations, Barbara J. Uriu, M.S.

Project Director of Sierra Nevada Job Corps Center, H. Randall Frost, Ph.D.

Coordinator, State Fire Service Training Program, David Stephan, A.S.

Manager, Field Operations, UNR Fire Academy, Royce Beals

Resident Manager, College Inn, C. Vaia

Dean of Student Services, Roberta J. Barnes, Ph.D.

Associate Dean, Robert G. Kinney, Ed.D.

Director of Career Planning and Placement, Harry J. Wolf, M.Ed.

Director of Counseling and Testing, Jack F. Clarke, Ph.D.

International Student Adviser, Kanatur Bhaskara Rao, Ph.D.

Director of Financial Aid, Student Placement, and Veterans Services, William E. Rasmussen, M.Ed.

Director of Health Service, Joseph S. Beres, M.D.

Director of Housing Services, Shirley Morgan

Director of Housing Programs, Vada Trimble, M.Ed.

Director of Special Programs, Ada Cook, M.Ed.

Coordinator Academic Advisement Center, Mena Porta

Research and Public Service

Director of Business and Economic Research, James L. Walker, Ph.D.

Director of Bureau of Governmental Research, Allen R. Wilcox, Ph.D.

Director of Engineering Research and Development Center, John A. Kleppe, Ph.D.

Director of Experiment Station and Cooperative Extension Service, Dale W. Bohmont, Ph.D.

Associate Director, Agricultural Experiment Station, Ralph A. Young, Ph.D.

Director of Nevada Bureau of Mines and Geology and Nevada Mining Analytical Laboratory, John H. Schilling, M.S.

Director of Research and Educational Planning Center, Len L. Trout, Jr., Ed.D.

Director of Seismological Laboratory, Alan S. Ryall, Ph.D.

Affiliated Units

Dean of National Judicial College, Ernst J. Watts, J.D.

Executive Director of the National Council of Juvenile and Family Court Judges, and Dean, National Council of Juvenile Justice, Louis W. McHardy, M.S.W.

Manager, Associated Students, Gary D. Brown

President, Alumni Association Inc., Thomas J. Hall



University Calendar

Fall Semester

1982

1983

Final date for filing:

Application for admission	Th, July 1	F, July 1
Application for readmission following suspension	M, August 23	M, August 22
Returning student application for registration materials	M, August 23	M, August 22
Semester begins	T-Th, August 24-26	T-Th, August 23-25
Residence halls open	T-W, August 24-25	T-W, August 23-24
Orientation and testing new students	Th, August 26	Th, August 25
Advisement for new and returning students	F, August 27	F, August 26
Registration	M, August 30	M, August 29
Registration	M, September 6	M, September 5
Instruction begins	W, September 8	W, September 7
Labor Day recess	M, September 13	M, September 12
Final date for late registration and addition of courses	Sa, October 9	Sa, October 22
Applications for graduation filed with registrar	Th, October 21	Th, October 20
Homecoming	M, October 25	M, October 24
Midsemester class lists filed with registrar	M, November 1	M, October 31
Final date for dropping courses without grades	T, November 2	T, November 1
Nevada Day recess	Th, November 11	F, November 11
Final date for filing late application for graduation	Th-Su, November 25-28	Th-Su, November 24-27
Veteran's Day recess	W, November 24	W, November 23
Thanksgiving vacation	F, December 3	F, December 2
Final date for filing graduate final oral examination reports	F, December 3	F, December 2
Final date for dropping a course or withdrawing from the university	M, December 13	M, December 12
Final date for filing approved thesis or dissertation with Graduate School Office	F, December 17	F, December 16
Final week schedule begins	T, December 21	T, December 20
Instruction ends		
Final grades filed with registrar by 9 a.m. Semester ends		

Spring Semester

1983

1984

Final date for filing:

Application for admission	M, January 3	M, January 2
Application for readmission following suspension	M, January 17	M, January 16
Returning student application for registration materials	M, January 17	M, January 16
Semester begins	T-Th, January 18-20	T-Th, January 17-19
Residence halls open	T-W, January 18-19	T-W, January 17-18
Orientation and testing new students	Th, January 20	Th, January 19
Advisement for new and returning students	F, January 21	F, January 20
Registration	M, January 24	M, January 23
Registration	T, February 1	T, January 31
Instruction begins	F, February 4	F, February 3
Final date for late registration and addition of courses	M, February 21	M, February 20
Applications for graduation filed with registrar	T, March 1	Th, March 1
Washington's Birthday recess	Th, March 17	Th, March 15
Final date for filing late application for graduation	M, March 21	M, March 19
Midsemester class lists filed with registrar	Sa-M, March 26-April 4	Sa-M, April 14-23
Final date for dropping courses without grades	W, April 27	W, April 25
Easter vacation	M-Sa, April 25-May 1	M-Sa, April 30-May 5
Final date for filing graduate final oral examination reports	W, May 4	W, May 2
Mackay Week	W, May 4	W, May 2
Final date for dropping a course or withdrawing from the university	W, May 4	W, May 2
Final date for filing approved thesis or dissertation with Graduate School Office	Th, May 5	Th, May 3
Honors Convocation	Th, May 12	Th, May 10
Final week schedule begins	W, May 18	W, May 16
Instruction ends	F, May 20	F, May 18
Final grades filed with registrar by 9 a.m. Semester ends	Sa, May 21	Sa, May 19
Commencement		

1983 Summer Session

Registration for minisession in Office of Admissions and Records — 8 a.m.-5 p.m.	Monday, May 16
Instruction begins	Monday, May 23
Registration for minisession closes. Last day to add classes or change from audit to credit - 5 p.m.	Tuesday, May 24
Last day to drop minisession classes and receive a refund	Wednesday, May 25
Last day to drop minisession classes or withdraw from the university without a grade being recorded	Friday, May 27
Memorial Day recess	Monday, May 30
Last day to drop a course or withdraw from minisession	Tuesday, June 7
Minisession instruction ends. Registration for first term in gymnasium	Friday, June 10
Instruction begins	Monday, June 13
Final grades for minisession due in registrar's office - 5 p.m.	Monday, June 13
Late registration for first term closes. Last day to add classes or change from audit to credit - 5 p.m.	Wednesday, June 15
Last day to drop first term classes and receive a refund	Friday, June 17
Application for August graduation to be filed	Wednesday, June 22
Last day to drop first term classes, change from credit to audit, or withdraw from the university without a grade being recorded	Wednesday, June 29
Final date for filing application for August graduation	Friday, July 1
Independence Day recess	Monday, July 4
Last day to drop a course or withdraw from first session	Monday, July 11
First term instruction ends. Registration for second term in gymnasium	Friday, July 15
Instruction begins	Monday, July 18
Final grades for first term due in registrar's office - 5 p.m.	Monday, July 18
Late registration for second term closes. Last day to add classes or change from audit to credit - 5 p.m.	Wednesday, July 20
Last day to drop second term classes and receive a refund	Friday, July 22
Final date for filing graduate final oral examination reports	Friday, July 29
Last day to drop second term classes, change from credit to audit, or withdraw from the university without a grade being recorded	Wednesday, August 3
Final date for filing approved thesis or dissertation with Graduate School Office	Friday, August 12
Classes in session	Saturday, August 13
Last day to drop a course or withdraw from second session	Monday, August 15
Second term instruction ends	Thursday, August 18
Final grades for second term due in registrar's office - 5 p.m.; Summer Session ends	Friday, August 19



1982

JAN							FEB							MAR							APR							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
					1	2		1	2	3	4	5	6		1	2	3	4	5	6						1	2	3
3	4	5	6	7	8	9	7	8	9	10	11	12	13	7	8	9	10	11	12	13	4	5	6	7	8	9	10	
10	11	12	13	14	15	16	14	15	16	17	18	19	20	14	15	16	17	18	19	20	11	12	13	14	15	16	17	
17	18	19	20	21	22	23	21	22	23	24	25	26	27	21	22	23	24	25	26	27	18	19	20	21	22	23	24	
24	25	26	27	28	29	30	28							28	29	30	31				25	26	27	28	29	30		
31																												

MAY							JUNE							JULY							AUG						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1		1	2	3	4	5						1	2	3	1	2	3	4	5	6	7
2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31	29	30	31				
30	31																										

SEPT							OCT							NOV							DEC								
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		
				1	2	3	4						1	2		1	2	3	4	5	6					1	2	3	4
5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11		
12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18		
19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25		
26	27	28	29	30			24	25	26	27	28	29	30	28	29	30					26	27	28	29	30	31			
							31																						

1983

JAN							FEB							MAR							APR						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1		1	2	3	4	5		1	2	3	4	5						1	2		
2	3	4	5	6	7	8	6	7	8	9	10	11	12	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19	14	15	16	17	18	19	20
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28						27	28	29	30	31			24	25	26	27	28	29	30
30	31																										

MAY							JUNE							JULY							AUG						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7		1	2	3	4	5						1	2	1	2	3	4	5	6		
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30	28	29	30	31			
														31													

SEPT							OCT							NOV							DEC						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3						1	8		1	2	3	4	5					1	2	3	
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31
							30	31																			

University Terminology

ASUN—Associated Students of the University of Nevada.

Admission—Formal application and acceptance as a regular student in a degree program.

Adviser, advisee—The adviser is the faculty member assigned by the university to assist each student in planning the proper academic program. The student is called the adviser's "advisee."

Audit—To take a course without credit and grade. A course audited can never be used for credit.

Corequisite—A course required to be taken simultaneously with another.

Course—A particular subject being studied—thus, a course in English.

Credit—The numerical reward received for completing a course. It is described in semester credit hours, and is defined as 3 hours of work per week for one semester. Usually this work is made up of one period in class plus 2 hours of preparation for lecture-seminar classes, or 3 hours of laboratory classes.

Curriculum—The total group of courses required for a degree.

Department—A part of a college which offers instruction in a specific area of knowledge.

Extracurricular—Those activities which are part of student life but are not part of the regular course of study, such as debate, dramatics, and athletics.

Fee—A charge which the university requires for services provided, such as a music fee paid for private lessons.

Freshman on Probation—A regular, undergraduate, Nevada resident who does not satisfy the freshman admission requirements.

GPA—Grade point average.

GSA—Graduate Students Association.

Grade Points—Grades are evaluated in terms of quality points. For each credit of A completed, four grade points are earned; for each credit of B, three grade points; for each credit of C, two grade points; for each credit of D, one grade point; and for each credit attempted of F, zero grade points. In order to be graduated, a student must have an average of two grade points for each credit attempted for regular letter grades, including all courses which are failed or repeated.

Graduate Special—A regular, graduate student who is not seeking a degree.

Graduate Standing—Regular, graduate, degree-seeking student status.

Graduate Study—Work beyond the bachelor's degree, usually toward a master's or doctor's degree.

I.D. Card—Identification card.

Incomplete—The I is not a grade. It is a mark which is given when a student has been performing satisfactory work, but for a reason beyond the student's control has been unable to complete the required work for the course.

International Student—An individual who is attending on a student visa.

Load—The total credits for which a student is registered in any registration period. The normal undergraduate load is 16 or 17 credits, also called a program of study.

Major—The subject or field of study in which a student plans to specialize. A plan to specialize in mathematics would be to major in that field. To specialize in two such subjects is called a double major. In some curricula the major with related areas of study is called a field of concentration.

Nondegree Student—An individual who is not officially admitted to the university. Registration is limited.

Prerequisite—The preliminary requirement which must be met before a certain course may be taken.

Probation—A status of trial for a student whose work or conduct is unsatisfactory. A student on probation may be suspended if his academic performance does not improve.

Registration—The act of enrolling in classes, usually at the beginning of a semester. This involves choosing classes with the help of the adviser, completing all registration forms, paying all fees, and filing the forms with the registrar.

Regular Student—A degree-seeking student who is officially admitted to the university.

Required Subjects—Those subjects which are prescribed for the completion of a particular program. The student has some choice in the elective subjects; the required subjects are determined by the college.

Resident Alien—A student attending as a permanent immigrant who has not attained U.S. citizenship.

Schedule, Class—The list of courses and sections offered, together with the names of the teachers, the days, hours, and locations of classes.

Schedule, Student—A listing of the courses which the student takes each semester. It is also called a program of study.

Semester—Fifteen weeks of instruction including final examinations.

Transcript—A certified copy of the student's permanent academic record on file in the Office of Admissions and Records listing each course and the final grade received.

Tuition—An additional charge for regular instruction and is required only of nonresident students.

Undergraduate—A student who has not yet obtained the bachelor's degree.

Withdrawal—The act of officially leaving the university. Students may also drop individual courses without withdrawing from the university.



University of Nevada Reno

The University of Nevada Reno (UNR), one of seven institutions within the University of Nevada System, is located in the city of Reno in north-western Nevada.

The University of Nevada Las Vegas (UNLV) is near the metropolitan center of Las Vegas in southern Nevada.

The four community colleges consist of Clark County Community College in North Las Vegas, Northern Nevada Community College in Elko, Truckee Meadows Community College in Reno-Sparks and Western Nevada Community College in Carson City.

The Desert Research Institute (DRI) is located at its north Reno site and at the Stead facility of UNR, about eight miles north of the Reno main campus. It also has special branch operations in southern Nevada.

The University

The University of Nevada Reno is a land-grant institution which offers an opportunity for higher education to qualified applicants, regardless of race, color, creed, handicap, or sex. The university provides an environment where learning may take place both inside and outside the classroom.

The main purposes of the university are the discovery and transmission of knowledge and the development of various ways of apprehending reality.

As a state-supported institution, the university also has an important responsibility to serve society by investigating and discussing problems of the past, the present, and the future in an effort to facilitate intellectual, political, economic, and social growth. To meet this responsibility the university serves as a repository of knowledge as well as a center of independent inquiry and critical thinking.

The Campus

The main campus is located on 200 acres of rolling hills north of the business district of Reno, overlooking the picturesque expanses of the Truckee Meadows.

A blend of the old and the new, the campus is marked by ivy-covered buildings and traditional pillars in a setting of tall elms and sweeping lawns. In what is called the "new" part of the

campus, some of the most modernistic facilities in the state graphically illustrate the university's progress. Together, they offer rich surroundings for the cultural and intellectual development of the student.

The City

Reno/Sparks, cities of approximately 200,000, are bounded on the west by the majestic Sierra Nevada, and on the east by the rolling basin and range province. The climate is cool and dry, and is marked by the full pageant of the seasons.

A mixture of metropolitan and quietly provincial, the area is noted on the one hand for its fashionable hotels and tourist attractions, and on the other for its beautiful parks, which line the Truckee River, and its modern residential areas.

Recreational activities abound, both in Reno and its environs. Within an hour of the campus, for example, a student can drive to the Lake Tahoe resort area in the high Sierra or to the unique prehistoric desert sea, Pyramid Lake. The adjoining Sierra is also the site of a number of nationally famed ski areas, including Squaw Valley, site of the 1960 Winter Olympics. Other scenic attractions include Virginia City, setting for one of the West's richest mining bonanzas, and Genoa, the state's first pioneer settlement.

History of the University

Established by the Nevada State Constitution of 1864, the year of the state's admission into the Union, the university actually began work in 1874 in Elko as one of the rare preparatory higher schools in the intermountain region. In 1886, the university was moved to Reno, near the center of the state's population. College-level study formally began in 1887.

The University Today

In its long history as a functioning institution of higher education, the university has grown into full-fledged status among the nation's universities, noted in particular for the academic quality of its faculty and the progressive nature of its research programs.

The university offers baccalaureate study in the colleges and schools of Agriculture, Arts and Science, Business Administration, Education, Engineering, Home Economics, Medicine, Mines, and Nursing. Graduate degrees are offered by each college and school. Additional instructional units include Continuing Education and Summer Session.

While the university has grown steadily by every standard, it is still a comparatively small, personalized institution. The student is offered personal contact with every form of higher education.

Accreditation

The university is fully accredited by the Northwest Association of Schools and Colleges, official accrediting group for most western states. This formal stamp of academic excellence was first earned by the university in 1938 and has been regularly renewed.

In addition to the Northwest Association accreditation, there are numerous university programs which are also accredited by their national professional accrediting associations. These include the American Assembly of Collegiate Schools of Business, the American Chemical Society, the American Council on Education for Journalism, the American Psychological Association, the National Council for Accreditation of Teacher Education, and the National League for Nursing. In addition, selected programs in Engineering and Mines are accredited by the Accreditation Board for Engineering and Technology as noted in the individual college sections. The university is also a member of many national professional associations.

Degrees and Majors

The university offers major fields of study leading to associate, baccalaureate, and advanced degrees through the academic departments in the various schools and colleges.

Specific degrees are listed in the Registration section.

Options within majors are described in the college and departmental sections.

The majors offered are:

Agriculture: Agricultural and resource economics; agriculture; animal science; biochemistry*; industrial mechanics; integrated pest management*; plant, soil, and water science; renewable natural resources; and veterinary science.

Associate degree programs include agricultural mechanics, farms and ranch management, and ornamental horticulture.

Arts and Science: Anthropology, art, atmospheric physics,* biochemistry,* biology, botany, chemistry, criminal justice, English, French, geography, German, health education, history, journalism, mathematics, music, music applied, music education, philosophy, physical education, physics, political science, predoctoral, prelegal, psychology, public administration and policy,* recreation, social psychology, social work, sociology, Spanish, speech and theatre, speech communication,* teaching of English,* theatre,* and zoology.

Business Administration: Accounting, business administration,* economics, finance, management and marketing. (Law school preparation may be obtained in all four-year majors.)

Education: Art, biological sciences, business education, chemistry, counseling and guidance personnel services,* earth sciences, educational administration and higher education,* educational foundations and media,* elementary education, English, French, German, health education, history, industrial education, journalism, kindergarten-primary, mathematics, music, physical education, physical sciences, physics, political science, recreation, social studies, Spanish, special education, and speech and theatre.

In addition, educational specialist certificate programs are offered in counseling and guidance personnel services, educational administration and higher education, educational foundations and media, elementary education, reading, secondary education, and special education.

Engineering: Civil engineering, electrical engineering, engineering science, and mechanical engineering.

Associate degree programs include electronics engineering technology and the architectural design option of engineering design technology.

Home Economics: Child development and family life, fashion merchandising, food and nutrition, home economics,* home economics in business, home economics education and community service, and shelter and environment.

Associate degree programs include fashion trades and prekindergarten education.

Medicine: Biochemistry,* medicine,* (Medical School class ONLY), medical technology, speech pathology, and speech pathology and audiology.*

*Graduate majors only.

Mines: Chemical engineering, earth science, geochemistry,* geology, geological engineering, geophysics, hydrology and hydrogeology,* metallurgical engineering, and mining engineering.

Nursing: Prenursing, nursing.

Graduate: The master's degree is offered in most areas of study. Doctoral programs are offered in biochemistry, biology, chemistry, counseling and guidance personnel services, curriculum and instruction, educational administration and higher education, educational foundations and media, engineering, English, geochemistry, geology and related earth sciences, geophysics, history, hydrology and hydrogeology, medicine, physics, political science, psychology, social psychology, and sociology.

Interdisciplinary and Special Programs

There are several interdisciplinary and special programs offered, including beliefs and values, computer and information science, environmental studies, ethnic studies, global studies, health careers for American Indians, historic preservation, history and social theory, honors study, hydrology and hydrogeology, land use planning, Medieval and Renaissance studies, museology, National Student Exchange Program within the United States, religious studies, study abroad through the Institute of European Studies, teacher certification, Western Interstate Commission for Higher Education (WICHE), and women's studies.

Additional information is presented in the special section preceding the school and college sections.

Commissioning Programs for the Military Services

The Reserve Officers Training Corps (ROTC) at the university provides an opportunity for men

and women to earn a commission in the United States Army while completing baccalaureate degree requirements. Program information is contained in the Military Science Department section in this catalog. Additional information is available from the professor, Military Science, University of Nevada, Reno, NV 89557, telephone (702) 784-6768.

Intercollegiate Athletics

Intercollegiate athletics has a long tradition at the university and has produced All-Americans, professional athletes, many outstanding coaches, and graduates in a multitude of academic disciplines.

The intercollegiate athletic program offers a variety of team and individual sports for men and women with a commitment to the development and education of the student athlete.

The men's program competes under the auspices of the National Collegiate Athletic Association (NCAA) in nine intercollegiate sports: football, basketball, baseball, track and field, cross-country, tennis, golf, boxing, and skiing. Nevada is a member of the highly competitive Big Sky Conference in all sports except baseball, boxing and skiing. Baseball competes in the Northern California Baseball Association, while boxing competes as a member of the California Collegiate Boxing Conference.

The women's program competes under the principles and philosophies of the Association of Intercollegiate Athletics for Women (AIAW). Sports offered include volleyball, basketball, softball, swimming and diving, tennis, and cross-country.

Involvement in the intercollegiate program at the university is considered a desirable part of the total educational experience.

Additional information about specific sports is available upon request from the Intercollegiate Athletics Office, Gymnasium Building, (702) 784-4878.



University Research and Services

All colleges and schools of the university maintain well-equipped laboratories and special facilities in support of instruction and research.

Relics of the past, samples of the present, and specimens which may unlock secrets in the future are maintained in the several scientific collections and museums on the Reno campus, primarily in the fields of agriculture, biology, and the earth sciences.

The university also operates the Little Valley outdoor laboratory, a gift from Captain George Whittell which is located in the Sierra Nevada. This tract of land encompasses approximately four square miles of natural meadow and forest, and is used for the study of both basic and applied problems in the natural sciences.

In addition, a number of public service and research organizations, including federal and state agencies, are located at the university and are operated in cooperation with or as part of the university programs and facilities.

University of Nevada System

Computing Center

The Computing Center serves the University of Nevada System and all of its divisions.

The center operates a computer network offering interactive and batch processing. Physical facilities of the network consist of a CDC CYBER 171-6 located in Reno linked to a CYBER-73 located in Las Vegas and a DEC VAX 750 located on the North Cheyenne Campus of the Clark County Community College. Remote job entry terminals are located in Getchell Library on the Reno campus, Carson City campus of Western Nevada Community College and the Northern Nevada Community College located in Elko.

Also available for student use are numerous interactive terminals in various campus locations. The center is responsible for providing equipment and consultant services which support the growth of educational, research, administrative and public service computer users.

University of Nevada Press

The University of Nevada Press was established by the Board of Regents in 1961 as a public service

division of the University of Nevada System. Its main purposes are to make a contribution to the history and literature of the state of Nevada and to the West, to stimulate scholarly research and writing by faculty members of the University of Nevada System and by other scholars and laymen, and to enhance the academic reputation of the University of Nevada on the national scene.

Press policy and decision as to publication of manuscripts are coordinated between the administration of the Press and the Editorial Advisory Board, drawn from the Reno and Las Vegas campuses, Desert Research Institute, and the Community College Division.

University of Nevada Reno Academic Services

Communications and Broadcasting

The Office of Communications and Broadcasting (OCB) provides for the coordinated development and utilization of media and educational technology as an integral part of the university's research, teaching, and public service activities on campus and throughout its service areas. The office works with faculty in the design and production of instructional media programs; it operates UNITE, an interactive teleconferencing system which extends university educational programs to rural communities in Nevada; and it operates KUNR-FM, national public radio for Reno. Facilities include photography laboratories, television studio and field production equipment, audio studio and media equipment resource center.

The office also provides an instructional environment for students wishing to learn television production, radio, photography, or other media related skills through independent student projects and classes scheduled through academic departments.

Continuing Education

Continuing Education provides postsecondary educational opportunities for individuals who are interested in furthering their training and preparation in selected areas.

Any individual who is 18 years of age or over, or who can present evidence of high school graduation may register as a nondegree student in

A central extension staff, headquartered on the campus, and a field staff with headquarters in 14 counties constitute the organizational structure of the service. The staff, working with local citizens and groups, plan and carry out informal educational programs to meet the local situations and needs.

The offices of the agents located throughout the state serve as local campuses of the university and provide citizens information about university programs.

Extension programs are financed by an agreement between the United States Department of Agriculture, the state, and the counties, and are consistent with the provisions of federal and state laws relating to extension work.

College of Arts and Science

Bureau of Governmental Research

The bureau is in the College of Arts and Science, as an adjunct to the Political Science Department. It functions as a public policy research and service center for the university as a whole, under an advisory board drawn from related segments of the university.

The bureau serves four primary functions: (1) as a center for stimulation of applied research on public policy by faculty and graduate students, with a catalytic role ranging from advice on project design to supervision of research projects; (2) as a publication outlet for occasional research monographs and shorter studies devoted to Nevada state and local policy issues, plus the regular series, *Nevada Public Affairs Review*; (3) as a study center, through maintenance of a small, specialized library of western regional, state, and local publications, plus selected national publications, which is available to students, faculty, and the general public; and (4) as a liaison between the university and state and local governments as well as public interest groups.

College of Business Administration

Bureau of Business and Economic Research

The research activities of the College of Business Administration are carried on through the Bureau of Business and Economic Research. This bureau collects and disseminates economic data about the state; provides economic and business information to individuals, businesses, and governmental agencies; engages in studies relative to the economic development of the state and its adjoining regions; and encourages and assists research efforts of students and faculty

members. The quarterly *Nevada Review of Business and Economics* and periodic monographs and working papers are published to report on studies and make data available to the public.

Center for Economic Education

The Center for Economic Education carries on curricular and instructional research and development, publication, and in-service teacher training; and provides consulting services and other programs related to the teaching of economics from preschool through adult levels.

Programs are partially funded by grants from the Nevada Council on Economic Education, a nonprofit organization. Services are provided free to Nevada students, teachers, school systems, and the general public.

College of Engineering

Research and Development Center

The Engineering Research and Development Center conducts research in all areas of engineering which have potential benefit to the state and to the nation. The ERDC administers sponsored grants and contracts in the College of Engineering.

Mackay School of Mines

Nevada Bureau of Mines and Geology

The Nevada Bureau of Mines and Geology is one of the public service divisions of the Mackay School of Mines. The bureau was established by an act of the legislature of 1929. The act places the supervision of the bureau with the Board of Regents of the University of Nevada.

The principal purposes of the bureau are to assist the mineral industry in the development and utilization of Nevada's mineral resources, and to provide geological and related data to individuals, industry, and public agencies concerned with activities that involve consideration of geologic features of the state.

Field studies are made of mineral deposits and geologic formations throughout the state to assist prospectors and mining companies in their search for new deposits. Field, laboratory, and library studies are made of the geology of urban areas to provide basic data for agencies, engineers, environmentalists, and others who have responsibility for development planning. Reports pertaining to these activities are published or made available to the public by other means.

The bureau conducts cooperative programs with the U.S. Bureau of Mines and the U.S. Geological Survey, and conducts funded research

provided by scientists, jurists, educators, and other professionals who come to participate in specialized workshops and conferences.

Official admission is not required of students enrolling in undergraduate courses in the summer. The Summer Session student must have graduated from an accredited or approved high school or be 18 years of age and have the ability to do university work.

Official admission to the university is required prior to registration for each student who wishes to enroll in graduate courses.

For further information write to the director for Summer Session.

Libraries

The University of Nevada Reno library system is designed to meet the diverse academic and research needs of the campus' faculty and students. The main collection, housed in the Noble H. Getchell Library, contains approximately 680,272 volumes, 1.3 million microforms and 5,100 current periodicals and newspapers. As part of a land-grant institution, the library also serves as a depository for federal and state government documents and receives publications from various international organizations, including the United Nations, OPEC and UNESCO.

Six branch libraries, located at different points on campus, house specialized collections that support university curricula. These include mines, engineering, physical sciences, life and health sciences, medicine, and the water resources and atmospheric sciences collections of the Desert Research Institute.

Most of the books in the libraries' collections circulate to faculty and students and are renewable if necessary. Periodicals are available for use in the library only.

Specialized services include computerized information searches in nearly 100 databases, inter-library loan, classes in library science, photocopying facilities and access to an audiovisual learning laboratory. The university's film collection is also housed in the main library.

Technological innovations in the library have allowed the acquisition and processing of books to be computerized. Further, a shared system with Washoe County Library allows the computerized circulation of books. Because compatible systems are used by other libraries in Nevada, the UNR Library has become part of a statewide information network, providing speedier and more thorough services to the university community.

Among the library's extensive collections are the Nevada and Great Basin, Basque and Modern

Authors collections. The university is also privileged to have the almost 50,000-volume law library of the National Judicial College located on campus.

College Service and Research

College of Agriculture

Agricultural Experiment Station

The Agricultural Experiment Station, a part of the Max C. Fleischmann College of Agriculture, has been in continuous operation since its establishment in 1888. The passage of the Hatch Act of 1887 and succeeding state legislation provided for the organization of the station.

The majority of the Agricultural Experiment Station staff have joint responsibility with resident instruction programs.

Federal funds are appropriated under the Hatch Act to promote the efficient production, marketing, distribution, and utilization of agricultural products and under the McIntire-Stennis Act to promote the development, protection, and utilization of the resources from the nation's forest and rangelands. Station personnel conduct scientific investigations of wildland management and arid land agriculture to insure a quality environment and a productive agriculture for the future through wise use of our natural resources. These include programs arising from soil conditions, animal disease, internal parasites of animals, production and marketing of agricultural products, insect pests, plant diseases, forest management, land use classification, water quality, range and wildlife habitat management, and the development of improved varieties and strains of plants and animals.

Additional research programs are designed to protect consumer health and improve the nutrition and well-being of Nevada residents; promote community improvement through development of recreation, environment, economic opportunity, and public services; and assist rural families to improve their level of living.

Cooperative Extension Service

The university extends many of its educational services throughout the state through the Cooperative Extension Service. This service includes giving informal instruction and practical demonstrations to Nevada residents in agriculture, home economics, youth, community resource development, and other related subjects.

The number of people requesting and participating in the programs is expanding and includes both rural and urban families.

Physical Plant

The Physical Plant Office provides services for the planning, construction, operation, maintenance, and safety for all university property. In addition, a motor pool is maintained for authorized university activities.

Postal Services

A branch of the U.S. Postal Service (University Station) is located on the ground floor of Jot Travis Student Union. All usual U.S. post office services, except general delivery, are available.

Mail boxes may be rented. Students living on campus must have a post office box to receive mail. Mail addressed to residence halls cannot be delivered and is returned to the sender.

Central Services handles the distribution of incoming and outgoing U.S. mail for the university, and provides the free distribution of campus and intra-state agency mail.

Purchasing

The Purchasing Office provides centralized buying services for the university community.

The property inventory section maintains a computerized listing of all university equipment, and handles the disposal of excess property. This section also processes all university insurance claims, provides for short-term risk insurance for special occasions, and handles the registration and licensing of all motor vehicles and trailers.

A central stores service is located on campus which stocks commonly used office supply items and provides daily deliveries.

The Purchasing Office also manages the real estate for the campus, and the off-campus rental units.

University Police

Emergency Number: 784-6971: The University System Police Department (UNPD) is an agency of the university community. Its purpose is to serve and protect the students, staff, faculty, and all other persons and property within the jurisdiction of that community.

Officers and personnel of the police department are on duty 24 hours a day every day of the year, and their services and facilities are available at all times.

University police have the exclusive responsibility of acting upon law enforcement matters and performing police functions for the University of Nevada System in the Reno area. This area includes the university's Reno and Stead campuses including the Sierra Nevada Job Corps, and the extended installations of the Agricultural Ex-

periment Station and Veterinary Science facility in the eastern part of the Truckee Meadows; the Community College Division; and the Desert Research Institute.

Members of the UNPD are sworn peace officers, performing the same services as those of any municipal police agency. They investigate all crimes and enforce federal, state, and local laws within their jurisdiction, as well as university regulations. The department administers traffic and parking regulations established by the university's Traffic and Parking Board, and maintains a student-employee force responsible for issuing parking tickets.

Officers of the UNPD are among the best trained and equipped in the state. They are graduates of the Nevada Highway Patrol Academy or the Northern Nevada Police Academy. They are also certified emergency medical technicians. Many of the officers hold either associate or bachelor's degrees in the sciences relating to criminal justice, sociology, psychology, community relations, and other public service-related fields. In addition to this extensive training they also attend many short courses and training seminars throughout the year.

Any member of the university community who needs emergency help or medical assistance may contact the police department day or night. The department is located at 1303 Evans Avenue, on the east side of the main campus.

The emergency number, shown above, is the 24-hour dispatch center, which is in direct contact with other emergency centers in the area.

The department's business office is open from 7:30 a.m. to 4:30 p.m. Monday through Friday, telephone: (702) 784-4013.

Public Affairs

Public Affairs is comprised of seven campus/community service-oriented units of the university: Alumni Relations and Records, College Inn, Office of Development and UNR Foundation, Fleischmann Atmospherium Planetarium, Office of Information, School Relations, Sierra Nevada Job Corps Center and the Fire Protection Training Academy. The units are administered by the directors who are responsible to the vice president for public affairs. In addition, the Public Occasions Board is a responsibility of this office.

programs for other governmental agencies. It is also the Nevada affiliate of the National Cartographic Information Service and supplies information on base maps and aerial photography.

Nevada Mining Analytical Laboratory

The Nevada Mining Analytical Laboratory is also a public service division of the Mackay School of Mines. The laboratory was organized at the University of Nevada in 1895, under the provisions of an act of the legislature approved that year. Its object is to assist the mineral industry of Nevada by making identifications and assays of minerals, ores, and rocks taken from within the boundaries of the state by its citizens and by reporting to the senders the results of such identifications or assays, together with the uses and values of the substance submitted.

Seismological Laboratory

Established as a separate research division of the Mackay School of Mines in 1974, the Seismological Laboratory has overall responsibility for instrumental studies of earthquakes in the Nevada region. The laboratory operates a statewide network of seismographic stations, and investigates the distribution of earthquakes, earthquake recurrence statistics, maximum earthquake magnitude, and problems related to seismic risk in Nevada. The laboratory publishes a series of bulletins, listing information on earthquakes analyzed for various periods of time, and serves as a repository of information and exchange of information on earthquake activity in Nevada and adjoining states. In addition to work of interest to the state, the laboratory carries out grant- and contract-supported research on seismic problems of national importance.

Business Services

Business Center North

The Business Center North Office provides system services for accounting, financial reporting, budgetary control, payroll, nonacademic personnel, purchasing and property management for the Desert Research Institute, Northern Nevada Community College, Truckee Meadows Community College, Western Nevada Community College, University of Nevada Reno and the University of Nevada System Office.

Central Services

Central Services, located in the University Services Center on Artemesia Way, provides mail and duplicating services for the university. Offset printing, xeroxing, typesetting, collating,

folding, drilling, perforating, binding, layout, and related darkroom services are available.

Controller

The controller provides a system for accounting, financial reporting and budgetary control and is responsible for the collection and custody of all university funds. Services provided include assistance in the preparation and control of all budgets, investment of all surplus funds and working capital, cashier, accounts payable, payroll, accounting aspects of all grants and contracts, plant funds, endowment funds, student loans, auxiliary enterprise funds and agency funds.

Dining Commons

The university dining commons and snack bar, open to faculty, students, and staff, are located in the Jot Travis Student Union. The Vice President for Business is responsible for the food service program. Charges for food may be adjusted with the approval of the Board of Regents, to conform to current prices.

Student food service regulations are given in the Student Services and Activities section.

Parking

All members of the university community—students, faculty, and staff—are permitted to park their vehicles in specified areas on university property in accordance with the University Traffic Code. Vehicles must be registered and carry official parking permit stickers. Students are required to complete vehicle registration cards during registration. Permits are renewable annually.

Meter parking, visitor parking, and parking for the handicapped are also available in designated areas.

The university traffic code, established by the Traffic and Parking Board, governs all vehicles operated on campus. Vehicles parked in violation of the code are subject to citation and/or impounding.

Permits and parking information are available in the office of the university police.

Personnel Services

Personnel Services administers personnel programs and the employee benefit programs for all university employees including those at Western Nevada Community College, Truckee Meadows Community College, Desert Research Institute and the Chancellor's System units.

State Fire Service Training Program

The statewide fire service training program is administered by the university in cooperation with the State Department of Education. The program is aimed at providing all phases of needed training in the various volunteer fire departments throughout the state. The program provides refresher courses and training concerning current innovations in the operation of fire service in order to give the fire departments in the smaller communities access to educational aids and materials that are not readily available to them now.

The program also coordinates conferences and seminars on fire department management, leadership and supervision, arson investigation, fire prevention, staff and command schools, and related subjects required by professional fire departments throughout the state.

UNR Fire Academy

A comprehensive, year-round schedule of intensive training programs in flammable liquids and gases fire control is operated at the Stead Campus in coordination with the Western Oil and Gas Association. The training is available to public fire service and petroleum industry personnel and offers not only classroom instruction but also field work on practical fire problems.

Affiliated Organizations of the University

Desert Research Institute

The Desert Research Institute (DRI), a division of the University of Nevada System, was established in 1959 by a special act of the Nevada State Legislature to promote specialized research objectives of the system. The institute was activated in October of 1960 with a grant from the Max C. Fleischmann Foundation of Nevada, the largest single private supporter of the institute's program over the past 15 years. The institute is funded largely by gifts, grants, and contracts from private, industrial, and public research supporting agencies.

Organizationally, the president of the institute is responsible to the chancellor of the university system.

The administrative structure of the institute is comprised of five research groups including the Atmospheric Sciences Center, the Bioresources

Center, the Energy Systems Center, the Social Sciences Center, and the Water Resources Center. Offices and laboratories are located at Reno, Stead, Las Vegas, and Boulder City.

The institute's primary research emphasis is in problems particularly relevant to Nevada and the United States. However, it is also involved in several international projects.

The Water Resources Center is one of 51 such centers at land-grant institutions in the United States and Puerto Rico, funded in part under the Federal Water Resources Research Act of 1964. This center's research includes water quality, hydrogeology, social and economic aspects of water resources, hydrochemistry, and systems analysis.

The Atmospheric Sciences Center focuses its research efforts in harnessing environmental sources of energy and in utilizing and protecting the physical environment. Since its beginning in 1960 it has become one of the world's more competent groups conducting studies in the environment of the atmosphere, precipitation, air pollution, cloud physics, and weather modification.

The Social Sciences Center performs research in the historical and social sciences especially as they relate to Nevada and the West. This includes the application of interdisciplinary methods to resolve environmental and research management problems, the development of capabilities to perform techno-economic studies for industry, and to make cost-effective analyses of new processes or new systems developed by DRI. This center continues to conduct archeological and anthropological research in Nevada, and ethnic studies regarding American Indians.

The Bioresources Center's studies concern the critical environment of Nevada and the Southwest and the identification of ecological problems concerning developments in the region. It is working to develop an ecological framework to support regional environmental impact studies and determining the cost-benefit ratios of resource development to environmental damage.

The Energy Systems Center specializes in research and development relating to new energy technologies such as solar, wind, and energy storage. The center is currently housed in a unique solar heated and cooled laboratory in Boulder City, Nevada, just 40 minutes from McCarran International Airport in Las Vegas. The center has capabilities in the area of computer simulation, prototype fabrication, system design and optimization, and testing of energy system components and subassemblies. The center's activities involve transferring new energy technologies from

Alumni Relations and Records

Alumni Relations and Records works closely with the Alumni Association representing the 24,000 plus graduates of the university who maintain contact.

Alumni Association

The University of Nevada Alumni Association, organized in 1895, encourages a lifelong relationship between alumni and their university and works to promote the welfare of the institution.

The association's activities include the operation of regional chapters throughout Nevada and other states, support of a variety of student activities, an annual giving program, and development of programming in the field of alumni continuing education.

The association's communications arm, combined university publication, *UNR Times*, is distributed to alumni on a monthly basis.

Officers and executive committee members are elected annually during homecoming weekend, with membership in the association open to all graduates and those who attended the university for one semester or more.

The association offices are located in Morrill Hall on the Reno campus. Further information may be obtained by writing to the Alumni Office.

College Inn

The College Inn is a 170-room adult residence conference facility with full food service capabilities located immediately adjacent to the campus of UNR. The College Inn was secured by the university through a grant from the Fleischmann Foundation. It serves adult continuing education programs offered by the university, the National Judicial College and the National Council of Juvenile and Family Court Judges.

Development

The Office of Development and UNR Foundation is charged with the coordination, cultivation, solicitation and processing of all private funds and gifts donated to the University of Nevada Reno. The office is staffed by a director who is responsible for (1) directing programs and activities carried out under the auspices of the UNR Foundation; (2) annual fund campaigns with the Alumni Association and the Corporate and Industrial Community; (3) the cultivation and solicitation of major prospects; (4) the coordination of capital campaigns as the need arises; and (5) an ongoing program to promote deferred gifts, wills and bequests. The director is a resource person within

the university and is available to all colleges, schools and departments for consultation and assistance.

Fleischmann

Atmospherium/Planetarium

The Fleischmann Atmospherium/Planetarium, familiarly called the "Space Place," is operated by UNR for the community as a science education/entertainment center. Located at the northern end of the campus, its heart is a domed theater containing a planetarium instrument, a sophisticated array of special effects equipment, and the world's first atmospherium. This is an all-sky motion-picture system that recreates daytime environments into the theater, just as the planetarium shows objects in the nighttime sky. Another feature recently added is the laser light show which features multi-colored laser light projections simultaneously with a wide variety of tape recorded musical selections.

Programs are presented for school groups and the general public throughout the year. In addition, a museum containing exhibits and displays on astronomy, is open daily. Call 784-4811 for a schedule.

Information, Office of

The Office of Information is responsible for university press relations, public affairs programming, promotional publicity, internal information and publications. The office includes the following departments: news bureau, publications and graphics and speakers bureau.

School Relations

School Relations seeks to encourage high school and junior college students to attend UNR and provides assistance to them during the educational planning process through school visitations, campus visits, tours and appointments with faculty.

Sierra Nevada Job Corps Center

Job Corps is a comprehensive and nonresidential program designed to serve the individual needs of each enrollee. The university, through its Public Affairs Office, operates the center. The program provides a comprehensive residential program to prepare youth, 16 through 21 years of age, of all ethnic groups, for meaningful employment and the responsibilities of citizenship. Program support is contributed by UNR academic departments. For information call (702) 972-5627 or write to Sierra Nevada Job Corps Center, P.O. Box 60181, Reno, NV 89506.

Admission Information

General Requirements

Age: Applicants for admission to the university must be at least 15 years of age.

Nondiscrimination: Applicants are not denied admission because of sex, race, color, religion, handicap, or national origin.

Placements Tests: American College Test (ACT) scores are required for freshman admission to the university for use in academic advisement, proper course placement, and for those resident applicants who do not qualify on the basis of their high school records. An applicant who completes the Scholastic Aptitude Test (SAT) and otherwise qualifies for admission is exempt from the ACT requirement. Special testing arrangements may be made for handicapped applicants.

The Foreign Language Placement Test is a special examination required prior to registration in other than a beginning course in foreign languages. This examination is scheduled during the orientation period prior to the beginning of each semester.

A transfer student who has successfully completed freshman-level courses in English, foreign language, or mathematics is placed on the basis of demonstrated achievement.

Admission Filing Dates: Application forms should be submitted with proper credentials not later than July 1 for admission to the fall semester and prior to January 2 for admission to the spring semester.

Application for Admission: Application forms are available in the Office of Admissions and Records. Each individual who is interested in attending the university is responsible for submitting complete admission credentials to the Office of Admissions and Records which become the property of the university and are not returnable. The following credentials are required:

1. A completed Application for Admission, properly dated and signed.
2. A nonrefundable \$5 application fee.
3. An *official transcript*¹ must be sent directly from the high school.
4. If applying with advanced standing, a separate official transcript must be sent directly

¹*Transcript Note:* All academic records must be submitted in the English language. Applicants who are enrolled in other educational institutions at the time of application may submit incomplete transcripts and end-of-course grade reports, but official final transcripts of the work in progress must be submitted before the final admission status may be determined.

from each college or university attended whether credit was earned or not.

5. A photostatic or certified copy of the report of separation from military service if credit is desired.

6. *International applicants* must submit the following additional credentials:

(a) Satisfactory scores on the Test of English as a Foreign Language (TOEFL) indicating an ability to speak, write, and understand the English language sufficiently to pursue full-time study;

(b) Adequate proof of financial responsibility or sponsorship by a reputable United States citizen or organization for all obligations while attending the university; and

(c) A recently completed (within six months) medical history and examination signed by a medical doctor.

Application for Resident Fees: Individuals claiming eligibility for resident fees at the university are required to submit a completed application to the Office of Admissions and Records. Students registering for 7 credits or more who have not proven resident status are charged nonresident tuition.

Admission Evaluation: Each newly admitted student is issued an *Admission Evaluation* which is valid for the registration period requested. Those who do not register at that time must submit the additional credentials necessary to bring the admission file up to date so a new admission decision may be made. Admission credentials for students who do not register are retained for a maximum of one year and then destroyed in accordance with established policy.

Cancellation of Admission or Registration: The university reserves the right to cancel the admission or registration of an individual whose attendance at the university, in the opinion of the appropriate administrative offices and the president, is not mutually beneficial to that person and to the institution.

Individuals who have registered at other educational institutions may *not* disregard such records and make application on the basis of their high school or selected college transcripts.

An ineligible applicant who gains admission to the university on the basis of incomplete or fraudulent credentials or misrepresentations in the written application for admission, shall have his or her:

- Admission and registration cancelled without refund of any fees; and
- Total credits rescinded that have been earned following such admission; and
- Future registration at the university prohibited.

The director of Admissions and Registrar is responsible for the verification of documents and credentials. If it is determined the student sought admission on the basis of incomplete or fraudulent credentials or misrepresentations in the written application for admission, the student is notified in writing of the director's intention to take the above action. The student has ten days thereafter to reply in writing. The director then makes a determination and takes appropriate action, notifying the student in writing. The student may file a written appeal to the president within ten days. The decision of the president is final.

Early Admission

Application by ACT/SAT: A qualified high school student who has completed the junior year may be admitted pending graduation on the basis of ACT or SAT standard scores and the self-reported grades. To be considered, a high school senior must take the ACT or SAT and designate UNR as first, second, or third choice to receive the official score reports.

Admission is offered to Nevada resident applicants who have an ACT composite standard score of 19 or higher, or an SAT combined score of 900 or higher, supported by an ACT or SAT self-reported high school grade point average of 2.3 (A = 4.0) or above. Nonresident applicants are required to have the same ACT or SAT scores supported by an ACT or SAT self-reported high school grade-point average of 2.5 or higher. Applicants whose grade-point averages are B or higher qualify with an ACT composite standard score of 16 or an SAT combined score of 800 or higher.

To accept admission, the applicant must provide all information requested by the Office of Admissions and Records. Upon satisfying the requirements, a certificate of admission is provided with relevant information for planning reference.

In addition, early admission consideration is given based upon an official six- or seven-semester transcript and ACT or SAT scores received in support of the application for admission.

Superior Student Program: High school seniors who have demonstrated above-average achievement through the junior year may qualify for

early admission to register in university courses prior to graduation subject to these requirements:

1. Evidence of an overall grade-point average of 3.0 (A = 4.0) or above after six semesters—the end of the junior year, or 2.5 or above after seven semesters.

2. An American College Test composite standard score of 21 or above or SAT combined score of 950 or above.

3. Be within 3 units of high school graduation.

4. Be enrolled, or approved for enrollment, in the courses that will satisfy high school graduation requirements as certified by secondary school officials. An approved student who ceases attending high school becomes ineligible to continue in university courses. Registration is cancelled upon the recommendation of the principal or counselor.

5. Have a personality showing mature social behavior.

6. Have parental approval and be recommended by the high school principal or counselor.

An approved student is a regular freshman and is assigned a faculty adviser. Registration may be in any courses for which the student is qualified, subject to the approval of the adviser and the department offering the course. A maximum of 6 credits may be earned per semester or during a summer term for a combined total of 18 credits prior to high school graduation. Any exceptions require the advance approval of the director of admissions. University correspondence courses are available to those who cannot attend on campus. Special application forms are available upon request from the Office of Admissions and Records.

Undergraduate Academic Requirements

Admission to Associate and Baccalaureate Degree Programs

The minimum academic requirements for admission to all undergraduate degree programs are the same.

High School Graduate: Each applicant for admission to regular first year or freshman standing must present satisfactory evidence of graduation from an accredited or approved high school. Graduates of nonaccredited or nonapproved high schools who otherwise satisfy the freshman entrance requirements are admitted on probation.

Grade-Point Average: A minimum overall high school grade-point average of 2.3 (A = 4, B = 3,

C = 2) or above is required. All credit courses with grades are included in computing the average.

Recommended Preparatory Subjects: The completion of specific high school subjects is not a requirement for admission. However, each student who plans to attend the university is encouraged to complete the subjects recommended in the chart.

Admission for International Students

The minimum academic requirements for international applicants are:

1. Official evidence of an educational level equivalent to graduation from an accredited American high school.
2. Evidence of above-average ability (B or higher) in an academic curriculum as verified by official transcripts or satisfactory test scores. Applicants who cannot submit official transcripts of

record may obtain specific information upon request from the Office of Admissions and Records.

3. Applicants with advanced standing must submit evidence of above average achievement in their college level courses.

Admission on Probation

Freshman on Probation: Legal residents of Nevada not satisfying the minimum freshman admission requirements who have earned an overall high school grade-point average between 2.0 and 2.29 are admitted as freshmen on probation.

Nevada residents graduating with less than an overall high school grade-point average of 2.0 (C), or Nevada resident applicants over 18 years of age who have not graduated from high school, may qualify for admission as freshmen on probation by submitting an ACT composite standard score of 20 or higher, or a SAT combined score of 925 or higher.

Recommended High School Preparatory Subjects and Minimum GPA Requirements for Freshman Admission

Subjects	Agriculture	Arts and Science	Business Administration	Education	Engineering	Home Economics	Medical Sciences	Mines	Nursing
ENGLISH	4	4	4	4	4	4	4	4	3 or 4
MATHEMATICS Algebra Pl. Geometry Trigonometry	2	1	2	1	3 Algebra 1½ Pl. Geom. 1 Trig. ½	1	4 Algebra Geom.(P & S) Trig. and Computer Sc.	3 Algebra 1½ Pl. Geom. 1 Trig. ½	2 or 3 Algebra 2 Comp. Sc.
SCIENCE Biology Chemistry Physics	3	1	1	1	1 2 units for E.E. to include Physics	1	3	1	2 Chemistry and Biology or Physics
SOCIAL SCIENCE American Government or History	2	2	2	2	2	2	2	2	2
FOREIGN LANGUAGE	0	4 ¹	0	0	0	0	2	0 ²	1

MINIMUM
GRADE-POINT
AVERAGE
REQUIRED

RESIDENT AND NONRESIDENT APPLICANTS MUST HAVE A 2.3 (A = 4.0) GPA OR HIGHER FOR FRESHMAN CLASSIFICATION

RESIDENT APPLICANTS MUST HAVE A 2.0 TO 2.29 GPA FOR FRESHMAN ON PROBATION CLASSIFICATION

¹Four units of one foreign language satisfies the Arts and Science degree requirement.

²Two units for the Earth Science, and Geology curricula.

Freshmen admitted on probation are removed from probation when 15 semester credits or more are earned at the university with a cumulative grade-point average of 2.0 or above.

The freshman on probation classification does not apply to applicants transferring from other educational institutions.

Special Admissions Program: An applicant who does not satisfy the minimum undergraduate academic requirements for admission may apply for probationary consideration through the Special Admissions Program. The maximum number of applicants who may be admitted each year may not exceed 4 percent of the total freshman enrollment for the previous fall semester as published in the official enrollment report.

Each applicant is required to meet the following educational criteria to the satisfaction of the director of Admissions and Registrar:

1. Provide documented evidence of the necessary capability (test scores), readiness, achievement, and motivation to be successful in university-level study.

2. Submit a personal statement of educational goals.

3. Provide two letters of recommendation—one from the university director of Counseling and Testing and the other from the most recent employer.

4. Appear for a personal interview, if requested.

Joint approval of the director of admissions and the appropriate academic dean is required for an applicant to be admitted. Admission is probationary and the regular academic standard regulations apply.

Interested individuals should contact the Office of Admissions and Records for information and the proper forms.

Inadmissible High School Graduate

An applicant who is ineligible for admission upon graduation from high school must complete 15 or more acceptable, baccalaureate-level, semester credits with an overall C average or above to qualify. Credits may be earned at the university as a *nondegree* student during regular semesters or summer session, at another regionally accredited educational institution, or through correspondence courses.

General Education Development Test (GED): The GED Test scores are not acceptable toward satisfying admission requirements.

Admission to Advanced Standing

Advanced Standing: Admission with advanced undergraduate standing is granted to a student transferring from another accredited college or university provided the applicant meets two conditions. First, the applicant must be in good standing at the educational institution last attended; and second, official transcripts must be presented from each college or university attended showing an overall C average or above on all acceptable transfer credits. An applicant transferring to the university with less than 15 acceptable transfer credits is required to satisfy both the transfer and freshman admission requirements.

Applicants from accredited institutions ordinarily are granted credit for all work completed at the previous institutions, provided such courses are equivalent or comparable to those in the curricula offered at the university. Credit is evaluated by the Office of Admissions and Records and granted in accordance with established university regulations and the following guidelines:

1. The regional accreditation of the institution and the listing published in the current American Association of Collegiate Registrars and Admissions Officers "Transfer Credit Practices" govern the acceptance of transfer credit.

2. Elective credit may be granted for individual courses which are not offered in the university program, provided the courses are clearly baccalaureate-level. Joint approval of the dean of the college and director of Admissions and Registrar is required.

3. The specific credit which may be applied toward satisfying degree requirements in the assigned college is determined by the adviser and/or dean of the college.

4. A maximum of 64 semester credits may be accepted in transfer from a regionally accredited two-year educational institution.

5. A maximum of 96 semester credits may be accepted from a regionally accredited four-year educational institution.

6. Credit may be granted for lower-division courses from other institutions which are comparable to university upper-division courses. Such

credit may be applied toward satisfying the individual college's upper-division credit or specific course requirements if approved by the dean of the college concerned.

7. Duplication, excessive credit, or repeated credit is not allowed.

8. Graduates from a one-year professional course in an accredited normal school are granted one year's credit of advanced standing in only the Colleges of Arts and Science, Business Administration, and Education.

9. Graduates from the Federal Bureau of Investigation National Academy are granted a maximum of 8 semester credits which are applicable toward the criminal justice program. Documentation is required for evaluation by the Office of Admissions and Records.

10. A summary of acceptable advanced-standing credits earned at each previously attended institution, and the transfer admission grade-point averages computed relative to the university grading system, are posted to the student's permanent academic record. The credit and grade-point totals earned at UNR are posted separately.

Correspondence Study and Continuing Education: A maximum of 60 semester credits earned in acceptable correspondence study courses completed through a regionally accredited correspondence division [including United States Armed Forces Institute (USAFI) and Defense Activity for Nontraditional Education Support (Dantes)] and/or in extension or off-campus courses may be applied toward a baccalaureate degree. The maximum for an associate degree is 30 semester credits.

Credit for Nontraditional Learning

Examinations

Four types of examinations are approved for earning university-level credit:

1. College Board Advanced Placement Examinations (CBAPE).

2. College-Level Examination Program (CLEP General and Subject).

3. ACT Proficiency Examination Program (PEP).

4. Special examinations administered by university departments.

Placement and entrance examinations such as the ACT Assessment and the College Board SAT

or Achievement Tests are not considered for any award of university credit. An individual who scores in the upper 25 percent on these tests (75 percentile or higher on national college bound norms) is encouraged to consider the advantages of earning credit by examination.

The maximum number of credits that may be earned in any combination of these examinations is 30 semester credits for an associate degree and 60 semester credits for a bachelor's degree. Credit earned by examination does not apply toward satisfying the university resident credit requirement for graduation.

Each student is responsible for arranging to complete the various examinations and for requesting the official score reports to be sent directly to the university Office of Admissions and Records. Information regarding test dates, costs and registration may be obtained from the Director of Counseling and Testing, University of Nevada Reno, Reno, NV 89557, telephone (702) 784-4648 or by writing directly to the respective testing organizations:

1. CBAPE, Box 977, Princeton, NJ 08541

Advanced Placement (AP) examinations are administered each May in the high schools, not at the colleges. High school students must make arrangements by January through their principals or AP coordinators to take the AP examinations.

2. CLEP, Box 592, Princeton, NJ 08541

College Level Examinations (CLEP) are administered by colleges only. Individuals may take these examinations during the third week of each month at any of the 700 test centers in the United States, one of which is the University of Nevada Reno. Individuals taking the College Level Examinations should note that certain examinations require an essay in addition to the objective section.

3. ACT PEP, Box 168, Iowa City, IA 52240

Military personnel may contact the Base Education Center for test information.

The director of testing is responsible for coordinating an annual evaluation of all revised and new national examinations with the departments concerned and reporting the results to the director of Admissions and Registrar for reference and publication. The evaluation status of any examination may be modified when there is adequate justification to change the amount of the credit to be granted.

College Board Advanced Placement Examination (CBAPE)

These examinations are primarily for students who complete advanced courses in high school. Upon receipt of an official score report from the College Board and a satisfactory essay when required, the Admissions and Records Office grants credit as specified and assigns a grade of S for scores of 3, 4, or 5.

Those who successfully complete CBAPE examinations in French, Spanish, or German with a score of 4 or 5 satisfy the foreign language requirement of the College of Arts and Science as well as that of other units within UNR.

An "e" means an essay is required along with the objective test.

Examination	UNR Course Equivalent	Credit Granted
Art		
History	None	3
Studio	ART 100	3
Biology	BIOL 101	4
Chemistry	CHEM 101 or 103	4
Classics		
Vergil	None	3
Latin Lyric	None	3
English (including essay)	ENGL 101	3 e*
French		
Language	None	4
Literature	None	4
German Literature	None	6
History		
American	HIST 101	3
European	HIST 106	3
Mathematics		
Calculus A,B	MATH 215	4
Calculus B,C	MATH 216, 310	8
Music		
Listening & Literature	None	3
Theory	None	3
Physics		
B	PHYS 151, 152	6
C (Mechanics)	PHYS 201	3
C (Electricity & Magnetism)	PHYS 202	3
Spanish		
Language	None	3
Literature	None	3

*With an objective test score of 5 and a satisfactory essay examination, 6 credits are granted, which satisfies the UNR English requirement.

College-Level Examination Program (CLEP)

Credit may be granted and a grade of S assigned upon receipt in the Admissions and Records Office of an official score report showing completion of one or more general examinations with a score of 500 or above, or subject examinations with a score of 50 or above, supported by a satisfactory essay where specified. The 90 minute General English Exam completed after October 1978 requires a satisfactory essay and a score of 610 or higher to award three credits, or 750 or higher to award six credits.

The general examination(s) should be completed before an individual enrolls at UNR, and must be completed prior to achieving sophomore classification at the university. Subject examinations may be taken at any time.

An "e" means an essay is required along with the objective test.

Examination	UNR Course Equivalent	Credit Granted
<i>General:</i>		
English Composition (including essay)	ENGL 101	3 e*
Humanities	None	6
Mathematics	None	4
Natural Sciences	None	6
Social Sciences	None	6
<hr/>		
<i>Subject:</i>		
Biology		
Biology	BIOL 101	3 e
Microbiology	BIOL 306	4 e
<hr/>		
Business		
Introduction to Business Management	None	3
Introductory Accounting	ACC 201, 202	6
Introductory Business Law	None	3 e
Introductory Marketing	None	3 e
Money and Banking	None	3
<hr/>		
Economics		
Introductory Macro-economics	EC 102	3
Introductory Micro-economics	EC 101	3
Introductory Micro- and Macro-economics	None	6
<hr/>		
Chemistry, General	CHEM 101 or 103	4 e
<hr/>		
Computer		
Computers and Data Processing	I S 250	3
Elementary Computer Programming- Fortran IV	I S 252	3
<hr/>		
Dentistry		
Dental Materials	None	0
Oral Radiography	None	0
Tooth Morphology and Function	None	0
<hr/>		
Education, History of America	None	3

*With an objective test score of 750 or higher and a satisfactory essay examination, 6 credits are granted, which satisfies the UNR English requirement.

When not available from the College Board, the essay may be written at the UNR Office of Counseling and Testing.

English		
American Literature	ENGL 241	3 e
American Literature I	ENGL 241	3 e
American Literature II	None	3 e
Analysis & Interpretation of Lit.	ENGL 291	3 e
College Composition (including essay)	ENGL 101	3 e*
English Literature	ENGL 235 or 236	3 e
Freshman English (including essay)	ENGL 101	3 e*
Foreign Languages		
College French-Levels 1 and 2	None	3
College German-Levels 1 and 2	None	3
College Spanish-Levels 1 and 2	None	3
History**		
Afro-American	None	3 e
American	HIST 101	3 e
American I: to 1877	HIST 101	3 e
American II: 1865 to present	HIST 102	3 e
Western Civilization	HIST 106	3 e
Western Civilization I: to 1648	HIST 105	3 e
Western Civilization II: to present	HIST 106	3 e
Home Economics		
Human Growth and Development	H EC 131	3 e
Mathematics		
Calculus with Elementary Functions	MATH 216	4
College Algebra	MATH 110	3
College Algebra-Trigonometry	MATH 102, 110	5
Trigonometry	MATH 102	2
Medical Sciences		
Anatomy, Physiology, Microbiology	None	6
Clinical Chemistry	None	4
Head, Neck and Oral Anatomy	None	0
Hematology	None	4
Immunohematology and Blood Banking	None	3
Nursing		
Behavioral Sciences for Nurses	None	0
Fundamentals of Nursing	None	0
Medical-Surgical Nursing	None	0
Political Science		
American Government	P SC 103 (satisfies U.S. Const. requirement, but not Nevada Const. requirement)	3 e
Psychology		
Educational Psychology	None	3
General Psychology	PSY 101	3 e

*With an objective test score of 64 or higher and a satisfactory essay examination, 6 credits are granted which satisfies the UNR English requirement.

**Does not satisfy the U.S. or Nevada Constitution requirement.

Sociology, Introductory	SOC 101	3 e
Statistics	MATH 251	3 e
Tests and Measurements	None	0

ACT Proficiency Examination Program (PEP)

Credit may be granted for selected PEP examinations completed with satisfactory scores. Upon receipt of an official score report, the admissions office grants credit as specified and assigns a grade of S for a standard score of 50 and above, or a letter grade of C or higher. The examinations may be taken at any time.

Examination	UNR Course Equivalent	Credit Granted
Business		
Accounting: Level I	ACC 201-202	6
Accounting: Level II	None	0
Accounting: Level III, Area I	None	0
Accounting: Level III, Area II	None	0
Accounting: Level III, Area III	None	0
Business Environment and Strategy	None	0
Finance: Level I	None	3
Finance: Level II	None	0
Finance: Level III	None	0
Management of Human Resources: Level I	None	3
Management of Human Resources: Level II	None	0
Management of Human Resources: Level III	None	0
Marketing: Level I	None	3
Marketing: Level II	None	0
Marketing: Level III	None	0
Operations Management: Level I	None	3
Operations Management: Level II	None	0
Operations Management: Level III	None	0
Criminal Justice		
Criminal Investigation	None	3
Introduction to Criminal Justice	CJ 110	3
English		
Freshman English (including essay)	ENGL 101	3 e*
Shakespeare	ENGL 271	3 e
Education		
Corrective and Remedial Instruction in Reading	None	0
Educational Psychology	None	3
History of American Education	EDFM 101	3 e
Reading Instruction in the Elementary School	None	0

*With an objective test score grade of A and a satisfactory essay examination, 6 credits are granted which satisfies the university English requirement.

History		
African and Afro-American History	HIST 455	3
Afro-American History	HIST 455, 456	6
Nursing		
Adult Nursing	None	5
Commonalities in Nursing Care, Area I	None	0
Commonalities in Nursing Care, Area II	None	0
Differences in Nursing Care, Area I	None	0
Differences in Nursing Care, Area II	None	0
Differences in Nursing Care, Area III	None	0
Fundamentals of Nursing	None	0
Health Restoration I	None	5
Health Restoration II	None	0
Maternal and Child Nursing, AA Degree	None	0
Maternal and Child Nursing, BS Degree	None	8
Nursing Health Care	None	2
Occupational Strategy, Nursing	None	0
Psychiatric/Mental Health Nursing	None	6
Science		
Anatomy and Physiology	None	6
Earth Science	None	3 e

Noncollegiate Learning Experiences

Credit may be granted and a grade of S assigned for selected courses or programs recommended in the *Guide to the Evaluation of Educational Experiences in the Armed Services* and the *National Guide to Credit Recommendations for Noncollegiate Courses* subject to the approval of the director of admissions in consultation with the dean of the college concerned.

The documentation required for evaluation by the Office of Admissions and Records includes:

1. A copy of the Report of Separation, DD214, or the DD295 for active duty personnel, or

2. An official transcript of the courses or program completed.

USAFI/DANTES courses completed by the group-study method may be accepted in accordance with the advanced standing regulations.

Credit is not granted for USAFI/DANTES courses completed by examination (nonenrolled), Military Occupational Specialties (MOS) training programs, or work experience. Credit for these types of learning experiences may be earned by special department examination.

Special Department Examination

A regular, currently registered student in good standing who has the knowledge and skills taught

in a university course may qualify to take an examination for credit subject to these regulations:

1. Credit may not be earned in a course which covers at an elementary level the subject matter of a more advanced course for which the student has already received credit.

2. Credit by special examination may not be attempted in a particular course more than once.

3. Credit by special examination may not be earned in a course the student has failed or audited until one calendar year after issuance of the final grade.

Each department is responsible for determining and identifying the specific course offerings that are appropriate for credit by examination and for providing information to students that is consistent, objective, and fair. Each special examination should be equivalent to the same quality, content and grading standard as applied to the examination administered to students who enroll in the course.

Procedure: A student desiring to earn credit by examination must initiate an application in the Office of Admissions and Records where it is reviewed to determine eligibility. Each authorized applicant must then obtain written approval to take the examination from the adviser, the dean of the college in which the student is registered and the chairman of the department offering the course. A \$10.00 per course examina-

tion fee is payable to the controller. The completed application is submitted to the faculty member named by the department chairman to administer the examination.

Grading is on an S or U basis except that a required course in a student's major or minor may receive a letter grade from A to F upon the advance written approval of the adviser.

The final grade assigned and each completed examination must be filed in the Office of Admissions and Records by the instructor for recording to the student's permanent academic record where it is treated as any other grade. The grade must be filed by midsemester for the student to receive credit for that particular semester. Each examination is retained in Admissions and Records where it may be examined by any faculty member.

If additional information is needed, specific questions regarding credit by examination policies and procedures should be directed to the Office of Admissions and Records.

Graduate Admission Requirements

Any student who wishes to do graduate study must first be admitted to the university in either graduate standing or graduate special classification. Each applicant is responsible for filing the required credentials with the office of admissions at least three weeks prior to the desired registration period to allow sufficient time for processing.

A UNR graduate is eligible to attend as a graduate special without making formal application as stated. Such students should request a graduate special certificate from the Office of Admissions and Records prior to the first registration in this classification.

Early Admission: A student who has completed at least one quarter or semester in the final year preceding graduation with a baccalaureate or higher degree may apply for early admission to graduate standing.

Two final, official transcripts showing graduation must be received in the Office of Admissions and Records directly from the institution awarding the degree for each student granted early admission.

General Requirements: Each applicant must submit the following:

1. A completed Application for Admission, properly dated and signed.

2. A nonreturnable \$5.00 application fee.

3. Graduate standing applicants must request each college or university attended to send *two* official transcripts directly to the Office of Admissions and Records. A University of Nevada Reno graduate is not required to submit transcripts of the credit earned at UNR.

Graduate special applicants should have *two* official transcripts showing evidence of having received a baccalaureate degree from an accredited four-year college or university sent directly to the Office of Admissions and Records. A Degree Certification form may be completed in lieu of the official transcript requirement if the applicant so desires. Should a graduate special applicant later apply for graduate standing, official transcripts (two copies) are required from *each* school attended.

4. Graduate standing applicants must submit Graduate Record Examination (GRE) scores (aptitude and advanced when required), *or* Graduate Management Admission Test (GMAT) scores for advanced degrees in business administration. GRE scores are required for economics.

5. Individuals claiming eligibility for resident fees are required to submit an Application for Resident Fees along with the other admission credentials.

6. International student applicants must submit satisfactory scores on the Test of English as a Foreign Language (TOEFL) and a recently completed (within six months) medical history and examination signed by a medical doctor.

Academic Requirements: The academic requirements for admission to graduate study are stated in detail in the Graduate School section of this catalog.

Admission to Institutions Within the University of Nevada System

Each individual who wishes to transfer to another institution within the university system is required to submit an application for admission, fee, and the supporting credentials directly to the appropriate admissions office in accordance with established policy.

Admission of the applicant and the acceptance of transfer credit are governed by the advanced standing regulations of the institution to which the application is submitted.



Regulations for Determining Residency for Tuition

The Office of Admissions and Records is responsible for the determination of residence status for tuition purposes for students enrolled at the University of Nevada Reno. An Application for Resident Fees must be submitted by each student claiming legal residence in Nevada. A recent Nevada high school graduate whose parents' permanent address is listed in Nevada is exempt from this procedure.

Information and application forms are available upon request in the Office of Admissions and Records.

The following regulations are Board of Regents' policy for all institutions in the University of Nevada System:

SECTION 1. Purposes

It is the purpose of these regulations to provide uniform rules throughout the University of Nevada System and all divisions thereof, in determining whether students shall be classified as in-state students or out-of-state students, for tuition purposes.

SECTION 2. Definitions

1. The word *tuition* means a charge assessed against out-of-state students which is in addition to registration fees or other fees assessed against all students.

2. The term *bona fide resident* designates a person who resides in the state of Nevada with the intent of making it his true, fixed, and permanent home and place of habitation, having clearly abandoned any former residence and having no intent to make any other place outside of Nevada his home.

3. The words *he* and *his* shall apply to the female person as well as the male, unless the context clearly otherwise requires.

4. The word *family* means the father or mother of the student or the legal guardian of the student, if appointed by a court at least 6 months prior to the date of matriculation and for purposes other than avoidance of tuition.

5. The term *date of matriculation* is the date of the first day of instruction in the semester or term in which enrollment first occurs, except that for a student at the University of Nevada School of Medicine, the *date of matriculation* shall be the

date that notice is sent that the student has been admitted to the medical school.

6. When residence for a particular period is required in these regulations, this shall mean that the person has been physically present and residing in the state during all the period for which residence is claimed.

SECTION 3. Tuition Charges

Tuition shall be charged to those persons classified as out-of-state students registering for 7 credits or more in a given semester at any division of the University of Nevada System; provided, however, that registration in Community College Division community service courses which are not state funded shall not cause tuition to be assessed, nor shall such enrollment be included in *date of matriculation* for evaluation of residency.

SECTION 4. Rules for Determining Status

1. A person who is not classified as an in-state student under these regulations shall be classified as an out-of-state student.

2. All students whose families are bona fide residents of the state of Nevada shall be classified as in-state students.

3. A student who, at the date of matriculation, is and has been a bona fide resident of the state of Nevada for at least 6 months prior thereto, shall be classified as an in-state student.

4. An applicant for admission to the University of Nevada School of Medicine who has been a bona fide resident of the state of Nevada for at least six (6) months prior to the last day for filing an application for admission to the school shall be classified as a Nevada resident for the purposes of being considered for admission to the University of Nevada School of Medicine.

5. A student who is a member of the Armed Forces of the United States, stationed in Nevada, or whose spouse, parent, or guardian (as defined in the word *family*) is a member of the Armed Forces and stationed in Nevada, shall be entitled to classification as an in-state student.

6. A person who has attended a division of the University of Nevada as an in-state student may continue or return in that status without subse-

quent reclassification because of changed circumstances, unless he has abandoned his Nevada residence and established residence elsewhere.

7. When a student who has been classified as an out-of-state student becomes eligible for classification as an in-state student, such reclassification shall become effective at the next registration period.

8. All public school teachers who are employed full time by the school districts in the state of Nevada are classified as in-state students.

9. All full-time teachers in private schools in the state of Nevada whose curricula meet the requirements of NRS 394.130 shall be classified as in-state students.

10. A student who matriculates as an out-of-state student and thereafter resides in the state while attending the university is presumed to be residing in the state temporarily for the purpose of attending school and not as a bona fide resident. The student may qualify for reclassification as an in-state student only if the presumption is rebutted by clear and convincing evidence that the student has resided continuously in the state of Nevada for a period of at least 12 months as a bona fide resident with the intention of making Nevada his true, fixed, and permanent home, having clearly abandoned his former residence and domicile and having no intention of making any other place outside of Nevada his residence and domicile.

11. A student who registers and enrolls but does not attend classes may, for purposes of these regulations, withdraw from the university and be deemed not to have matriculated. Any determination concerning his residence status will be voided until such time as he shall again apply for admission.

12. An alien student holding a permanent immigrant visa and otherwise meeting the requirements for in-state student status shall be classified as an in-state student. Alien students holding other types of visas shall not be classified as in-state students.

13. A student who is attending the University of Nevada Las Vegas or the University of Nevada Reno through the National Student Exchange Program shall be entitled to classification as an in-state student for tuition purposes, and for tuition purposes only, during the time of the exchange. Time spent in Nevada while a student is on exchange shall not be counted towards satisfying the residence requirements as described in Section 3 above nor shall such enrollment be included in the *date of matriculation* for evaluation of residency.

GUIDELINES FOR DETERMINING CHANGE IN TUITION STATUS.

The following are guidelines to assist the Offices of Admissions and Appellate Boards in making determinations on applications for changes in tuition status under Section 4.9 of the regulations:

Continuous Residence: One year's continuous residence in the state of Nevada is required under Regulation 4.9. Temporary absences for more than one day should be explained. Ordinarily, the application of a person who is absent from the state for more than a total of ten days during the year will not be approved for a change in tuition status, barring unusual circumstances.

Residence in Nevada While Not Attending University: A person who has resided in the state of Nevada for a period of one year while not attending any division of the university and who has filed an affidavit of intention to become a bona fide resident, will qualify for a change to in-state status.

Residence in Nevada While Attending University: Ordinarily, a student attending the University of Nevada who has matriculated as an out-of-state student will not be eligible for reclassification as an in-state student based upon residence while attending the university. However, the student may present such clear and convincing evidence of intention to become a bona fide resident, independent of mere physical residence while a student, that reclassification may be considered.

The following are examples of some minimal evidence of intention to become a bona fide resident:

- a. Registering to vote in Nevada.
- b. Obtaining a Nevada driver's license, if the student drives an automobile.
- c. Filing a federal income tax return in Nevada.
- d. Registering in Nevada any vehicles owned by the student.

Ordinarily, without more evidence, the above would be insufficient independent evidence to establish the requisite intention to become a bona fide resident of the state of Nevada.

The following are examples of proof which would ordinarily be clear and convincing evidence of intention to become a bona fide resident:

- a. If a student had taken all the steps above and had worked full-time for the year for which residence is claimed, even though attending the university full- or part-time.
- b. If the student had taken all the steps above

and owns and resides in a home or holds and resides in a home under a long-term lease extending well beyond the school years.

c. If the student had taken all the steps above and can prove that full-time employment in Nevada has been confirmed for at least one year following completion of schooling, which fact is verified by the student's employer.

The university will consider other convincing, independent evidence in addition to that enumerated above, which the student may wish to present to prove intent to become a bona fide resident.

If a student marries a bona fide resident of the state of Nevada, this is also relevant, though not of itself clear and convincing as evidence of the intention of the student to become a bona fide resident.

The following are factors indicating that the student is not a bona fide resident:

a. Dependence upon out-of-state parents for financial support.

b. Any out-of-state driver's license or other licenses.

c. Any owned vehicles registered out of state.

d. Voter's registration out of state.

e. Owning a residence out of state.

f. Having a bank account out of state.

g. Other ties to a former domicile or another state.

h. Career objectives which could not likely be carried out in Nevada.

i. Indeterminate career objectives which evidence a lack of a firm purpose to reside in Nevada after completion of schooling.

The above negative factors are weighed with other evidence in determining the student's intention.

SECTION 5. Application of Regulations

It is the intent of the Board of Regents to apply these regulations effective immediately. The application of these regulations shall not affect the status of any student now classified as an in-state student. Any person who is now classified as an

out-of-state student, but who, under these regulations, is eligible for reclassification as an in-state student, shall, upon application, become eligible for such classification at the time of the next registration period. No reclassification under these regulations shall give rise to any claim for refund of tuition already paid to the University of Nevada.

SECTION 6. Determination of Status

Each division of the University of Nevada affected shall implement these regulations through the Office of Admissions and Records on each campus, under the direction of the president. The president of each division shall establish an appellate procedure, whereby the student may appeal decisions of the admissions office concerning tuition or his status as an in-state or out-of-state student to an appellate board, which will hear evidence and make a final determination. The student may appeal the decision to the appellate board within 30 days from the final determination by the admissions office. In the event the appeal is not taken within that time, the decision of the admissions office shall be final for that school term.

SECTION 7. Exceptional Cases

In exceptional cases, where the application of these regulations works an injustice to an individual who technically does not qualify as an in-state student, but whose status, either because of the residence of the student or his family is such as to fall within the general intent of these regulations, then the Appellate Board shall have the jurisdiction to recommend that such students be classified as in-state students. If the recommendation is approved by the president, the student shall be so classified. The intent of this provision applies only in the infrequent, exceptional cases where a strict application of these regulations results in an obvious injustice.



Registration and Records

Period of Registration

Instructions and the specific dates for registration are published in the class schedule which is available in the Office of Admissions and Records prior to the beginning of each semester. The late registration period closes at the end of the seventh day of classes. Registration is not complete until all fees are paid and all registration materials are filed with the Office of Admissions and Records.

Returning Students: Students returning to the university after an absence of one or more semesters are required to submit a registration application by July 15 for the fall semester or January 2 for the spring semester so that proper registration forms may be prepared.

Each individual who attends another educational institution since last enrolling at the university must submit official transcripts from each school attended whether credit was earned or not.

An ineligible student who is approved for registration on the basis of incomplete or fraudulent credentials or misrepresentations in the written application for registration, will have his or her:

- registration cancelled without refund of any fees paid; and
- credits rescinded that have been earned following such readmission; and
- future registration at the university prohibited.

The director of Admissions and Registrar is responsible for the verification of documents and credentials. If it is determined the student sought registration on the basis of incomplete or fraudulent credentials or misrepresentations in the written application for registration, the student is notified in writing of the director's intention to take the above action. The student has ten days thereafter to reply in writing. The director then makes a determination and takes appropriate action, notifying the student in writing. The student may file a written appeal to the president within ten days. The decision of the president is final.

Penalty for Late Registration: A regular student enrolling for 7 credits or more (or equivalent) after instruction begins is charged a late fee and is subject to a reduction in the total credit load allowed.

Clearance of Accounts: A student whose record indicates a delinquent indebtedness to the university is not permitted to register, continue registration, or receive a transcript of record or diploma.

Advisement

Planning and Scheduling Classes: Prior to registration, each student should study the requirements of the college as outlined in this catalog. Many programs require specific courses for specialized training, while others allow the student a considerable choice of subjects. The assigned faculty adviser provides valuable assistance in planning the desired program. Together, the student and the adviser establish a program of courses which is in accord with the student's interests and the requirements of the college or curriculum. Each student is responsible for enrollment in the courses required for the degree sought.

Courses numbered 1-99 are associate degree or nonbaccalaureate level courses; therefore the credits and grade points earned in these courses are not applicable to baccalaureate degree programs.

In general, each semester's registration should constitute approximately one-eighth of the total credits required for the selected degree.

Required Courses: Each associate and baccalaureate degree student must complete the following university course requirements:

Constitution: Nevada state law provides that no student may receive a diploma of graduation or a teacher's certificate without having passed a satisfactory examination upon the Constitution of the United States and the Constitution of Nevada. For graduation purposes, the constitution requirements may be satisfied by the following courses:

United States Constitution: HIST 101, 401, 402, 601, 602; P SC 409, 609. Previously offered courses include HIST 1, 341, 701; and P SC 79, 101, 201, 207, 302, 303, 410, 602, 603, 709, 710.

Nevada Constitution: HIST 102, 217; P SC 208. Previously offered courses include HIST 2, 317, 331; and P SC 80, 102, and 202.

United States and Nevada Constitutions: HIST 111; P SC 103. Previously offered course, P SC 203.

P SC 20, previously offered, satisfies the requirement for associate degree programs.

English: Each student must demonstrate proficiency in written composition by successfully completing courses in ENGL 1, 101-102, (113, 114 for international students) unless the requirement is satisfied by authorized exemption.

Initial placement is based upon standardized test scores:

UNR Course	ACT		SAT	
	English	Verbal	TSWE	
ENGL 1	1-18	200-449	40 or less	
ENGL 101	19-24	450-599	41-56	
ENGL 102, 102H*	25-36	600-800	57 or more	

Proper placement is verified by performance in a written composition during the first week in class. Students with scores of 25 or above are encouraged to enroll in the honors sections of ENGL 102.

Authorized exemptions:

1. An ACT English standard score of 25 or above, verified by a satisfactory written composition administered and evaluated by English department personnel, qualifies a student for exemption from ENGL 101 and placement in 102. Credit is not awarded for ENGL 101 as a result of this advanced placement.

2. When a grade of A is received in ENGL 101, the director of freshman English may, after proper review and evaluation, approve an exemption from ENGL 102 by written notification to the student's adviser, dean and the director of Admissions and Registrar. Since credit is not awarded for 102 as a result of the exemption, a student must enroll in 102 if credit is desired.

The English requirement may also be satisfied by: (1) a CBAPE examination in English with a score of 5, (2) a CLEP general examination in English composition with a score at the 92nd percentile or higher, (3) a CLEP subject examination in college composition or freshman English with a score of 64 (92nd percentile) or higher, (4) an ACT PEP examination in freshman English with a grade of A, or by (5) acceptable transfer credit equivalent to ENGL 102. Each examination must be supported by a satisfactory written essay.

Each student is expected to complete the university English requirement during the freshman year so that the knowledge acquired can be applied to the remaining courses in the degree program.

English for International Students: All undergraduate international students are required to demonstrate proficiency in English by the completion of ENGL 114 or the equivalent. Placement is based on test scores and is within the sequence ENGL 111, 112, 113 or 114. Initial placement recommendations are entered on the appropriate form when admitted. Withdrawals from English during any semester are not permitted without prior written approval of the Director of Admissions and Registrar. International undergraduate students must register in an appropriate English course each semester until the university requirement (ENGL 114) is satisfied.

International graduate students being considered for fellowships involving classroom teaching must be certified as proficient in English *prior to* undertaking teaching duties.

Precedence of Certain Courses

Required Courses: All students are expected to give precedence to required courses in regular sequence and should not register in an elective course to the exclusion of a required course. Under exceptional circumstances, the dean of the college may permit a student to defer a required course or to withdraw from it. In no case should a required course be deferred for more than one year.

Failed Courses: Any required course in which a student has failed takes precedence over all others in the arrangement of the program of study. Such a failed course should be repeated in class the next time it is offered in the university program. In exceptional cases, a required course which has been failed may be taken at another accredited institution. In these cases, prior written approval by the chairman of the department, the adviser, and the dean of the student's college must be filed in the Office of Admissions and Records.

Credit Load: The maximum number of credits a student may take per semester with the approval of the assigned faculty adviser is 21 undergraduate or 16 graduate. Noncredit courses are considered as credit equivalents. Any exception requires the advance written approval of the dean of the student's college. A graduate student must obtain the approval of the graduate dean.

Registration

Registration forms are distributed by the Office of Admissions and Records prior to the beginning of each semester. Computer advance registration

*Honors level

is provided for those who wish to register early by mail and a centralized Walk-Thru registration period is provided for those who wish to register in person. Registration fees must be paid and forms filed in the Office of Admissions and Records for enrollment to be officially complete.

Addition of Courses: A student may add courses or change sections up to the close of the registration period. Exceptions may be made after this date by the dean of the college for individual cases involving illness, accident, or similar emergencies.

Procedure: Each student must obtain an Add-Drop-Change form from the Office of Admissions and Records, secure the proper signatures, pay the required fee, and file the completed form in Admissions and Records for the *add* to be official.

Audit to Credit: An auditor changing to a credit basis must complete the change of registration form prior to the close of registration.

Dropping a Course: A student may drop a course any time prior to the last two weeks of a semester with the adviser's approval. Drops which occur after the first *eight* weeks require the teacher to determine if the student is passing or failing. The dropping of courses during the last two weeks of a semester is not permitted. Severe hardship cases including illness, accident, or similar emergency may be appealed through the student's adviser and dean of the college.

Procedure: Each student must obtain an Add-Drop-Change form from Admissions and Records, secure the proper signatures, and file the completed form in Admissions and Records for the *drop* to be official.

Credit to Audit: A student must be passing to change from credit to audit after the first eight weeks.

Withdrawal from the University: A student wishing to withdraw from the university should obtain the proper form from Admissions and Records and contact the Office of Student Services for an exit interview. A withdrawal which occurs after the first *eight* weeks of the semester requires each instructor to determine if the student is passing or failing. When the student obtains the required signatures and files the completed form in Admissions and Records, the withdrawal is official. *A student who leaves the university without officially withdrawing receives a failing grade in all courses.*

Change of College, Major, or Adviser: A student may change college, major, or adviser by obtaining a change card from Admissions and

Records (or the dean of the college) and securing the required signatures. The completed change card must be filed in Admissions and Records before it becomes official. If the change occurs during registration, the completed change card should be inserted in the registration packet for official processing.

Each student must satisfy the course requirements of the college or major to which transfer is made.

Change of Name: A student may change name by completing a change of name form in Admissions and Records and submitting a copy of the supporting document.

Cancellation of Courses: The university reserves the right to cancel any course where the enrollment is insufficient to warrant offering the course.

Satisfactory/Unsatisfactory: A baccalaureate student may earn a maximum of 30 semester credits in courses graded on an S/U basis, subject to the approval of each individual college.

1. An associate degree student may earn a maximum of 15 semester credits in courses graded on an S/U basis.

2. A transfer student may earn a maximum of one-fourth of his remaining credits at UNR on an S/U basis providing the total does not exceed university policy.

3. A transfer student with more S/U credits than allowed by university policy is ineligible for additional S/U registration, except for required courses offered on an S/U basis only.

4. Each course that is taken to satisfy the university English and United States and Nevada Constitution requirements must be completed with a regular letter grade.

5. Each college is responsible for determining the total number of credits earned with grades of S, P, or Cr and the specific courses (transfer, elective, or required) which are acceptable toward a degree in that college within the limits of the university maximum.

6. Each college course which is approved for S/U grading only is to be properly designated in the university catalog for reference.

7. Credits and grades recorded in accordance with the satisfactory/unsatisfactory policy are applicable toward meeting graduation requirements but are excluded when calculating the grade-point average.

Procedure: Each student is responsible for indicating the S/U grading option at the time of registration for each course approved by the adviser.

Changes between S/U and the regular grading system may be made only during the late registration and add period.

The instructor assigns an S or U grade to each student so registered.

Categories of Students

Regular: An individual who is officially admitted to a degree program is defined as a *regular* student and is classified according to the total number of semester credits completed.

A *regular* student may enroll either full-time or part-time for any given semester.

Nondegree: An individual who is not officially admitted to the university is defined as a *nondegree* student. Anyone who is 18 years of age or over, or who can present evidence of high school graduation, may register nondegree. With the approval of the department offering the course, a nondegree student may register in a maximum of 6 semester credits (or equivalent) in classroom instruction in one semester. This includes students in noncredit courses and those registered as auditors. Although there is no limit to the number of credits that may be earned as a nondegree, a maximum of 32 semester credits is acceptable toward an associate or baccalaureate degree.

All *nondegree* students are governed by university regulations, including suspension and disqualification, and are encouraged to seek official admission at the earliest possible date.

Nondegree students may also register in courses offered through Continuing Education and Correspondence Study.

Auditor: A student who wishes to enroll for no credit may register as an *auditor* with the approval of the department offering the course. While no credit or grade may be earned, auditors may, at the discretion of the teacher, have the same class privileges as other students.

An auditor whose performance in class is considered unsatisfactory may be dropped by filing in the Office of Admissions and Records a written authorization signed by the instructor, department chairman, and dean.

Classification of Students

Undergraduate: Regular students are classified by the Office of Admissions and Records based upon the number of semester credits completed:

Freshman or first year	29 credits or less
Sophomore or second year	30-59 credits
Junior	60-89 credits
Senior	90 credits or more

Junior or senior classification is usually required for a student to register in courses numbered 300 through 499.

Graduate: Regular students are classified at the time of official admission as either graduate special (for those not seeking a degree) or graduate standing (for those in graduate degree programs).

Full-Time and Part-Time Students

Undergraduate: Regular students who register for 12 credits or more in a given semester are defined as full-time. Those registering for 11 credits or less are defined as part-time.

Graduate: Regular students registered for 9 credits or more are defined as full-time. Those enrolled in 8 credits or less are part-time.

Nondegree: Nonadmitted students are limited to a maximum of 6 credits or equivalent of classroom instruction per semester.

FTE: The number of full-time-equivalent students is computed by dividing the total undergraduate credits offered each semester by 15 and the total number of graduate credits offered each semester by 8.

Grades and Examinations

Grades and Marks

A, the highest grade, is given for work of exceptional quality. Each credit earned with a grade of A carries 4 grade points.

B is awarded for better than average work. Each credit earned with a grade of B carries 3 grade points.

C represents average work. Each credit earned with a grade of C carries 2 grade points.

D is the lowest passing grade for which credit is allowed—1 grade point for each credit earned.

F means failure and receives no credit or grade points. Failed courses count as credits attempted.

S and U indicate satisfactory or unsatisfactory performance in courses offered with this grading option, noncredit courses, and completed graduate courses involving thesis or dissertation. An S indicates achievement equivalent to an A, B, or C for undergraduate courses; U represents D

or F performance. Neither S nor U is assigned a grade-point value.

AD indicates audit and is given when a student registers in a course for no credit.

W signifies the dropping of a course, or withdrawal from the university, with passing grades and is not included in the grade-point average. After the first eight weeks of the semester, an F is given to each student who is failing at the time of dropping a course or withdrawing from the university.

I is a neutral mark and means INCOMPLETE. An I is given when a student is performing satisfactory work, but for some uncontrollable reason is unable to complete the course requirements during the instructional period. Each student is responsible for providing the instructor with adequate evidence for consideration prior to the assignment of the final grade. An I is excluded from grade-point average computation.

Each instructor is required to provide the reasons for giving each I, the work required to complete the course, the approximate grade of the student at the time the I is given, and the approval of the department chairman. This information is required on the back of the final grade class list prior to filing in Admissions and Records. Acceptable reasons include illness or accident. Nonattendance, poor performance or requirements to repeat the course are not acceptable.

An I that is not made up in one calendar year from the date of issuance remains an I indefinitely. Credit may then be earned only by reregistration and the satisfactory completion of the course.

The Director of Admissions and Registrar is authorized to grant a waiver for hardship cases involving incompletes received prior to June 1967. In such cases, the recommendation of the instructor, department chairman, and dean of the college is required.

An incomplete is made up if the student completes and submits the outstanding course requirements to the instructor within one calendar year. The instructor is responsible for obtaining the Grade Report for Incomplete form from Admissions and Records for reporting the final grade and acquiring the approval of the department chairman and dean for filing in Admissions and Records within the calendar year provided.

Repeat: A passed course at the university may be repeated to gain additional grade points provided proper registration occurs. These courses are marked *repeat*, the number of credits are added

to those attempted, but no additional credit is earned.

Grades and Grade-Point Average

Midsemester Reports: Each instructor is required to post unsatisfactory progress reports prior to midsemester for each student whose grade is D or F and to indicate in each case the reason for the unsatisfactory grade.

Examinations: The instructor is responsible for the proper evaluation of each enrolled student throughout the instructional period.

Final Grades: Each instructor is responsible for determining and submitting final grades to the chairman of the department concerned who, in turn, files them in the proper manner and time in Admissions and Records where they become a part of the official records of the university. The final grades shown on the student's grade report are considered final unless the student notifies the Registrar within six months of the date of issuance that error has occurred.

Grade-Point Average: The grade-point average (GPA) is determined by dividing the sum of the grade points earned by the total number of credits attempted for a regular letter grade. I, AD, W, S, and U are excluded in the computation of the GPA.

Grade Changes and Appeals

Changing a Final Grade: After the final grades are filed in Admissions and Records, a grade may normally be changed only to correct a clerical error. For these changes, the instructor must file in Admissions and Records a completed Change of Grade form approved by the chairman of the department and the dean of the college.

Appealing a Final Grade: A student may appeal a final grade in a course by filing an Intent to Appeal a Grade form with the chairman of the department concerned within 20 days of issuance of official grades by the Registrar. Failure to file the proper forms within the specified deadlines results in the student forfeiting the right to appeal that grade. Appeal forms and specific regulations are available upon request in Admissions and Records.

Appealing Grades Received for Improper Withdrawal: Under certain circumstances, a student who does not withdraw from the university in accordance with official procedures may appeal the grades received for that semester. The appeal

procedure applies *only* to emergency or hardship situations defined as follows:

1. Personal illness or accident involving extended hospitalization, or
2. Sudden and unexpected departure from the area involving the inability to return to the university, e.g., death in the immediate family, induction to military service.

The appeal must be made for all of the course work in the semester in question and must be made within six months of the issuance of final grades unless the student can demonstrate incapacity beyond that date.

It is the student's responsibility to support the appeal with written, documented evidence, such as an official hospital record, to substantiate the hardship claimed. In addition, if the date of departure from the university came after the free drop period, the student must also provide documented evidence from each instructor that he/she was passing each course listed on the record for that semester.

A student who meets the specified criteria and elects to file an appeal must submit a written statement and the supporting documentation to the director of Admissions and Registrar for consideration by an appeals board appointed by the president. The board considers each student's appeal and makes a final decision based upon the evidence submitted.

Academic Distinction

Semester Honor Roll: An academic honor roll, which includes those members of the undergraduate student body who have completed at least 15 credits in regular graded courses with a GPA of 3.5 or higher is determined at the close of each semester by the Office of Admissions and Records.

Distinction at Graduation: At Commencement, each graduating senior who earns a minimum of 64 semester credits in residence at the university in all courses Graded A through F with a GPA of 3.75 or higher receives the baccalaureate degree with High Distinction (or with Distinction if the GPA is between 3.5 and 3.75). Each transfer student must satisfy the UNR requirements and have a combined transfer-university GPA of 3.75 or higher for High Distinction or 3.5 or higher for Distinction. The final date for graduating with distinction under this policy is August 1984.

Effective the Fall Semester 1980, a new Honors Program was implemented for those who complete the specific requirements upon graduation:

With Honors: Awarded to an associate degree student graduating with a GPA of 3.5 or higher (both in the major and overall) who earns nine or more honor points to include six or more in the major during the second year of study.

With University Distinction: Awarded to a baccalaureate degree student who graduates with a GPA of 3.75 or higher in at least 110 credits graded "A" through "F."

Cum laude, magna cum laude, or summa cum laude is awarded to a graduating baccalaureate degree student who completes the honors program and all university, college and major requirements, with the specified GPA (both in the major and overall), based upon at least 110 credits in courses graded "A" through "F":

cum laude: GPA of 3.5 to 3.69.

magna cum laude: GPA of 3.7 to 3.89 with grade of "A" on senior honor thesis.

summa cum laude: GPA of 3.9 or above with grade of "A" on senior honors thesis.

The minimum 64 resident credits and the transfer GPA requirements are the same for both programs.

Completion of the honors program requires earning 18 or more honors points with at least nine being in major courses numbered 300 and above. For additional information, refer to the Honors Study Program in the Interdisciplinary and Special Program section of this publication.

The Gold Medal: Awarded annually at Commencement, the Gold Medal for scholarship is given to the graduating senior who has achieved the highest undergraduate GPA while completing 120 semester credits or more in regularly graded (A, B, C, D, F) courses involving classroom instruction at the university.

Undergraduate Academic Standards

Class Conduct: A student may be dropped from class at any time for negligence or misconduct upon recommendation of the instructor and with the approval of the dean.

Grade-Point Deficiency: An undergraduate student is deficient when less than 2 grade points are earned for each credit registered excluding those completed with grades of I, AD, W, S, or U. Deficiency in grade points endangers academic standing and leads to the penalties described in the following sections on probation, suspension, and disqualification.

An associate degree student may apply grades earned in courses numbered 1-99 toward bac-

calaureate grade-point deficiencies in satisfying the minimum GPA for graduation in a two-year program.

However, a baccalaureate degree student may not earn credits or grade points in university two-digit courses to apply toward a four-year degree or to remove a negative grade-point deficiency.

Probation

Condition: An undergraduate student is placed on academic probation at any time the following occur:

1. The cumulative GPA is below 2.0.
2. The grade-point average for each of two consecutive semesters is below 2.0 even though the cumulative average is 2.0 or above.
3. The GPA for any semester is below 1.0.

Restriction: The credit load of a student on probation is determined in consultation with the assigned faculty adviser and, when necessary, the dean of the school or college.

Release from Probation: An undergraduate student who has reduced the deficiency to a 2.0 GPA on the cumulative record is no longer on probation. A student who had an overall 2.0 GPA or above at the time probation occurred is off probation at the end of the semester in which a 2.0 average or above is obtained.

Suspension

Condition: An undergraduate student deficient 15 or more cumulative grade points at the end of any semester is suspended from the university. If the class preparation, attendance, or progress of a student toward a degree is deemed unsatisfactory, the student may be suspended from the university at any time.

Penalty: A suspended student may not register *during the fall or spring semester in any university course which involves classroom instruction* for credit. Noncredit or audit enrollment is permitted.

Requirements for Readmission: To qualify for readmission, an undergraduate student must earn a minimum of 6 acceptable semester credits if on first suspension, or 12 acceptable semester credits if on second suspension, with a 2.5 GPA or above. These credits may be earned in correspondence study, university summer session, or at another regionally accredited educational institution. Courses which are not acceptable as a basis for readmission are those (1) in which credit has already been earned, (2) failed previously, (3) completed for audit, (4) which are non-baccalaureate and nontransferable. The university

suspension and disqualification regulations do not apply to a suspended student until official readmission occurs.

A student who is readmitted after suspension is on probation. Second suspension occurs whenever the GPA at the end of any semester is less than 2.0 and the total grade-point deficiency is 15 or more.

When the grade-point deficiency is reduced to minus 14 or less, the regular probation and suspension rules apply.

Readmission Procedures: A student under academic suspension may apply for readmission whenever the credit and grade requirements are satisfied as stated. An Application for Readmission must be submitted to the director of Admissions and Registrar by July 15 to be considered for the fall semester or January 2 for the spring semester.

If the student has attended other educational institutions after being suspended from the university, official transcripts must be submitted for evaluation.

Applications for readmission are available upon request from the Office of Admissions and Records in Clark Administration Building.

Disqualification

Conditions: A student readmitted after a second academic suspension is on probation. Disqualification occurs whenever the undergraduate GPA at the end of any semester is less than 2.0 and the total grade-point deficiency is 15 or more. When the grade-point deficiency is reduced to minus 14 or less, the regular probation and disqualification rules apply.

Penalty: A disqualified student may register only as an auditor or in a noncredit course. After a period of two years from the date of disqualification, the student may apply for readmission by filing a letter of appeal in Admissions and Records. Each case is considered on its own merits, and no individual case is considered as establishing a precedent.

If the student's appeal is upheld, registration for credit is authorized in Summer Session, or correspondence study, at the university. Upon completion of 12 or more acceptable semester credits with an overall GPA of 2.5 or above, the student qualifies for readmission on probation.

Graduate Academic Standards

Each graduate student is subject to the academic standard regulations published in the Graduate School section of this publication.

Requirements for Graduation

Catalog: A student may elect to graduate under the degree requirements of the year of admission and registration, the year of acceptance to the major in which the student is graduating, the year of reentry to the university if not enrolled for a period of five years or more, or the year of graduation, but not a combination of these. Each student must satisfy the current academic requirements.

Degrees, diplomas, or certificates may not be granted unless all requirements are fulfilled. A degree, diploma or certificate that is awarded in error, or upon fraudulent claims, will be withdrawn immediately and the student record corrected accordingly.

Academic Requirements: To be graduated, each student must average at least 2 grade points for each semester credit attempted for a regular letter grade at the university. This includes all courses repeated and excludes those courses resulting in marks of AD, I, S, U, and W (Audit, Incomplete, Satisfactory, Unsatisfactory, Withdrawal). Additional academic requirements may be established by the dean of an individual college.

Course Requirements: In addition to the courses specified by each school or college, university course requirements in English, Nevada and U.S. Constitution must be satisfied by each candidate for a degree.

Any course offered for credit by the university may be used to fulfill degree requirements, provided the course is the proper level and is acceptable by the dean of the college concerned as a part of the student's approved program of study. Mere accumulation of credits does not assure fulfillment of requirements for a degree.

Resident Credit Requirements: A candidate for an associate or bachelor's degree must complete the last 32 semester credits in uninterrupted resident credit, special examination or correspondence credits excepted, *on the campus as a regular student in the college or school* from which the degree is expected.

Authorized exceptions to this rule are:

1. Preprofessional students who complete three years or more of approved resident credit at the university may transfer a maximum of 32 semester credits of satisfactory work from an accredited professional school to apply toward a bachelor's degree in their designated major, *pro-*

vided all department, college, and university requirements for graduation are satisfied.

A prephysical therapy student who completes the required 96 credits of prephysical therapy curriculum, with the last 40 credits in approved residence at the university, may complete the remaining 32 credits by the satisfactory completion of a 12- to 24-month certification course from an approved school of physical therapy.

2. A student who has earned a minimum of three-fourths of the total acceptable credits of a specified degree requirement in resident credit may earn a maximum of 8 acceptable transfer credits during the senior year, which may be applied toward the degree.

Any course which is satisfactorily completed at the university for credit, except credit earned by special examination or correspondence study, is considered resident credit of the campus sponsoring the course. (Off-campus courses do not satisfy the on-campus credit requirement.) Credit earned by correspondence study, examination, or enrollment in another institution within the University of Nevada System does not constitute an interruption of resident credit. However, the 8 transfer credit maximum during the senior year for eligible students applies to all schools, including other UNS institutions.

Credit earned through the Institute of European Studies (IES) and the National Student Exchange (NES) program as an approved part of a degree program is exempt from the resident credit regulations.

Application for Graduation: During the registration period *two* semesters before the expected date of graduation, each candidate for an associate or baccalaureate degree is required to submit a completed Application for Graduation in triplicate to the assigned faculty adviser for approval and forwarding to the dean of the college. The dean of the college retains the application for reference until the beginning of the final semester and then forwards the approved application to Admissions and Records within the ten-day filing period.

An undergraduate or graduate application which is submitted to the adviser after the first ten days of the final semester is assessed a late application fee. The \$5.00 late fee is in effect until November 1, March 1, or July 1 in the respective filing period in which graduation is planned. An application filed after these dates is *not* acceptable for that graduation period.

A candidate who does not graduate on the expected date must *resubmit an updated application during the appropriate filing period.*

Undergraduate Degrees and Credit Requirements

The minimum number of credits required for an undergraduate degree is 64 for the associate degree and 124 for the baccalaureate degree. In-

dividual colleges may require additional credits and the specific requirements are shown in the respective college sections.

The minimum number of credits required for an undergraduate degree in each of the colleges is as specified.

UNDERGRADUATE DEGREE REQUIREMENTS

	Credits Required
School of Agriculture—	
Associate of Science in Agriculture (A.S. in Agriculture)	64
Bachelor of Science (B.S.)	128
Bachelor of Science in Veterinary Science (B.S. in Veterinary Science)	128
College of Arts and Science—	
Bachelor of Arts (B.A.)	128
Bachelor of Arts in Criminal Justice (B.A. in Criminal Justice)	128
Bachelor of Arts in Journalism (B.A. in Journalism)	128
Bachelor of Music (B.M.)	128
Bachelor of Science (B.S.)	128
Bachelor of Science in Chemistry (B.S. in Chemistry)	128
Bachelor of Science in Geography (B.S. in Geography)	128
College of Business Administration—	
Bachelor of Arts (B.A.)	128
Bachelor of Science in Business Administration (B.S. in Business Administration)	128
College of Education—	
Bachelor of Arts in Education (B.A. in Education)	128
Bachelor of Science in Education (B.S. in Education)	128
College of Engineering—	
Associate of Science in Electronics Engineering Technology (A.S. in Elect. Eng. Tech.)	68
Associate of Science in Engineering Design Technology (A.S. in Eng. Design Tech.)	65
Bachelor of Science in Civil Engineering (B.S. in Civil Engineering)	130
Bachelor of Science in Electrical Engineering (B.S. in Electrical Engineering)	132
Bachelor of Science in Mechanical Engineering (B.S. in Mechanical Engineering)	134
Bachelor of Science in Engineering Science (B.S. in Engineering Science)	130
School of Home Economics—	
Associate of Arts in Fashion Trades (A.A. in Fashion Trades)	64
Associate of Arts in Prekindergarten Education (A.A. in Prekindergarten Education)	64
Bachelor of Science in Home Economics (B.S. in Home Economics)	128
School of Medicine—	
Bachelor of Science (B.S.)	128
Bachelor of Science in Medical Sciences (B.S. in Medical Sciences)	128
School of Mines—	
Bachelor of Science in Chemical Engineering (B.S. in Chemical Engineering)	134
Bachelor of Science in Earth Science (B.S. in Earth Science)	128
Bachelor of Science in Geology (B.S. in Geology)	128
Bachelor of Science in Geological Engineering (B.S. in Geological Engineering)	138
Bachelor of Science in Geophysics (B.S. in Geophysics)	130
Bachelor of Science in Metallurgical Engineering (B.S. in Metallurgical Engineering)	134
Bachelor of Science in Mining Engineering (B.S. in Mining Engineering)	134
School of Nursing—	
Bachelor of Science in Nursing (B.S. in Nursing)	128

Dual Undergraduate Degrees

A student may earn two baccalaureate or associate degrees, either successively or simultaneously, provided all specified requirements for both degrees are fully satisfied.

A minimum of 30 credits, earned in residence, beyond the requirements for the first baccalaureate degree must be completed for the second degree.

A candidate for a second associate degree must satisfy the specific course requirements as prescribed by the school or college concerned.

A separate application for graduation must be submitted to each dean of the college from which a degree is expected; and payment of the fee for each degree is required.

Dual Undergraduate Majors

A student may elect to complete two majors within the requirements of one bachelor's degree program. The request to plan a second major should be made to the assigned faculty adviser prior to the student's junior year so the second program can be properly planned in consultation with the appropriate department. Upon completion of all requirements, the two majors are listed on the application for graduation for approval by the adviser and dean prior to filing in Admissions and Records.

Undergraduate Minors

Each department offering an approved major, or any university interdisciplinary committee or board, may propose a minor for official program approval. A minor requires a minimum of 18 credits including 9 or more upper division.

The program requirements for each approved minor are specified in the college and department sections. A student completing the requirements must list the minor on the application for graduation for approval by the adviser and dean prior to filing in Admissions and Records. The minor is recorded when all graduation requirements are satisfied.

Undergraduate Thesis

Whenever a thesis is required for an undergraduate degree in any department, school, or college of the university, and such thesis is to be filed in the university library, the format of the thesis must conform to the requirements for the master's thesis.

Advanced Degrees

For professional and graduate degrees, see the Graduate School section in this catalog.

Transcript of Record

Upon the written request of eligible students and the payment of the proper fees, the Office of Admissions and Records issues official transcripts of the permanent records. (See Fees and Expenses section of this catalog for transcript fee and statement of payment of accounts.)

Transcripts of record do not show grades or credit earned on work in progress until the official close of the respective semester or registration period. Transcript orders should be placed in advance of the date needed to provide adequate time for processing—especially during the busy periods of registration and final examinations.



Regulations for Student Records

Confidentiality and Release of Information

The confidentiality and security of student educational records are of primary importance to the university.

As amended, the Family Educational Rights and Privacy Act of 1974 insures that eligible students have the right to inspect and review educational records, files, and other data; to waive the right of inspection and review of confidential letters and statements of recommendation filed since January 1, 1975; to challenge the content of educational records to insure that it is not misleading or inaccurate; to preclude any or all directory information from being released. Student access is not permitted to the financial statements of parents; confidential statements and recommendations filed prior to January 1, 1975; records which the student has waived the right to inspect; records of instructional, supervisory, and administrative personnel; records of the law enforcement unit of the university, which are kept separate from educational records, maintained solely for law enforcement purposes and available only to law enforcement officials of the same jurisdiction; records which are created and maintained by a physician, psychiatrist, psychologist, or other recognized professionals or paraprofessionals acting or assisting in a professional or paraprofessional capacity; or records of the university which contain only information relating to a person after that person is no longer a student. Requests for review of educational records are processed within 45 days of submittal.

The university does not allow access to, or the release of, educational records or other personally identifiable information without the written consent of the student except that the university must disclose information to students requesting review of their own records and to authorized governmental officials or agencies for audit and evaluation of state and federally supported programs. The university may disclose, without a student's written consent, educational records or other personally identifiable information to full-time university employees having authorized access; to the Director of Admissions and Registrar and/or appropriate officials of another school or school system in which the student intends to enroll; to persons or organizations providing student financial aid; to accrediting agencies engaged in ac-

crediting functions; to parents of a student whose status as a dependent has been established according to Internal Revenue Code of 1954, Section 152; in compliance with a judicial order or lawfully issued subpoena; to authorized officials in connection with an emergency, if knowledge of the information is necessary to protect the health or safety of a student or other persons. The written consent must be signed, dated, and include the birth date of the student. The written consent must specify the educational records to be disclosed, the purpose or purposes of the disclosure and the party or parties to whom the disclosure may be made.

Directory information is considered public and may be released without written consent unless specifically prohibited by the student concerned. Data defined as directory information include student's name, address (refers to either local or permanent), telephone number, date and place of birth, major field of study, participation in officially recognized activities and athletics, weight and height of athletic team members, dates of attendance, degrees and awards received, and the most recent previously attended educational agency or institution. In general, directory information is *not* available until after the end of each registration period.

A student may restrict the publication of information which appears in the annual campus directory by not completing the optional *directory card* provided during registration each fall semester.

A student may restrict the release of directory data contained on the registration *address and information card* by notifying the Office of the Associate Dean of Students, located in Thompson Student Services Center, Room 103, immediately following registration each semester.

Each office in which the educational records of students are located maintains a record of requests and releases of personally identifiable information.

Student educational records, maintained by and accessible to authorized university personnel, are located in the following offices.

Admissions and Records

Includes the application for admission, transcripts of previous academic achievement, correspondence, application for resident fees and

change in tuition status, registration documents, the permanent academic record, and records of disclosure. The director of Admissions and Registrar, located in Clark Administration Building, is responsible for the maintenance of these records.

Controller

Includes student fee and payroll records. The controller, located in Clark Administration Building, is responsible for the maintenance of these records.

Deans and Faculty Advisers

Admission evaluation including test scores, registration data, final grade reports, annual transcripts, graduation information, and miscellaneous advisement data.

Student Services

All offices are located in Thompson Student Services Center, except for the Student Health Service, located in Juniper Hall. Responsibility for student files is delegated by the dean of students to the associate dean and directors concerned.

Advisement Center: Certificates of admission, test scores, registration data, final grade reports, annual transcripts and miscellaneous advisement data.

Associate Dean of Students: Admission evaluations, test scores, registration data, final grade reports, honors, awards, student discipline files, and other supplementary data.

Career Planning and Placement: Placement files and other supplementary data.

Counseling and Testing: Test scores and supplementary data.

Financial Aid and Veterans' Affairs: Financial aid applications, applications for veterans' benefits, and other supplementary data.

International Student Adviser: Immigration records for each student attending the university on a visa status.

Special Programs: Faculty evaluation of student performance, financial statements, counseling and tutorial records, and other supplementary data.

Student Health Service: Medical history, examination, and record of treatment.

Retention and Disposition

The maintenance, retention, and disposition of documents relative to student educational records are governed by institutional policy.

A listing of documents and disposition schedules by specific office includes:

Admissions and Records

1. The permanent academic records of students are retained indefinitely.

2. Applications for admission and/or readmission, transcripts issued by other institutions, applications for resident fees, military service documents, undergraduate admission evaluations, advanced standing admission evaluation, including CBAPE, CLEP and ACT-PEP, changes of college, major or adviser and pertinent correspondence are retained until graduation or five years after the last date of attendance.

3. Final class (grade) lists including special (departmental) examinations. Continuing Education final grade reports, and registration source documents are retained five years.

4. The admission files of students who do not register, are disapproved or are incomplete, student data cards, changes of registration, withdrawal forms, transcript requests, and disciplinary action notices are retained for one year.

The fee for document reproduction is \$2.00 per copy. Policy prohibits reproduction of transcripts and similar documents issued by other educational institutions.

Student Services

Associate Dean of Students: Final grade reports are retained for five years after issuance. Honors, awards and other supplementary data are retained for two years after the end of the semester in which they occur. Admissions evaluations and registration data are retained for one year after the date of initial registration.

Student discipline files are retained for established periods of time depending upon the action involved.

Advisement Center: Certificates of Admission, test scores, registration data, final grade reports, annual transcripts and miscellaneous advisement data are retained for five years after last date of attendance.

Career Planning and Placement: Placement files are retained indefinitely.

Counseling and Testing: Test scores are retained indefinitely.

Financial Aid and Veterans Affairs: Financial aid applications are retained indefinitely.

Applications for veterans' benefits and their associated files are retained for three years.

International Student Adviser: Immigration records are retained for five years after the last date of attendance.

Special Programs: Faculty evaluations of student performance, financial statements, counseling and tutorial records, and other supplementary data are retained for five years after a student leaves the program.

Student Health Service: Medical histories, examinations and records of treatment, are retained for five years after the last date of treatment.



Fees and Expenses

All fees assessed are subject to change by the Board of Regents. Every effort is made to keep the fees as low as possible and still render the desired level of service.

Payment of Accounts

A student or former student having a delinquent account with the university is not permitted to register or to receive a transcript of record or a diploma.

Application Fee

Persons making application for admission to the university are charged a fee of \$5, which is not refundable nor applicable to any other fee.

Registration Fees

The registration fee for all students is \$31 per credit or credit equivalent except for those enrolled in the medical school, the Ed.D. program in education, and students under the special fee provision for persons 62 years of age or over. Summer fees are published in the summer school publications. Continuing education fees vary by course and program. Specific charges are available upon request from the continuing education office.

Tuition for Nonresidents

Tuition of \$1000 per semester is charged undergraduate and graduate students (excluding four-year medical students) registered for 7 or more credits who are nonresidents of Nevada. This is in conformity with Sections 10.020 and 396.540, Nevada Revised Statutes. Each student is responsible for providing documentary proof of Nevada residence on the application provided through the Office of Admissions and Records. This fee is in addition to the \$31 per credit registration fee.

Four-Year Medical Program

The registration fee for medical students is \$1,573 per semester. Nonresident students are charged tuition of \$2,141.50 per semester in addition to the registration fee.

Doctor of Education Program

A fee of \$75 per credit is assessed for 44 credits taken by students admitted to the doctoral program in education.

Special Reduced Registration Fee

Persons 62 years of age or older are permitted to register for credit or as auditors in any course without fee except as noted below. Lab fees and special instruction fees however, are not waived. Such registration does not entitle a person to any privileges usually associated with registration, e.g., student association membership, health service, or intercollegiate athletic tickets.

Enrollment in Summer Session or off-campus credit courses (independent study by correspondence and field study programs excepted) and in noncredit continuing education courses is permitted for one-half the regular registration fee. Reduced fee benefits are always subject to programs being otherwise self-sustaining.

Nondegree students who are native speakers of a foreign language may be permitted to register without fee for credit or as auditor in literature courses in that language.

Late Registration Fee

Students are expected to complete registration during the designated period and are assessed a fee if late. The fee is \$5 for each day to a maximum of \$25 for the fifth day or later. The late registration fee is applicable only to undergraduate and graduate students registered for 7 credits or more during the fall and spring semesters.

In the event the university does not provide adequate time for registration, the registrar may defer the assessment of this fee one day. This decision is made during the final hours of the scheduled registration period.

Student Associations

All students registered for 7 or more credits are members of Associated Students of the University of Nevada (ASUN) as undergraduates and Graduate Student Association as graduate students.

Student Health Service

All students registered for 7 or more credits are entitled to the service offered by the Student Health Service.

Admission to Intercollegiate Athletic Events

All undergraduate students registered for 7 or more credits are entitled to admission to intercollegiate athletic events pursuant to regulations established by the ASUN and the Athletic Department.

Refund of Fees

Registration Fees

1. 100 percent of registration fees are refunded for net credit load reductions made on or before the last day of registration. No refund of registration fees is granted for courses dropped after the last day of late registration.

2. 100 percent of registration fees are refunded for withdrawal from the university completed by the last day of registration. For withdrawals after the last day of late registration and prior to the sixth calendar week of instruction, a fifty percent refund of fees is granted. No refund is granted thereafter.

Nonresident Tuition

1. 100 percent of nonresident tuition is refunded for net credit reduction to six credits or less or withdrawal from the university on or before the last day of late registration.

2. No refund of nonresident tuition is granted for courses dropped after the last day of late registration.

3. A fifty percent refund of nonresident tuition is granted for withdrawals made from the university after the last day of late registration but prior to the end of the sixth calendar week of instruction. No refund is granted thereafter.

Dates of Refunds

Refunds of registration fees and nonresident tuition are issued near the end of the first six weeks of instruction.

Insurance and Special Fees

1. The optional hospital and accident insurance premium is nonrefundable but remains in force for the duration of the policy.

2. Refund of course related special fees are prorated on the basis of actual usage. Authorization for a refund of special fees must be originated by the department chairman.

Refunds for Exceptional Circumstances

Upon presentation of documentation and approval of the dean of students, a full refund of the registration fee and nonresident tuition is given upon official withdrawal at any time during the first eight weeks of the semester in the following instances:

1. Induction of the student into the U.S. Armed Forces.

2. An incapacitating illness or injury which prevents the student from returning to school for the remainder of the semester.

3. Death of student.

4. Death of spouse, child, or parent.

No refund is made if withdrawal is after the eighth week, regardless of circumstances.

Grant-In-Aid, Fee Waiver, and Accounts Receivable Card

Each student is expected to pay all assessed fees during registration unless the student is entitled to a grant-in-aid, elects the deferred payment plan, or makes arrangements, prior to registration day, with the Controller's Office for an accounts receivable procedure.

Deferred Payment Option

Contracts for deferred payment of room and board costs and/or registration fees which are in excess of \$200 are available during the registration period. Approximately one-half of the total due is payable upon registration. The balance is due and payable not later than Friday of the sixth week of instruction. This option is available during the fall and spring semesters only.

The registration of students who fail to meet the deferred payment plan on the date set for such payment will be cancelled.

Payment by Personal Checks

Personal checks are accepted in payment of fees or bills due the university. The university does not furnish counter checks and checks altered in any way are not accepted. A \$5 collection fee is assessed for any check returned unpaid by the bank.

Such checks must be made good within ten calendar days after notification or suspension procedures are instituted.

Accident and Health Insurance Plan

An accident and health insurance plan is available to all students registered for 7 or more credits. Coverage can be purchased at registration for that semester only. If coverage is desired for more than one semester or for dependents the carrier should be contacted. A representative of the carrier is normally available during the first two days of registration.

Special Instruction Fees

The fees assessed for specialized instruction depend entirely upon current costs and are required for:

1. Courses requiring equipment, facilities, or materials not available on the university campus; for example, bowling, golf, or certain field courses.
2. Private instruction in music and similar arts.
3. Noncredit courses, conferences, workshops, postgraduate professional seminars, and similar educational offerings.
4. Personal expenses of students incurred in connection with field trips or laboratories.

Graduation Fee

Each student who graduates with an associate, bachelor's, master's, professional, or doctor's degree, or receives an education specialist certificate, is required to pay a \$10 graduation fee.

Transcript of Record Fee

A fee of \$2 must be paid in advance for each transcript of record.

Other Fees

Late Application for Graduation, \$5; special examination fee, \$10 per course; Placement Office registration fee, \$5; Placement Office fee for reactivation and updating credentials, \$5; American College Testing Program (ACT) examination, \$25 if taken at time other than national test dates.

Housing and Food Service Fees

The fees for the 1982 spring semester were as follows and are subject to change for 1982-83:

Room—\$488 (includes \$22 for telephone).

Semester meal contracts:

10 meals per week—\$450.00

15 meals per week—\$520.00

20 meals per week—\$555.00

Meals may also be purchased for cash on a meal-by-meal basis.

Cancellations and Refunds: Housing contracts may be cancelled by the student without penalty if the student so requests in writing to the Housing Office prior to August 1 for the fall semester and January 1 for the spring semester. Cancellations after these dates and before registration into the assigned hall results in forfeiture of \$50.

If a student withdraws from the university after assignment to a hall, refunds are made at the rate of 75 percent during the first and second weeks, 50 percent during the third through the sixth weeks, and 25 percent during the seventh and eighth weeks. Students who elect to use the deferred payment plan are liable for the amount, if any, due in excess of what they have already paid.

Board charges are refunded on cancellations at 80 percent of the unused payments through the twelfth week. Refunds are not made after the twelfth week of the semester.



Student Services and Activities

The Office of Student Services provides a wide range of services to meet the needs of students and sponsors special programs designed to supplement the formal academic program and to promote the development of the individual.

Prospective students and their parents are invited to visit Thompson Student Services Center for general information regarding the university. An orientation program is scheduled prior to the beginning of each semester to acquaint new students with university procedures and to provide information needed during the first few weeks of the semester. During this time students have an opportunity to consult with their faculty advisers who will assist with the planning of a class schedule.

The Office of Student Services is administered and coordinated by the Dean of Student Services. The staff includes the associate dean of students; assistant deans of students for Student Union, university activities, orientation, and student programs; Director of Counseling and Testing; Director of Career Planning and Placement; Director of Financial Aid, Student Placement and Veterans; directors of Housing Services and Programs; Director of the Student Health Service; the international student adviser; Director of Special Programs; and the Coordinator of the Academic Advisement Center.

Academic Advisement Center

The Academic Advisement Center, under the supervision of the Dean of Student Services, is now in operation. Newly admitted students with undeclared majors in arts and science are assigned by the Office of Admissions and Records to the center for advisement. Also encouraged to use the center are nondegree students. However, the center is for everyone who wants to make use of the facility and everyone is encouraged to do so. The center is located in Room 105, Thompson Student Services, telephone (702) 784-1537.

Counseling and Testing Center

Professional Counseling

The Counseling and Testing Center is the primary counseling office for the students of the University of Nevada Reno. The center offers

both individual and group counseling services. The staff members are professionally trained counselors with experience in helping students with a variety of concerns. Personal problems and career and educational objectives are discussed. Typical concerns include adjustment problems, resolution of conflicts, interpersonal relationships, career development and learning more about oneself.

Throughout the year the counseling center offers a variety of opportunities for students to participate in groups which explore interpersonal and communication issues. These groups consider issues such as personal growth, anxiety reduction, sex roles and sexuality, and women's groups.

All sessions are confidential and any counseling records are open only to the student and the counselor. The counseling center is not connected with, or does not report to, any academic or disciplinary agency on campus. Appointments may be made by calling at the counseling center in Room 209, Thompson Student Services Center or by phoning (702) 784-4648.

Testing

The center's testing program includes both individual and group assessment. The individual tests include career interest, personality, and aptitude. The group tests include most tests required for admission or placement (ACT, GRE, MCAT, LSAT, GMAT) and equivalency examinations (CLEP, PEP).

Results of the ACT and SAT which students send to UNR are on file at the center. These results include information such as vocational interest scores as well as academic aptitude scores. Counselors are available to assist students with the interpretation of test information.

International Students

The international student adviser assists international students with official matters pertaining to passports, visas, release of funds, work permits, insurance, loans, regulations issued by home governments and the U.S. Immigration Service, contacts and dealings with other educational institutions, or organizations such as the Institute of International Education (IIE), foundations, and other groups. The adviser serves as the liaison between students and faculty, administration, community, and home governments.

The international student office assists international students and scholars with housing, financial problems, part-time employment (where authorized), and general orientation and integration into university and community life.

Prior to their arrival, arrangements for international students are made primarily through the Office of Admissions and Records. All first inquiries, applications, and transcripts of previous high school and university work should be addressed to that office; and all admissions and certified statements necessary to procure passports and visas are issued by that office.

International students are required to register for a full credit load (12 for undergraduates, 9 for graduates) each semester to maintain their legal status as students with the Immigration and Naturalization Service.

The international student adviser acts as ex-officio adviser to several international clubs—and is available in Room 102, Thompson Student Services Center.

Student Information Services

Students and student groups have frequent occasion to avail themselves of the guidance services provided by the Associate Dean of Student's Office. This office serves as a university clearing house for information, particularly with reference to extracurricular activities. Students who seek any kind of information or have problems of a social or extracurricular nature may obtain assistance from the personnel in this office or may be referred to the appropriate agency if a specialized problem exists. Staff members often advise student groups and organizations including ASUN boards, Student Judicial Council, service clubs, Associated Women Students, fraternities, sororities, and independent groups and organizations. Disciplinary counseling in connection with infractions of university rules and regulations is a function of the Associate Dean of Students.

General Information

Absences

There are no official absences from any university class. It is the personal responsibility of the student to consult with the professor regarding absence from a class. In the event that a student misses a class because of an official university function, or because of serious personal considera-

tions, a member of the Dean of Students' staff may, at his discretion, send an explanation to the instructor involved at the student's request. The instructor makes the final determination on whether the missed work can be completed at a time other than during the regularly scheduled class period.

Change of Address

Changes of address must be reported immediately to the Office of Admissions and Records and to the Associate Dean of Students' Office.

Housing Information

The university makes every effort to provide students with suitable living conditions, food, and housing. The core of the housing program is provided by the university residence halls which supply complete living facilities for approximately 1,000 men and women. In addition, a number of national fraternities and sororities maintain chapter houses near the campus.

General Policy

All regular, full-time students are eligible to live in university residence halls. Undergraduate student residents are expected to be enrolled in at least 12 credits per semester. On-campus living is available to part-time students on a space available basis; however, priority is given to full-time students.

Students are encouraged to request housing information immediately after they have been officially admitted to the university since the demand for on-campus housing usually exceeds the space available.

Residence Halls

The University of Nevada Reno maintains five residence halls which are supervised by the Office of Student Services.

Coed Residence Halls: Men and women are assigned to different areas in Nye, White Pine, and Juniper Halls. While the traditional personality of men's or women's floors is maintained, the student government and some social, recreational, and cultural activities are coeducational in nature.

Nye Hall is a high-rise hall accommodating 560 students with two students assigned to each room. There are lounges on each floor with a larger reception and lounging area in the main floor

lobby. A weight-training room is located on the lower level.

White Pine Hall accommodates 160 students in an innovative suite style. Each suite consists of four bedrooms, a living room, and bathroom facilities. There are no hallways or corridors, as all suites open directly to the outside. The spacious study lounge has a fireplace for special events and laundry facilities are available on the ground floor.

Juniper Hall, which houses 141 students, also offers a suite format, which includes two bedrooms and a common foyer/dressing area. As with Nye Hall, all public areas are carpeted and laundry facilities are available.

Residence Halls for Men and Women: Manzanita Hall has a long tradition as the women's residence hall. A study lounge and comfortable living room help create a home-like environment shared by 100 women. Lincoln Hall is the only all-male residence hall. Individuality in rooms and a large fireplace and recreation room serve the 78 men residents of this tradition-filled campus hall.

Application for Residence Halls: Each new student requesting university housing receives an application after official admission to the university. Both new and renewal contract forms should be returned as soon as possible to the Housing Office.

Rooms are assigned in the order in which contracts are received, and usually all space is assigned several weeks before the fall semester begins.

For additional information write to Housing, P.O. Box 8034, Reno, Nevada 89507 or phone (702) 784-6107.

Married Student Housing

The university maintains a limited number of one-bedroom, unfurnished apartments at reasonable cost. There are 40 one-bedroom apartments which share central laundry facilities. Applications for married student housing may be requested from the Housing Office.

Additional married student housing is available at the Stead facility. See *Stead Campus* under Off-Campus Housing.

Off-Campus Housing

The Office of Student Services maintains a listing service for students, faculty, and staff. The listings include off-campus privately managed apartment and house rentals, as well as listings of rooms in private homes and students seeking roommates.

While the university endeavors to assist students and staff in locating suitable housing in the Reno area, it does not inspect or approve such off-campus facilities. Therefore, all rental arrangements are made between the parties involved, and the university does not assume any responsibility in this area.

Landlords utilizing the services of the Housing Office are requested to abide by the university's policy on nondiscrimination. All reported acts of discrimination are subject to investigation and referral to the Nevada Commission on Equal Rights of Citizens. Those found guilty are denied listing privileges and are subject to legal action initiated by the injured party and/or the state.

Stead Campus: One and two bedroom unfurnished apartments are available at the Stead Campus for married students who are enrolled full-time and married staff. Students with children are given preference. These apartments are managed by the Stead Facilities administrator, telephone 972-0781.

Food Services

The university dining commons and snack bar are located in Jot Travis Student Union. "board and room" fees are listed in the section on Fees and Expenses.

Dining commons regulations for students are as follows:

1. All students have the option of contracting for one of several meal plans.
2. If the contract meal option is selected, students are expected to forward funds for housing and food service along with their new student or renewal housing contract; however, if the deferred payment option is selected, the signed deferred payment form should also be returned with the contract and funds.
3. The first meal served each academic semester is breakfast on the first day of registration and the last meal served is dinner on the day following the close of instruction. No meals are served during official university recesses.
4. Students living off campus who wish to eat in the dining commons may pay cash or purchase coupons or a meal ticket from the dining commons.
5. Students who officially withdraw receive a refund in accordance with the refund schedule (see Fees and Expenses section).

Jot Travis Student Union

Jot Travis Student Union is the informal social and recreational center of the university.

The union provides lounges, snack bar, typing room, space for banquets and luncheons, two auditoriums (Alumni and Pine) for programs and discussion groups, gallery arrangements for exhibitions of paintings, sculptures and prints and a meeting place for the entire university community.

The university bookstore is also located in Jot Travis Student Union.

Student programs emphasizing educational, social, recreational, and cultural activities are planned and administered by the ASUN Activities Board, with the counsel and guidance of the professional staff.

Student Health Service

The Student Health Service is located on the ground floor of Juniper Hall which is near the north end of Manzanita Lake across from the Jot Travis Student Union. General out-patient medical care is provided by two full-time physicians, a certified physician assistant, and clinic nurses. In addition, part-time consultants hold weekly clinics in the fields of gynecology, dermatology and mental health. Nutritional counseling is provided by senior students majoring in food and nutrition.

Clinic hours are 8 a.m. to 5 p.m. Monday through Friday during the regular semester and 8 a.m. to 4:30 p.m. during the summer sessions. The Student Health Service provides services during the semester breaks for those students who were eligible for care in the immediately preceding semester. Students enrolled for any number of credits during the summer session are eligible for care. Students not enrolled during the summer may upon payment of a special fee become eligible for summer health care.

Appointments are recommended to decrease patient waiting time. Emergencies are seen immediately. Patients without appointments are generally seen in the order of arrival at the Student Health Service.

A clinical laboratory and X-ray service is available at the Student Health Service. Commonly prescribed generic medications are dispensed without charge for treatment of acute illness and injury.

The Student Health Service is funded mainly by a budgeted allocation from UNR student fees and is available to all students registered for seven or more credit hours. Graduate students registered for less than seven credit hours but who are primarily involved in academic pursuits may request permission to use the Health Service and

become eligible upon payment of a semester health service fee. Truckee Meadows Community College students carrying seven or more credit hours are also eligible for health care upon payment of a semester or summer health fee.

All services provided are free of charge except for electrocardiograms and special lab tests sent to outside medical laboratories. Additionally, students requiring a physical examination for personal needs such as for life insurance applications, pre-employment physicals, etc., may have their physicals done at the Student Health Service for a modest fee.

Students enrolling for the first time or re-enrolling after an absence of a year or more are requested to complete a health questionnaire. The staff at the Student Health Service observes a high ethical code concerning confidentiality. Information regarding an individual's medical record can be released only after written permission is given by the patient.

Student Hospitalization-Accident Insurance: The university provides an optional health insurance program with a national health insurance company. This insurance provides for benefits to apply against expenses incurred for hospitalization, consultation and for services not available at the Student Health Service. Coverage is in effect during the entire semester, whether at school or away. Additional coverage for non-student spouse and/or children is available.

All students eligible for Student Health Service care (registered for seven or more credits) may elect to purchase this supplemental hospitalization-accident insurance. Students must sign up for this insurance during a limited enrollment period at the beginning of each semester. Insurance may be purchased for a single semester or for the entire year. It is strongly recommended that students avail themselves of this insurance plan to cover the situations where the needed care cannot be provided at the Student Health Service.

Special Programs

The Office of Special Programs provides assistance to undergraduate students who require academic support services and special advisement services to help them succeed in the academic environment. The office provides the following services: the Educational Opportunity Program grants, Bureau of Indian Affairs grants, individual advisement, readers for blind students, interpreters for the deaf, notary services, individual and group tutoring, counseling for

handicapped students, assistance in basic English and writing. There is also a typing lab which is open to all students Monday-Friday 8:00 a.m. to 5:00 p.m. in Room 211, Thompson Student Services Center. These services are designed to help students overcome the four major obstacles to higher education: financial, communication, cultural, and physical barriers. Additional information may be obtained in Thompson Student Services Center or by calling (702) 784-6801.

Handicapped Students: A handicapped student is defined as one with a physical, sensory, learning, or emotional impairment which substantially limits the person from participating in and/or securing the benefits of a postsecondary education. The handicapping condition may be temporary or permanent. Handicapped students who need special parking permits, assistance in scheduling classes or special academic support services should call at Room 211, Thompson Student Services Center.

Financial Aid*

The university administers an intensive financial aid program so that qualified students will not be denied an education because of financial need. Aids such as scholarships, fellowships, assistantships, awards, grants, loans, student employment, and deferred payment are granted in order to encourage continued academic success and to assist needy, capable students in financing their college educations.

Financial aid is offered to qualified students who hold promise or have demonstrated their ability to engage successfully in the pursuit of higher education and who have need of assistance in meeting educational expenses. This need may be overcome through a single financial aid or a combination of aids available.

Because of the emphasis placed upon a college education and the increasing costs to the student and his parents, the university will continue to enlarge upon and refine its program of financial aid to students. It is with assistance from interested individuals, groups, business firms, governmental agencies, and alumni that the university can continue to meet these ever-increasing responsibilities.

The majority of university financial aids for students are administered by the Director of Financial Aid located in the Thompson Student Services Center.

Qualifications

Financial aid is predicated upon the applicant maintaining at least a C average (undergraduate) or at least a B average (graduate) and being regularly enrolled as at least a half-time student (6 or more semester credits for undergraduates, 5 or more graduate credits for graduate students). Students enrolled for half time or more are eligible for all federal financial aid contingent upon their need and the availability of federal funds.

Further, students receiving financial aid must maintain satisfactory progress toward completion of their respective degree or certificate in order to remain eligible for student aid funds. Satisfactory progress, as defined by university policy, means that each student must complete and receive credit for at least the *minimum* number of credits in each category for which they were funded each semester. These are listed below.

Full:	Undergraduate—12 or more credits
	Graduate—9 or more graduate credits
	Graduate Assistants—5 or more graduate credits
¾ time:	Undergraduate—9 through 11 credits
	Graduate—7 through 8 graduate credits
½ time:	Undergraduate—6 through 8 credits
	Graduate—5 through 6 graduate credits

Students who do not complete the required number of credits are ineligible to receive financial aid until the deficit is made up. Appeals concerning UNR's *satisfactory progress* requirements may be made to the Director of Financial Aid.

It is expected that recipients of financial aid will maintain or improve the level of academic achievement required for selection.

The use of financial need as a major factor in determining eligibility of a student for assistance is an effort to offer more equitable distribution of the limited funds available to qualified students.

Financial aid is considered as a supplement to the funds provided by the student and family. The university evaluates all outside sources of income which are available and expects the student to utilize them completely. The Director of Financial Aid attempts to make available the assistance necessary to provide for the balance of the student's legitimate educational expenses.

Applicants for the National Direct Student Loan (NDSL), Nursing Student Loan/Scholarship, Health Professions Student Loan, Excep-

*Refer to the Financial Aids Calendar at the end of this section for deadline dates.

tional Financial Need Scholarship for Freshman Medical Students, Supplemental Educational Opportunity Grant, Nevada Student Incentive Grant, College Work-Study Program, and the College Work-Study Graduate Assistantship Program are required to complete and submit the ACT Family Financial Statement (ACT-FFS) and Financial Aid Transfer Records. Entering freshmen may secure the ACT-FFS from their local high school counselor. All other students may obtain the FFS from the university Financial Aid Office.

Financial Aid Eligibility Review Committee

The purpose of this committee is to screen those financial aid applicants who are *re-entering* the university from other accredited institutions and who are currently ineligible for financial assistance due to an earlier University of Nevada Reno deficiency. The committee makes recommendations to the Director of Financial Aid. The final decision on any recommendation is the responsibility of the director. Students who wish to apply for review may do so by contacting the Dean of Students' Office.

Loans

Three main types of loans are available to qualified university students from funds provided by interested donors. They include the following:

1. Emergency loans involving small amounts of money for short periods of time, readily available to qualified students for bona fide emergencies.

2. University loans normally payable within a year or before graduation (whichever is first), available to qualified students who have completed at least one semester at either University of Nevada campus for educationally connected expenses while they are enrolled as at least half-time students.

3. Long-term loans on a low-interest basis available through the university for qualified students under these programs:

(a) National Direct Student Loans.

(b) Nevada Guaranteed Student Loans (including USA or federally guaranteed *bank loans* from other states).

(c) Nursing Student or Health Professions Loans.

In the event of the death of a student, the Dean of Student Services may, if circumstances warrant, authorize the cancellation of any or all

financial obligations due the university. The policy does not supersede existing federal regulations governing NDSL, nursing, or other federal aids already having cancellation provisions.

Further information on loans may be obtained by contacting the Financial Aid Office.

Student Loan Funds: Specific university loan funds are assigned by the Financial Aid Office to those students who qualify and/or who have satisfactorily completed one or more semesters at the University of Nevada.

Henry Albert and Edith W. Albert Trust Fund (1969)

Maximum loan is \$1,500 per academic year with an additional \$500 available for the preceding or succeeding summer session. Interest is at 4 percent simple per annum. Repayment maximum of five years from termination of student status.

Anonymous Loan Fund (1942)

Varies at a rate of 4 percent simple interest. Repayment: up to a year.

Block "N" Loan Fund (1938)

Varies at a rate of 6 percent simple interest. Repayment: up to a year.

Ira G. Blundell Loan Fund (1974)

Varies at a rate of 4 percent simple interest. Repayment up to a year. For undergraduate students.

J.S. Buchanan Memorial Loan Fund (1956)

Repayment: up to a year.

Louella Rhodes Garvey Loan Fund (1934)

Maximum loan is \$200 at no interest. Repayment: normally less than six months

William Goodfellow Loan Fund (1944)

Maximum loan is \$500 at 4 percent simple interest. Repayment up to a year.

Daniel and Elizabeth M. Grant Memorial Loan Fund (1969)

Maximum loan of \$200 with 1½ percent simple interest per annum. Repayment: within four years of date of loan.

Charles Haseman Memorial Loan Fund (1940)

For qualified students who have finished calculus. Maximum loan is \$100 at 1½ percent interest. Apply to Director of Financial Aid with recommendation of Chairman, Mathematics Department. Repayment: within four years of date of loan.

Health Professions Loan Program (1971)

For regularly enrolled full-time students who are pursuing a course of study leading to a degree of Doctor of Medicine. Citizenship or permanent residency in the U.S. as well as financial need for the loan to pursue the course of study are also required. Maximum loan: \$2,000 plus cost of tuition and fees per academic year. Nine percent simple interest rate. Repayment: up to ten years after graduation or termination of full-time student status in the prescribed course of study.

Daniel C. Jackling Student Loan Fund (1959)

For a qualified student in Mackay School of Mines. Loan varies (geared to normal costs of college). Apply to director of Financial Aid with recommendation of dean, Mackay School of Mines. Repayment: within one year after graduation or termination.

Douglas J. Jackson Memorial Loan Fund (1977)

Maximum loan amount varies at 4 percent simple interest. Repayment: up to one year.

National Direct Student Loan Program (1959)

For regularly enrolled students who are at least half time and meet specific academic and need requirements. Maximum loan: undergraduates, up to \$6,000; graduate students, up to \$12,000. Five percent simple interest. Repayment up to ten years after graduation or termination of half-time status.

Nevada Federation of Women's Clubs, Emergency Loan (1961)

For any regularly enrolled student with a bona fide emergency who is not on probation. Maximum loan is \$100 with nominal service charge. Repayment: 30 to 60 days.

Nursing Student Loan Program (1964)

For regularly enrolled full-time students seeking bachelor's or associate degrees in nursing, or an equivalent degree or diploma in nursing, who meet specific academic and need requirements. Maximum loan is \$2,500 per year at 6 percent simple interest. Repayment: up to ten years after graduation or termination of full-time status.

Donald W. Reynolds Foundation in Journalism (1957)

Preference given to qualified students preparing for a career in a communications medium. Maximum loan is \$500 per year up to \$2,000 at 2 percent simple interest.

David Russell Loan Fund (1908)

Maximum loan is \$300 at 4 percent simple interest. Repayment up to one year.

J.M. Slattery School of Medical Sciences Loan Fund (1973)

For medical students pursuing the medical doctor program. Maximum loan is \$1,000—normally up to \$500 in any school year at 4 percent simple interest. Up to one year normal repayment period.

Wesley E. Travis Loan Fund (1953)

Maximum loan is \$500. Repayment: up to one year.

United States Aid Funds (1962) and *Nevada Guaranteed Student Loans* (1969)

For qualified undergraduate or graduate students who are attending the University of Nevada Reno on at least a half-time basis. Maximum loan per year of \$2,500 for undergraduate dependent student, and \$5,000 for graduate students. Total amount borrowed under this program may not exceed \$12,500 for undergraduates and \$25,000 for graduates. Interest does not exceed 9 percent simple per year. The federal government pays all interest while applicant is at least a half-time student and also during the 6 or 9 month grace period after graduation or termination. Repayment may extend up to ten years after graduation or termination.

Ed and Mary Von Tobel Memorial Loan Fund (1968)

For engineering and mining students. Maximum loan of \$500 with interest at 4 percent simple per annum. Repayment to begin not later than one year after terminating student status and paid in full within four years.

Olin W. Ward Bequest (1915)

For any qualified male student of "good moral character" in financial need. Maximum loan is \$300 at no interest. Repayment: up to seven years after date of loan.

Donald R. Warren Loan Fund (1945)

Maximum loan is \$100. Repayment: up to one year.

Vol Wilson Loan Fund (1970)

For a qualified student at the University of Nevada Reno who is majoring in music.

Grants

Grants such as the Pell Grant, Health Professions-Exceptional Financial Need Scholarship Program, Nevada Student Incentive Grant, Nursing Scholarship Program and the Supplemental Educational Opportunity Grant are outright gifts to help students defray educational expenses. Grants are awarded primarily on the basis of need and are utilized in conjunction with other financial aid resources. For further information, contact the Director of Financial Aid.

Student Placement

Regular student employment referral service for all campus part-time jobs and numerous off-campus positions is available to qualified students. This service is for those students who are

enrolled on at least a half-time basis and are making satisfactory academic progress. The student employment officer and staff fill hundreds of part-time jobs each semester with qualified students. Full-time summer intern and cooperative education program opportunities exist through Student Placement Office contact with employers.

The coordinator of Job Location and Development has the responsibility to develop additional jobs, particularly those that are career oriented for students to improve their opportunities for meaningful work while attending school.

Students who are entering the university for the first time are advised not to seek employment until they have their class schedules finalized. Further information may be obtained from the Student Placement Office in Thompson Student Services Center.

The Work-Study Program, under the Higher Education Act of 1965, is available to those entering or returning students who are enrolled on at least a half-time basis who can qualify on the basis of financial need. Under this program students may obtain work in their major areas which relates to their educational or vocational objectives. Graduate students qualifying for financial aid may apply for the College Work-Study-Graduate Assistantship Program (CWS-GAP). Graduate assistants receive a monthly salary and a partial fee waiver if accepted for the program. Applications should be submitted to the Director of Financial Aid.

The university makes all decisions regarding recruitment, hiring, and all other terms and conditions of employment without discrimination on the basis of race, color, creed, sex, national origin, physical or mental handicap, or other factors which are not a lawful basis for employment decisions.

Scholarships and Prizes

All communications concerning scholarships should be addressed to the director of Scholarships. Students should understand that scholarships are awarded primarily on the basis of scholastic proficiency, with factors of need, character, service, and certain specialized talents also bearing upon selection. Scholarship applications on the Reno campus are submitted to the director of Scholarships in January of the year preceding the academic year for which the awards are sought. Recipients of scholarships are notified by letter at approximately the time of commencement each year.

All scholarship stipends are divided into two equal parts with one-half made available to the student on registration day of the fall semester. The second half of the award is released to the student on registration day of the spring semester, provided the recipient has maintained scholarship proficiency during the fall semester.

Scholarships are offered students for the purpose of encouraging continued academic excellence and to promote higher achievement. Recipients must be regularly enrolled, full-time students at the university during the academic year when they receive their awards.

Applicants for regular undergraduate scholarships must have a minimum 3.0 grade-point average (on a four-point scale) for all college credit with at least one semester completed at UNR. Annual scholarship awards are routinely divided in half with the first stipend released on fall registration day and the second on spring registration. Students are not eligible for spring scholarship stipends unless they complete 12 or more credits in the fall semester with a 2.75 grade-point average or higher. Applicants for regular freshman scholarships must have completed high school in Nevada with a B or better average in the academic course work attempted and must score sufficiently high in the American College Testing Program. All applications are due in the Scholarship Office on or before March 1.

There are three types of scholarships available to students at the university, as follows:

Amounts of Awards

Most scholarships range from \$350 to \$700.

Type I Awards: These awards are made to students from any division of the university, usually without respect to class level or academic interest.

AAUW Scholarship (Helen Atkinson Memorial)
 Jewett W. Adams Memorial Scholarship
 Alumni Association Scholarship
 ASUN Scholarship
 Camillo Barengo Memorial Scholarship
 Mabel and Helene Batjer Memorial Scholarship
 Josephine Beam Memorial Scholarships
 The Jim Beaver Memorial Fund Scholarship
 Cleo Seaton Bowman Memorial Scholarship
 Bently Nevada Engineering Scholarship
 Charles Francis Cutts Memorial Scholarship
 Daughters of Union Veterans of the Civil War Scholarship
 Bob Davis Memorial Scholarships
 Lino Del Grande Scholarship
 Maude F. Dimmick Memorial Scholarship
 Exxon Education Foundation Scholarship
 Max C. Fleischmann Freshman Scholarships
 Max C. Fleischmann General Scholarships
 Mary Florentz Scholarship
 Julia S. Gipson Scholarship
 Warren Graham Scholarship
 Grand Army of the Republic Scholarship
 Marvel Guisti Award of Excellence

R. Herman and N.B. Herman Scholarship
 Harry F. Holmshaw Memorial Scholarship
 Virginia M. Johnson Memorial Scholarship
 Alan Ladd Johnston Scholarships
 C.L. (Chauncey) King Memorial Scholarship
 Willard J. Larson Scholarship
 Fred Mackenzie Memorial Scholarship
 Doug Magowan Memorial Scholarship
 Rose Sigler Mathews Scholarship
 Jessie Patricia McCarthy Memorial Scholarship
 Leonard H. McIntosh Foundation
 Murdock McLeod Memorial Scholarship
 Pearl Mesta Memorial Scholarship
 Elaine Mobley Scholarship
 Lloyd & Martha Mount Memorial Scholarship
 National Student Association Scholarship
 (George M. Williams, President)
 E.J. Questa Scholarships for 4-H Participants Scholarship
 Reno Business & Professional Women's Club Scholarship
 Reno High - Class of '69 Scholarship
 Elizabeth O. Ross Honor Scholarship
 Dr. Ruth Russell Memorial Scholarship
 Tracy Saulisberry Memorial Scholarship
 Scottish Rites Masonic Bodies of Nevada
 Soroptimist Club of Reno Scholarships
 Soroptimist International of Carson City
 Frederick Stadtmuller Memorial Scholarships
 Frederick and Anna Stadtmuller Memorial Scholarships
 Jerry Tyson Memorial Scholarship
 U.S.S. Reno Memorial Scholarship
 Dr. Peter B. Wagner Memorial
 Lloyd Welch Memorial Scholarship
 Glen E. Whiddett Memorial Scholarship
 Charles and Faye Zanay Scholarship

Type II Awards: Type II awards are scholarships granted to students pursuing work in a particular college or department who, in addition to meeting general scholarship criteria, have the endorsement of the faculty scholarship representative in the college or department concerned. Students interested in receiving a Type II award are encouraged to make this interest known to the chairman or head of the particular university division concerned.

Max C. Fleischmann College of Agriculture
 Chester A. Brennan Memorial Scholarship
 Mary E. Dalton Memorial Scholarship
 Fleischmann Agriculture Scholarship
 Robert A. Hanson Memorial Scholarship
 Dick Kleberg Agricultural Scholarship
 Harvey and Thelma Reynolds Scholarship
 Robertson-Fleming Range Management Scholarship
 Dr. Charles Seufferle Memorial Scholarship
 Trans-Mississippi Golf Assoc. Turf Scholarship

College of Arts and Science
 Morgan Anglim Memorial Art Scholarship
 Kate L. Bartholomew Memorial Journalism Scholarship
 George and Harriet Basta Men's Intercollegiate Scholarship
 A. Irene Bateman Memorial Art Scholarship
 Loucile and Alan Bible Political Science Scholarship
 Marye Williams Butler Memorial Mathematics Scholarship
 Dr. John Carrioco Memorial Scholarship (Music)
 Azro E. Cheney Memorial English Scholarship
 Chevrolet Coach-of-the-Year Scholarship
 Comstock Sertoma Scholarship (Speech Pathology, Audiology)
 Royna Craig Memorial Mature Woman Scholarship
 James R. Crane Memorial Art Scholarship
 D.B.S. Incorporated Scholarship
 Delta Zeta Sorority Speech & Hearing Scholarship
 Jessie Dewar Art Scholarship
 Gannett Newspaper Foundation Journalism Scholarship
 Alleta Gray Memorial Music Scholarship

Houghton Foundation Scholarships in Art and Music
 Ira LaRivers Memorial Biology Scholarship
 Jake Lawlor Athletic Scholarship
 Carrie B. Layman Memorial Scholarship in History and Political Science
 Hedvig and Sigmund W. Leifson Scholarship in Physics
 Lenz Scholarship in Music
 Guy Leonard Memorial Scholarship in English and Philosophy
 Adele Mayne Liddell Memorial Music Scholarship
 Mark Lister Memorial Scholarship (Sigma Nu)
 Elizabeth Locke Memorial Music Scholarship
 Karen Loehr Graduate Student Fund Scholarship
 James H. MacMillan English Scholarship
 O'Hara and Martin Scholarships in History and Political Science
 Joseph and Leola McDonald Scholarship in Journalism
 Howard F. McKissick Jr. & Sr. Memorial Scholarships
 Agnes Momand Memorial Scholarships
 Joe E. Moose Research Award in Biology and Physics
 Nevada State Golf Association Scholarship
 Nevada State Press Scholarship
 Paul R. Pinching Memorial Scholarship
 Phi Kappa Phi Scholarship
 Reno Advertising Club Graduate Fellowship
 Reno Advertising Club Undergraduate Fellowship
 Reno Newspapers Journalism Scholarship
 Katherine Riegelhuth Memorial Scholarship in Nursing and Biology
 John-Douglas Robb Memorial Scholarship
 Savitt Family Athletic Scholarships
 Scripps Foundation in Journalism Scholarship
 John and Louise Semenza Memorial Scholarship in Social Services
 Craig Sheppard Memorial Art Scholarship
 Robert A. Simpson Memorial Music Scholarship
 Speidel Newspapers Charitable Foundation Journalism Scholarship
 Jack Stevenson Memorial Scholarship
 Sociedad Honorificia Mexicana Scholarship
 Society of Organized Latins Scholarship
 C. H. Stout Scholarship in Journalism
 Mary Elizabeth Talbot Memorial Mathematics Scholarships
 Theatre Scholarship Fund
 Regent Helen Thompson Athletic Scholarship
 Reuben C. Thompson Memorial Philosophy Scholarship
 Joseph W. Weihe Memorial Mathematics Scholarship
 Dr. Charles V. (Tom) Wells Memorial Scholarship
 Jerry and Betty Wilson Memorial Scholarship
 Fuji Woon Scholarship in French
 Frederick H. Williams, Jr., Sundowner Scholarship
 Xerox Corporation Athletic Scholarship
 Kenneth W. Yeates Athletic and Psychology Scholarships
 Loni Dee Yopp Memorial Music Scholarship
 Young Nevada Journalist Scholarship

College of Business Administration

Bill Archer Scholarship of the Data Processing Management Association
 O.G. Bates Memorial Scholarship
 CPA Wives of Northern Nevada Accounting Scholarship
 Elmer Fox, Westheimer & Company CPAs Scholarship
 Leslie O. Fart Memorial Scholarship
 Alexander Grant & Company Accounting Scholarship
 Leppner, Ballard, Nickel and Crofoot Scholarship
 William and Helen Kunce Memorial Scholarship
 Union Manufacturing Company/Trainee Program
 Pat Mooney Scholarship
 National Association of Accountants Scholarship
 Nevada Association of Realtors Scholarship
 Nevada National Bank/Trainee Program
 Nevada Society of CPAs Scholarship
 Pannell, Kerr, Forster Scholarship
 Returning Students Award
 Aileen R. Shewalter Memorial Scholarship
 Small Firm Accounting Scholarship
 Society of Real Estate Appraisers Scholarship
 Speidel Newspapers Charitable Foundation Business Scholarship

College of Education

John A. Bailey Professional Expectancy Award in Counseling
 Mary Sartor Memorial Scholarship
 Rita Hope Winer Scholarship

College of Engineering

Frank O. Broili Memorial Scholarship in Electrical Engineering

Charles E. Clough Memorial Scholarship
 Royal D. Hartung Industrial Education Scholarship
 Richard Hellmann Memorial Scholarship
 Mrs. Carl Otto Herz Scholarship in Electrical Engineering
 Nevada Society of Professional Engineers Scholarship
 Andrea Raddatz Engineering Scholarship
 Women in Construction Scholarship

Sarah Hamilton Fleischmann School of Home Economics

Nevada Home Economics Scholarship
 Nevada School Food Service Association Scholarship
 Nora and James Ryan Memorial Scholarship
 Northern Nevada School Food Service Scholarship
 Nora and James Ryan Memorial Scholarship

Mackay School of Mines

AMAX Foundation, Inc. Scholarship
 American Borate Company Scholarship
 Amselco Scholarship
 Anaconda Company Scholarship
 ASARCO Foundation Scholarship
 Enfield B. Bell Memorial Geology Scholarship
 Chevron Resources Company Scholarship
 Chevron Scholarship in Economic Geology
 The Cleveland-Cliffs Foundation Scholarship
 Consolidation Coal Company Scholarship
 Copper Mines Foundation Scholarship
 Viola Vestra Coulter Foundation Scholarship (junior or senior)
 Viola Vestra Coulter Graduate Scholarship
 Continental Oil Company Scholarship in Geology
 Dow Chemical Scholarship in Chemical Engineering
 Duval Corporation Scholarship
 Flintkote Company Scholarship
 FMC Corporation Scholarship
 Fluor Mining and Metals Scholarship
 Getty Oil Company Scholarship
 J.R. or Virginia H. Gignoux Scholarship
 Royal D. Hartung Industrial Education Scholarship
 Kennecott Copper Corporation Scholarship
 Kerr-McGee Foundation Scholarship
 Parker Liddell Memorial Scholarship
 George Burke Maxey Memorial Scholarship
 Mineral Industries Educational Foundation Scholarships
 Newmont Mining Corporation Scholarship
 Larry Noble Memorial Scholarship
 Warren V. Richardson Memorial Scholarship
 Rosorio Resources Corp. Scholarship
 Frank Sharp Scholarships
 Union Carbide Scholarship
 Utah International, Inc. Scholarships

School of Medicine

Dr. Fred M. Anderson Scholarship
 Clark County Medical Society Auxiliary Scholarship
 Errett Lobban Cord Memorial Scholarship
 Laura M. Cummings Memorial Scholarship
 Dr. Francis R. Dean Memorial Scholarship
 Carl and Eleonora Esping Memorial Scholarship
 Dr. Mary Hill Fulstone Scholarship
 Wesley W. Hall, Sr. Memorial Planning Service Scholarships
 H. Hamer Holloway Memorial Scholarship
 Manville Memorial Fund Scholarship
 H.E. Manville, Jr. Scholarship
 Hubert E. McCoskey Memorial Scholarship
 Medical School Achievement Scholarship
 Don Mello Annual Award
 Dr. George Steinmiller Memorial Scholarship
 Richard Sugden Scholarship

Orvis School of Nursing

Allstate Foundation Scholarship
 Nora S. Kawamura Memorial (Nursing) Scholarship
 Nevada Association of Medical Assistants Scholarship
 Nevada Lung Association Scholarship
 Nevada State Nurses Association (District #1) Scholarship
 Quota Club of Reno Scholarship
 Jackie Rea Memorial Scholarship
 Katherine Riegelhuth Memorial Scholarships in Nursing and Biology
 Stoops Student Nurse Award

Department of Military Science

American Legion ROTC Scholarship
 AUSA General Westmoreland Chapter Scholarship
 Colonel's Coeds Scholarship
 National Council of Juvenile Court Judges Scholarship
 Nevada State Medical Association Scholarship
 Retired Officers Association, Sierra Nevada Chapter Scholarship
 Paul Charles Rudy Memorial Scholarship
 Veterans of Foreign Wars Scholarship
 Lt. George M. Wisham, Jr. Memorial Scholarship

Type III Awards: Type III awards are presented to students by individuals or organizations independent of the university. Funds associated with them are held in trust by the university and administered by the Scholarships and Prizes Board.

A.A.R.P. Walker Lake Chapter #657 Scholarship
 Buck and Randy Aiazzi Memorial Scholarship
 Aid Association of Lutherans Scholarship
 Alpha au Omega Scholarship
 American Association of Teachers of Spanish and Portuguese Scholarship
 American Association of University Women Scholarship
 American Baptist Student Aid Program Scholarship
 American Business Women's Association Scholarship
 A.B.W.A. Truckee Meadows Chapter Scholarship
 American Federation of Mineralogical Society Scholarship
 America's Junior Miss Scholarship
 American Legion Auxiliary, Dept. of Nevada Scholarship
 Analy High School Scholarship
 Army Emergency Relief Scholarship
 John Ascuaga Scholarships
 A.I.M.E. Scholarship (Colorado Plateau Section)
 Barton Memorial Hospital Auxiliary Scholarship
 Basic High School Scholarship
 Battle Mountain High School Scholarship
 Bently Nevada Scholarship
 Dr. James Botsford Memorial Scholarship
 Bowling Council of Nevada Scholarship
 William Broadhead Memorial Scholarships
 Howard E. Browne Scholarships
 Business & Professional Women's Club Scholarship (National)
 Scott Campbell Memorial Scholarship
 Candelaria Partners—Occidental Minerals Corp. Scholarship
 Carson City Builders Association Scholarship
 Carson City Chapter, A.B.W.A. Scholarship
 Carson City Business & Professional Women's Club Scholarship
 Carson City Rotary Club Scholarship
 Carson City Council—Beta Sigma Phi Scholarship
 Carson High School Scholarships
 The Christian Foundation Scholarship
 Churchill County High School Scholarship
 The Clark Foundation Scholarship
 Continental Association of Resolute Employers Scholarship (C.A.R.E.)
 Continental Telephone Service Company Scholarship
 Cornell University Scholarship
 George C. Coverston Scholarship
 The Davey Foundation Scholarship
 Dimond-Mears Complex, Anchorage, Alaska Scholarship
 Thomas E. Dixon Memorial Scholarship
 Doctors' Wives of Washoe County Scholarships
 Douglas County High School Scholarship
 Doyon, Limited Scholarship
 Elks Club Scholarship (Carson City)
 Elks National Foundation Scholarship
 Elks Reno Lodge #597 Scholarship
 Elko Lions Club Scholarship
 Sadie L. and James T. Elliott Memorial Scholarship
 Ely Lodge #1469 B.P.O. Elks Scholarship
 Emblem Club Scholarship (California State Association)
 Emblem Club of Reno #372 Scholarship
 Supreme Emblem Club of the United States Scholarship
 Emblem Club of Carson City #507 Scholarship
 Faculty Wives Club—UNR Scholarship

Fundacao Calouste Gulbenkian Scholarship
 (Dept. of Armenian Affairs)
 Gabbs P.T.A. Scholarship
 Gamma Phi Bety Sorority Scholarship
 Gemco Scholarships
 Grand Lodge I.O.O.F. Scholarship
 The Greater Reno Italian Golf Association Scholarship
 Gannett Newspaper Foundation Scholarship
 The Randy Hall Scholarship
 E.C. Hallbeck Memorial (American Postal Workers Union) Scholarship
 Teddy Bear Havas Scholarship
 Hawthorne Kiwanis Club Scholarship
 Hawthorne Lions Club Scholarship
 Helen and O.C. Hing Memorial Scholarship
 Proctor R. Hug High School Scholarships
 Indian Health Employees Fund, Inc. Scholarship
 Indian Springs High School Scholarship
 Institute of Nuclear Power Operations Scholarship
 International Brotherhood of Electrical Workers,
 Local Union #357 Scholarship
 International Brotherhood of Teamsters Scholarship
 Ikramullah Khan Scholarship
 Italian Catholic Federation of California Scholarship
 Japanese American Citizens League Scholarship
 Jones-West Ford Scholarships
 Jean A. Kelly Memorial Scholarship
 Kerak Temple Scholarship
 Kiwanis Club of Carson City Scholarship
 Kiwanis Club of Reno Scholarship
 Lake Tahoe Nevada Republican Women's Club Scholarship
 Las Vegas Numismatic Society Scholarship
 Levi Strauss Foundation Scholarship
 Lion Manufacturing Scholarship/Trainee Program
 Mark Lister Memorial (Sigma Nu) Scholarship
 Lyon County 4-H Leaders Council Scholarship
 Lyon County Unit Retired Teachers Assn. Scholarship
 Maine Indian Scholarship Fund
 Marine Corps Scholarship Foundation, Inc.
 Frank McCleary Medical Scholarship
 (Daughters of the American Revolution)
 Minden Fortnightly Club Scholarship
 Minden Rotary Club Scholarship
 Miss Elko County Scholarship (Elko Lions Club)
 Miss Nevada Pageant Scholarship
 Miss North Lake Tahoe Pageant Scholarship
 Miss Reno Scholarship
 Miss Washoe County Scholarship
 Rollan Melton Scholarship
 Dave Myers Memorial Fund, Inc. Scholarship
 W.H. Myers, Jr. Scholarship
 National Assn. of Negro Business & Professional Women's Club
 Scholarship
 National Assn. of Secondary School Principals Scholarship
 National Society of Professional Engineers Scholarship
 Negro Business & Professional Women's Club Scholarship
 Nellis Officers Wives' Club Scholarship
 Nevada Classified School Employees Assn. Scholarship
 Nevada Cement Company Scholarship
 Nevada Insurance Educational Foundation Scholarship
 Nevada Junior Miss Scholarship
 Nevada Liquefied Gas Dealers Scholarship
 Nevada National Bank/Trainee Program Scholarship
 Nevada State Fireman's Fund Scholarship
 Nevada Telephone—Telegraph Company Scholarship
 Optimist Club of North Lake Tahoe Scholarship
 Organization of Spanish Speaking People Scholarship
 Order of Ahepa District #9 Scholarship
 Osage Scholarship Committee Diocese of Tulsa
 Pahrangat Valley High School Scholarship
 Pennwalt Foundation Scholarship
 P.E.O. Sisterhood, Chapter X Scholarship
 Rainbow Girls of Reno Scholarships
 Ralston Purina Scholarship
 Rebekah I.O.O.F. Scholarship
 Edward C. Reed High School Scholarships
 Reno High School Scholarships
 Rotary Club of Reno Scholarships
 San Lorenzo District Scholarship

Savitt Family Scholarships
 Robert R. Saxon Scholarship
 Jack Selbig Track Scholarship
 Sierra Health Care Center Scholarship
 J.R. Simplot Company Scholarship
 Soroptimist Club of Lovelock Scholarship
 Soroptimist Club of North Lake Tahoe Scholarship
 Soroptimist Club of South Lake Tahoe Scholarship
 Soroptimist Club of Yerington Scholarship
 Sparks High School Scholarships
 St. John's Episcopal Women's Guild Scholarship
 State of Nevada Employees Association Scholarship
 Lillie Stock Testimonial Fund Scholarship
 (Nevada State Children's Home)
 Sunrise Hospital Auxiliary Scholarship
 Tahoe Douglas Rotary Scholarship
 Tonopah Lodge #1062 B.P.O.E. Scholarship
 Tonopah Memorial Scholarship
 UNR Track and Field Scholarship
 Valley Hospital Auxiliary, Inc. Scholarship
 Vegas Lodge #32, F. & A.M. Scholarship (Kiwisar Trust Fund)
 Veterans of Foreign Wars, Department of Nevada Scholarship
 (Ladies Auxiliary)
 Virginia City Alumni Association Scholarship
 Washoe Zephyrs Chapter, A.B.W.A. Scholarship
 Lloyd Welch Music Scholarship
 Wells Business & Professional Women's Club Scholarship
 West Hills Hospital Scholarship
 Western Electric Company (Robert M. Betry) Matching
 Funds Scholarship
 Western High School, Las Vegas Scholarship
 Western Nevada Peace Officers Association Scholarship
 Westwood High School Scholarship
 White Pine County High School Scholarship
 White Pine County School Employees Federal Credit
 Union Scholarship
 George Whittell High School Scholarship
 Wolf Club Scholarship
 The Woman's Auxiliary to the American Institute of Mining,
 Metallurgical & Petroleum Engineers, Inc. Scholarship
 Women's Auxiliary National Association of Plumbing, Heating,
 Cooling Contractors Scholarship
 Women's Auxiliary to the Northern California Medical, Dental and
 Pharmaceutical Association Scholarship
 Women's Club of North Tahoe Scholarship
 Women in Construction Scholarship
 Women in Mining Scholarship
 Wooster High School Scholarships
 World Wings International Foundation Scholarship

Special Prizes and Awards

Each year the university gives a number of prizes and awards to students who have made unique and outstanding achievements. Recipients are selected on the basis of these achievements and not through application. A list of current prizes follows:

Henry Albert Senior Public Service Awards
 American Association of University Women Award (one year's membership)
 Delta Sigma Pi Business Fraternity Scholarship Key
 Female Athlete of the Year Award
 French Medal
 German Prize
 R. Herz & Brothers Jewelry Awards (a gold watch is presented to the male and female sophomore students with the highest scholastic records)
 Male Athlete of the Year Award
 Nevada Congress of Parents and Teachers Award
 Nevada Society of Certified Public Accountants Awards
 Old Timer's Club Award
 Outstanding Senior Award
 Outstanding Student Teacher Award

Peace Prize
 Robert Petrini Award in Journalism, silver loving cup
 Phi Delta Kappa Expectation of Excellence Award
 Phi Kappa Phi Award
 Dean Scheid Trophy
 Spanish Prizes
 University Scholarship Foundation Art Award
 C.F. and Frank Wittenberg Award in Agriculture
 Herz Gold Medal Award (presented to the graduating senior with the highest four-year scholastic record)
 Outstanding Teaching (faculty) Award
 Research Recognition (faculty) Award

ROTC Medals

Association of the United States Army Award
 Association of the United States Army Medal
 City of Reno Civic Government Fellowship
 City of Reno Trophy
 Daughters of Founders and Patriots of America Medal
 Daughters of the American Revolution Medal
 Governor's Medal
 Kerak Temple Medals and Plaque
 President's Medal
 Reserve Officers Association Medal and Plaque
 ROTC Detachment Trophies
 Society of American Military Engineer Award
 Sons of the American Revolution Medal
 Superior Cadet Awards
 Veterans of Foreign Wars Trophy

Registration Fee Grants-in-Aid

1. Each semester the university awards a number of registration fee grants-in-aid equal to approximately 3 percent of the university's enrollment. Recipients of these grants-in-aid must be residents of Nevada. Those selected are not required to pay the basic registration fee for that semester during which they receive the award.

2. Twenty registration fee grants-in-aid may be awarded each semester to American Indian students who are residents of the state of Nevada and certified as Indians by the Bureau of Indian Affairs.

3. Widows of Nevada servicemen killed in action on or after January 1, 1961, may receive registration fee grants-in-aid for a period up to eight semesters.

In general, the granting of these grants-in-aid is based upon sound scholastic achievement, financial need, and the rendering of special service to the university. Application forms may be obtained from the Director of Scholarships, University of Nevada Reno. Each award is made for one semester and is renewable only following submission of a new application. Applications for fall semester must be received not later than June 1. Recipients must have an overall GPA of 2.0 or higher at the time of award and must complete 12 or more credits with a GPA of 2.0 or higher each semester to be considered for successive awards. Applications for the spring semester must be received not later than January 5.

Out-of-State Tuition Grants-in-Aid

Each semester the university awards a number of out-of-state tuition grants-in-aid equal to approximately 3 percent of the university's student enrollment. Recipients of these grants-in-aid are not required to pay the nonresident tuition charge. Applications should be directed to the Director of Scholarships. Each award is made for one semester and is renewable only following submission of a new application. Awards are based upon scholarship proficiency, as well as the rendering of special service to the university. A proportion of these awards is also set aside for students from foreign countries. Applications for the fall semester must be received not later than June 1. Recipients must have an overall GPA of 2.0 or higher at the time of award and must complete 12 or more credits with a GPA of 2.0 or higher each semester to be considered for successive awards. Applications for the spring semester must be received not later than January 5.

Graduate Teaching and Research Awards

To be eligible for graduate teaching awards an individual must first be admitted to the Graduate School and be classified as a graduate standing student in the department or college of study. Application should be made to the dean of the

college concerned or the department chairman.
 1. Graduate Assistant—includes the sub-categories of teaching and research assistant, contractual positions for teaching or research services. Stipends may be accompanied by fee and tuition waivers.

A teaching assistant contract can be issued for no more than three years for students completing the master's degree, and five years for completion of the doctorate degree. If a student comes to the university with a master's degree, then no more than three years are allowed on a teaching assistant contract.

To insure satisfactory progress toward the degree, graduate teaching assistants are required to pass at least 10 graduate credits per year to maintain eligibility for the assistantship.

International students must score 550 or above on the TOEFL examination, or its equivalent, to be eligible for a teaching assistantship.

2. Graduate Fellow—designates individuals receiving a stipend that would be treated as a scholarship, i.e., no specific duties are required.

Graduate stipends range from \$5,000-\$6,000 for a 20 hour per week assignment on a ten-month basis. Graduate assistantships may be offered at FTE assignments less than .50. The step level stipend schedule is designed to recognize different levels of competencies and assignments.

Financial Aids Calendar

<i>Type</i>	<i>Deadline date</i>
Freshman scholarship applications must be returned by students to high school principal by February 1. Deadline to college (Type I)	March 1
Undergraduate scholarship applications (Type I)	March 1
All other scholarships	Check deadline with college or department concerned.
Regents Grants-in-Aid (tuition and fee waiver applications)	
Fall semester	June 1
Spring semester	January 5
Federally Funded Financial Aid (Loans, Grants, Work)	
Fall semester	February 15*
Spring semester	August 15*
Summer session	January 15*
Guaranteed State Loans (GSL)	Three months prior to time needed.
Emergency loans	During semester in which emergency occurs
University loans	One week minimum to process.
Deferred-payment of fees, tuition, board and room	Before last day of registration.
Student employment	When class schedule is established and you are available.

*Note: The ACT Family Financial Statement and Financial Aid Transfer Record form must be completed and mailed to ACT by these dates. All completed forms mailed to Iowa City after these dates are late and considered as time allows and if funds are available.

Veterans Service—Benefits

Veterans services are administered by the Veterans Office staff located on the second floor of Thompson Student Services Center. They are available to assist each veteran in achieving his or

her academic goal. Advisement services (pertaining to curricula, admission, and other administrative procedures) are available, as well as information on housing, career counseling, and financial aid. The Veterans Office serves in a liaison capacity with the Reno Veterans Administration Regional Office.

The University of Nevada Reno is fully accredited by the Veterans Administration for educational benefits to qualified veterans under existing applicable public laws. Discharged veterans, or those currently in service, who plan to attend the university must make application for veterans' educational benefits at the time registration fees are paid.

The university is also accredited for War Orphans and Widows under Chapter 35, Title 38, U.S.C. (a program of financial assistance for the education of men and women whose parents or spouses are deceased or completely disabled as a result of injuries or diseases received during their military service).

Every individual receiving benefits under any of the public laws is required personally to complete the Veterans Educational Benefits Application immediately after payment of fees for each semester, summer session, or other instructional period. This can be done in the registration area or at 203 Thompson Student Services Center. Failure to present the Advance Registration Schedule Fee form when completing the application may delay receipt of educational benefits from six to eight weeks.

It is the beneficiary's responsibility to notify Veterans Office personnel immediately if he/she drops or adds a course, withdraws from the university for any reason, or stops attending any or all classes. Failure to do so will delay monthly checks and subject the student veteran to financial liability for an overpayment or incorrect payment made. If changes in the student's program affect his status (from full- to half- or three-fourths time, etc.), the effective date will be registration day unless mitigating circumstances are accepted by the Regional Veterans Administration.

Student veterans are subject to the university's normal academic standards and are required to maintain *satisfactory progress* toward the VA certified degree objective to continue receiving Veterans Educational Benefits.

The amount of monthly educational subsistence is determined (except for Vocational Rehabilitation Benefits) by: (1) the number of registered credits as certified by the Veterans Office to the Veterans Administration and, (2) the number of dependents the student veteran claims. Only courses leading to the certified degree objective apply and those courses repeated or audited are not applicable.

All teaching or graduate assistants must obtain a statement from the Academic Personnel Office verifying their precise status as an assistant before

seeking certification if they are registering for less than nine graduate credits and desire full-time subsistence.

Tutorial benefits are administered through the Veterans Office for up to \$72 per month for a maximum of nine months.

Additional information on veterans services and benefits may be obtained by contacting the campus Veterans Office.

Career Planning and Placement

The Career Planning and Placement Office (CPP) serves as a centralized link between the student and the professional community, giving employers a chance to draw on trained personnel and giving the students an opportunity for placement in jobs where they can best utilize their talents. The office is located in Room 204, Thompson Student Services Center. The CPP staff is trained in career guidance and planning to assist students in developing their careers and finding jobs. A career library is maintained in the CPP office so that students may study organizations with which they may wish to seek employment. Potential employers may place information and advertising for their organizations in the office. Job vacancies may also be posted for student use.

The primary goal of the office is to help graduates acquire permanent positions. The staff provides undergraduates with opportunities for professional summer and temporary employment whenever possible. Career planning and placement services are also made available to alumni, who provide an additional source of experienced employees to campus recruiters. The university encourages students to establish placement files, containing personal information and references, which are routinely supplied to interested employers when interviewing or upon request. Completion of registration forms and payment of a \$5 registration fee establishes the confidential or nonconfidential placement file which remains active throughout the placement year (September 1-August 31). Reactivation of this file for any subsequent placement year requires payment of an additional registration fee. Recruitment schedules on campus begin the middle of September and extend through the middle of May. It is important that seniors and graduate students complete their placement registration forms early to allow time for letters of reference to be placed in their files.

Student Government and Organizations

GSA

For further information see Graduate School Section.

ASUN

Student government on the University of Nevada Reno campus is a strong student voice with delegated authority to assume a responsible leadership role within the university community.

The undergraduate student body of the university is organized into a unified, self-governing body known as the Associated Students of the University of Nevada—the ASUN. This body, an integral part of the university community, recognized by the president and the Board of Regents, functions under the ASUN Constitution, copies of which are available to all members of the student body at the ASUN Office. The ASUN offices are located upstairs in the Jot Travis Student Union.

The areas of responsibility and jurisdiction of ASUN are as follows:

ASUN President: The ASUN president is the chief executive officer, serving as the chairperson of the Executive Council and the Program and Budget Committee. The president is also a member of all ASUN committees and a member of many university committees and boards.

Vice President of Finance and Publications: The Vice President of Finance and Publications serves as chairperson of the Finance Control Board and the Publications Board. The Finance Control Board consists of one-third of the members of the ASUN senate, as selected by the executive council, the ASUN president (nonvoting), and nonvoting advisers. The Finance Control Board is responsible for the allocation of ASUN operating expenses and budgeting for ASUN recognized organizations.

The Publications Board is composed of one-third of the members of the ASUN senate, as selected by the Executive Council, the editors of the three major publications, the ASUN president (nonvoting), the publications advertising manager (nonvoting), and nonvoting advisers. The board acts as the legal publisher for three publications, the *Sagebrush* (campus newspaper), the *Artemisia* (campus yearbook), and the *Brushfire* (literary magazine) and allocates the funds for each publication. Student publications provide opportunities for students to develop

writing and other skills and provide information services to the university community.

Vice President of Activities: The Vice President of Activities acts as the chairperson of the Activities Board. The board consists of one-third of the members of the senate, as selected by the Executive Council, the ASUN president, and nonvoting advisers. The board establishes policies and procedures which affect student activities; reviews the operation of the Student Union; and plans ASUN movies, concerts, lectures, and other activities. All activities, including groups and organizations, are to be coordinated through the Vice President of Activities. *All* student organizations are required to reserve space through the university Activities Office, located in the Student Union.

Program and Budget Committee: This committee consists of two members from each of the three boards (activities, finance control, and publications), the ASUN president (chairperson), the Vice President of Activities, the Vice President of Finance and Publications, and nonvoting advisers. This committee is responsible for all control of ASUN funds and the initial allocation at the beginning of the fall semester to each of the three ASUN boards.

ASUN Senate: The ASUN Senate is the final authority of the ASUN. The senate consists of 20 senators elected from each of the nine colleges. All actions taken by the three boards and the Program and Budget Committee must be reviewed and approved by the senate. The senate also reviews and approves groups for ASUN recognition.

Student Judicial Council: The Student Judicial Council is composed of a chief justice, an associate chief justice, and three associate justices. A nonvoting member of the university faculty serves as adviser.

The primary purpose of the council is to provide students with a greater voice and responsibility in maintaining high standards of conduct. Its major function is to hear all cases referred to its jurisdiction—to investigate, adjudicate, and assess sanctions for violations of the Student Conduct Code and the *Rules and Disciplinary Procedures for Members of the University Community*.

ASUN also has a legal services director who guides students to the appropriate legal help when it is needed.

Student Organizations

Students have an opportunity to participate or

apply for membership in a wide range of organizations. These include religious, social, scholastic, honorary, service, and recreational organizations, as well as clubs for students in specific fields of study.

Any student organization which wishes to establish an activities program or use on-campus facilities must petition for ASUN recognition. Information regarding this procedure is available in the ASUN Office. Lists of organizations and information regarding these organizations are available in the ASUN Office. All organizations are required to have a faculty or staff adviser. Membership in student organizations is based upon scholarship, college, class, skills, and interests of the individual student, or on any other basis consistent with the aims of the university. Any practice excluding individuals from membership in groups on the basis of race, creed, color, national origin, age, handicap, or sex is inconsistent with university and ASUN policies.

Associated Women Students: The administration of the Associated Women Students of the university (AWS) is vested in the AWS president and the AWS Council. The AWS Council sponsors programs of special interest to women students.

Fraternities and Sororities: There are eight social fraternities and five social sororities at the university.

<i>Social fraternities</i>	<i>Date founded locally</i>
Sigma Nu	1914
Phi Sigma Kappa	1917
Sigma Alpha Epsilon	1917
Alpha Tau Omega	1921
Lambda Chi Alpha	1929
Phi Delta Theta	1972
Omega Xi	1978
Tau Kappa Epsilon	1981

<i>Social sororities</i>	<i>Date founded locally</i>
Delta Delta Delta	1913
Pi Beta Phi	1915
Gamma Phi Beta	1921
Kappa Alpha Theta	1922
Alpha Chi Omega	1971

The Interfraternity Council and the Panhellenic Council coordinate the activities of their respective groups. Information regarding fraternities and sororities and rushing procedures is available from the Assistant Dean of Students, Room 103, Thompson Student Services Center.

Student Conduct

Enrollment in the university carries with it obligations regarding conduct. Not only within but outside the classroom, students are expected to conduct themselves in such a manner as to be a

credit both to themselves and to the university. They are accountable to the laws governing the community as well as to the policies and regulations of the university and directions of university officials, and they are expected to observe the standards of conduct approved by the university.

The administration of student conduct follows the procedures outlined in the *Rules and Disciplinary Procedures for Members of the University Community*. Copies of the procedures are available in the office of the Associate Dean of Students, 103 Thompson Student Services Center.

UNIVERSITY POLICIES

1. Alcoholic Beverages

Students living in university-approved housing who are 21 years of age or older may store or use alcoholic beverages under conditions specified in the Student Handbook.

The president of the university has the authority to designate the time and place for special events where alcoholic beverages may be served on the university campus or at university recognized living groups.

Except as provided above, the storage, possession or use of alcoholic beverages is not permitted on university-owned or supervised property.

2. Firearms, Fireworks

Carrying or using firearms on university-owned or supervised property is prohibited except under special conditions described in the Student Handbook.

Possessing or using fireworks or pyrotechnics on university-owned or supervised property is prohibited.

3. Use of University Facilities

University facilities, including campus grounds, are provided primarily for the support of the regular educational functions of the university and the activities necessary for the support of these functions. The university's functions take precedence over any other activities in the use of university facilities.

University facilities may not be used for the purpose of raising monies to aid projects not related to some authorized activity of the university or of university groups, and no efforts at conversion and solicitation by uninvited non-campus groups or individuals are permitted on campus.

Regulations concerning the use and scheduling of university facilities are available in the university Activities Office.

PROSCRIBED CONDUCT

1. Rules and Disciplinary Procedures for Members of the University Community

The following forms of conduct, being incom-

patible with the purposes of an academic community, are prohibited for all members of that community and lead to sanctions and procedures as described.

(1) The use of, or threat to use, force or violence against any member or guest of the university community, except when lawfully permissible.

(2) Interference by force, threat or duress, with the lawful freedom of movement of persons or vehicles on the university premises.

(3) The intentional disruption or unauthorized interruption of functions of the University of Nevada System, including but not limited to classes, convocations, lectures, meetings and recruiting interviews on or off university property.

(4) Willful damage, destruction, defacement, theft, misappropriation of property belonging to the university or to a member of the university community.

(5) Knowing possession on any university premise of any firearms, explosives, dangerous chemicals, or other instruments of destruction, or other dangerous weapons as defined by laws of the state of Nevada, without written authorization of the chief administrative officer of the campus or his authorized agent unless such possession relates to duly recognized university functions by appropriate members of the faculty, staff or students.

(6) Continued occupation of buildings, structures or grounds belonging to the university after having been ordered to leave by the president of the university or the designated chief campus officer present.

(7) Forgery or alteration or destruction of university documents or furnishing of intentionally falsified information in documents submitted to the University of Nevada System or making intentionally false accusations against any member of the university community by the filing of a complaint or charges under these rules.

(8) The repeated use of obscene or abusive language in a classroom or public meeting where such usage is beyond the bounds of generally accepted good taste which, if in a class, is not significantly related to the teaching of the subject matter.

(9) Willful incitement of persons to commit any of the acts herein prohibited.

(10) Disorderly, lewd or indecent conduct occurring on campus or at a university recognized or university group sponsored activity off campus.

(11) Any act prohibited by local, state or federal law which occurs on a university campus or at a university sponsored function.

(12) The use of threats of violence against a faculty member or his family in order to secure preferential treatment for grades, loans, employment or any other university service or privilege.

(13) Any other conduct which violates applicable stated policies or rules of the divisions of the University of Nevada System.

2. Other University Regulations

The following are subject to disciplinary action:

(1) Storage, possession, or use of alcoholic beverages by minors, or violation of the Alcoholic Beverage Policy.

(2) Dishonesty, such as cheating or plagiarism.

(3) Conduct which endangers the health or safety of any member or guest of the university community.

(4) Illegal possession of keys or unauthorized entry into or use of university facilities, including buildings and grounds.

(5) Violation of university policies and regulations governing residence in university-owned or controlled property, including responsibility for the conduct of invited guests.

(6) Storage, possession, use, distribution, sale, barter, manufacture, exchange, or giving away of stimulant, depressant, narcotic, or hallucinogenic drugs, or other dangerous drugs such as marijuana, LSD (lysergic acid diethylamide), amphetamines, or barbiturates on university-owned or controlled property, except as expressly permitted by law.

(7) Failure to comply with the directions of university officials acting in the performance of their duties.

(8) Failure to comply with directions of university police acting in performance of their duties and to identify one's self to these officials when requested to do so.



Interdisciplinary and Special Programs

Interdisciplinary and special programs are offered to provide the student with enriched educational opportunities that extend beyond the traditional offerings. Some programs enable students to integrate academic disciplines to study a particular area more directly and effectively. Other programs provide study opportunities in different geographic regions within the United States as well as in other countries. Most of the programs are coordinated by faculty advisory boards. The individual designated for each program may be contacted for further information.

Beliefs and Values Program

The beliefs and values program is a development by the Committee on Philosophy of Inquiry to offer students and faculty a means of investigating belief patterns which direct inquiry and which affect moral and intellectual commitment in a number of fields.

Of particular interest are the fundamental questions of our time concerning the place of the person and of personal belief and action in the development of our culture's dominant scientific world view. During the last century psychology, sociology, political science, economics, biology, physics, chemistry, and technology have struggled for self definition. The human and even personal dimension of assumptions underlying these separate disciplines need study.

Interdisciplinary and cross-cultural in nature, the beliefs and values program sponsors courses at introductory and advanced levels to explore relations between the social and natural sciences and technologies and the changing tradition of the humanities exemplified in literature, history, art, religion, and philosophy. Examples include science and religion, the idea of Utopia, history and fiction, role of the intellectual in politics, belief patterns in ancient Greece, in Judaism, in early Christianity, in Islam.

Courses developed and publicized by beliefs and values are ordinarily listed under regular department offerings. Students interested in such courses should make inquiry to Dr. Robert Harvey, Department of English, FH 19.

Computer Science

MINOR: The computer science minor consists of a core of at least 6 courses comprising at least 18 credits including 12 or more upper division

credits of a computer science nature taught in the departments of electrical engineering, mathematics, philosophy, and accounting and information systems. This core covers areas of computer science recognized as fundamental by professional organizations in computing, engineering, and business. Students completing the core have a strong technical foundation upon which to build further special expertise in computer science in the directions of either electrical engineering (hardware design and interfacing), mathematics (theoretical computer science, software), or accounting and information systems (software applications in business). Other disciplines might also be profitably related to computer science.

Core Courses

Introductory computer courses (students select 3 or 4 credits from this set—credits shown in parentheses):

- E E 131-132, Computer Techniques 1-11 (2-2)
- MATH 183, Intro. to Computer Science (3)
- I S 250, Intro. to Business Information Systems

Required core computer science courses:

- MATH 385, Computer Programming and Organization (3)
- MATH 386, Computer Programming Languages (3)
- E E 333 (MATH 387), Computer Logic and Architecture (3)

Electives selected (2 or 3 credits) from among:

- E E 431, Digital Computer Design (3)
- E E 435, Microprocessors (3)
- MATH 283, Computer Mathematics (2)
- PHIL 326 (MATH 307), Symbolic Logic (3)
- PHYS 466, Introduction to Microcomputer Interfacing (3)
- MATH 435, Combinatorics (3)
- MATH 485, Computer Data Structures (3)
- MATH 486 (E E 436), Principles of Computer Operating Systems (3)
- MATH 489, Topics in Computer Science (1-3)
- I S 251, Cobol (3)
- I S 350, Computer Operating Systems (3)
- I S 488, Seminar in Information Systems (3)

The computer science minor is administered by an interdepartmental faculty committee. Students pursuing this minor must have an adviser from this committee in addition to their regular adviser. Further information can be obtained by contacting the chairman of the program committee, Prof. Edward F. Wishart, Department of Mathematics.

For further information on degree options in electrical engineering, mathematics or accounting and information systems, contact the chairmen of those respective departments, University of Nevada Reno, Reno, Nevada 89557.

ADVANCED DEGREE: A master of science degree is offered with a major in computer and information science. The major provides for four options leading to professional careers in operations research applications, systems programming, applications programming and com-

puter engineering and communications systems.

The program is administered by the Computer Science Board, an interdisciplinary board of faculty members with teaching and/or research interests in computer science, computer applications or computer engineering. The board establishes core courses for the program and sets the broad outline of course studies for each candidate. Only the Plan A (thesis) format of studies is offered.

Applicants should have a bachelor's degree in engineering, mathematics or one of the natural sciences.

Additional information may be obtained by contacting the chairman of the Computer Science Board, Prof. Edward F. Wishart, Department of Mathematics.

Environmental Studies

The university offers a minor in environmental studies under the direction of the Environmental Studies Board. The board is authorized to develop a curriculum of special courses, listed in course offerings under environment, and related courses in various departments. In addition, the board encourages environmentally oriented graduate research based upon any of the conventional disciplines in the academic and professional departments of the university.

The environmental studies minor addresses problems of the environment and of natural resource and energy use, many of which overlap or affect several disciplines. The minor requires 24 credits, of which at least 9 must be in upper-division (300-400) courses.

Core Courses

The following courses are required of all students taking minors in environmental studies:

ENV 101	Credits	3
One of these: ENV 292 (GEOG 292), GEOG 335 (RNR 335), or RNR 490 (GEOG 431)		3

Additional Environmental Courses

Students taking minors must select at least two courses from each of the following areas of concentration:

Ecological and Physical Principles: BIOL 210, 212, 410; CHEM 100, 101; GEOL 480; PHYS 101, 106; PSW 120, 222 or equivalent courses in the biological, earth or physical sciences or in engineering.

Economic and Social Principles: AREC 202, 368; ANTH 470; EC 101, 459; HIST 316; ENV 294 (H EC 294), ENV 494 (H EC 494), or equivalent courses in economic or social sciences.

Environmental Planning and Policy: C E 401; ENV 292 (GEOG 292) if not taken as a core course; ENV 457 (P SC 457); P SC 336, 458; RNR 420, 490 (GEOG 431) if not taken as a core course, 494 (GEOG 434) or equivalent courses concerned with environmental and resource planning and policy.

Students are responsible for any prerequisites that are required for any of the above.

A maximum of 3 credits in ENV 301 and 3 credits in ENV 401 may be used toward the minor program. Each of these may be substituted for one course in each of two different areas of concentration as listed above.

The specific courses taken are selected with the approval of the Environmental Studies Board and the student's major department; a board adviser works with the student in designing an appropriate program. In keeping with the interdisciplinary goals of the minor, no student minoring in environmental studies may include more than 6 credits from courses in the major department. Such credits must be in addition to those used to fulfill the requirements for the major.

Additional information may be obtained by contacting the Environmental Studies Board, through the Geography Department.

Ethnic Studies

The ethnic studies program offers an opportunity for students to gain an awareness of the varied cultures, experiences, and contributions of black Americans, Spanish-speaking (Chicano, Latino) Americans, and native Americans by providing a series of interdisciplinary focal points within the humanities and social sciences. Courses in ethnic studies are offered in the subject areas of anthropology, English, foreign languages and literatures, geography, history, political science, psychology, social services and corrections, and sociology. Such courses are open to any student regardless of major, and are invaluable to an understanding of the American past and present, or to an assessment of the future.

Ethnic studies also offers minor programs in three areas of specialization: black American, Spanish-speaking American, and native American. Students who choose one of these minor programs must complete six credits of required courses and twelve credits of elective courses in one ethnic specialization. Nine of these credits must be upper division. No student minoring in an ethnic studies area may include more than six credits from courses in the major department. Such credits must be in addition to those used to fulfill the requirements for the major.

Black American

Required Courses: ANTH 365; HIST 456.

Elective Courses: ANTH 205; ENGL 345; HIST 447, 448, 449, 455; H EC 438; P SC 205, 453; SHR 372; SOC 205, 379.

Spanish-speaking American (Chicano, Latino)

Required Courses: HIST 320; SPAN 222.

Elective Courses: ANTH 205, 425; HIST 343, 344, 345, 346; H EC 438; P SC 205, 415, 453; SHR 372; SOC 205, 379.

Native American

Required Courses: ANTH 362; P SC 453.

Elective Courses: ANTH 205, 360, 363, 420, 423; ENGL 345; HIST 418; H EC 438; P SC 205; SHR 372; SOC 205, 379.

The Ethnic Studies Board also sponsors special courses in various departments when possible. These courses may be used as elective courses in the specialty areas. Additional information is available upon request from Dr. Michael S. Coray, Room 112, Mack Social Science Building.

European Studies

The university, through affiliation with the Institute of European Studies, offers high quality academic programs of study at seven campuses abroad. Year programs are available in Vienna (Austria), Durham (England), Paris and Nantes (France), Freiburg (Germany), and Madrid (Spain). A single semester program is available, fall and spring, in London. Each institute center, except Durham, also offers fall and spring semester programs. Summer study for beginners, intermediate and advanced students is available in Paris, Freiburg, and Madrid.

Students in nearly all subject areas can take courses through the institute which may be applicable to their regular programs at the university. The courses are not designed exclusively for foreign language majors.

Participation is generally limited to students who have completed at least two years of college and who give evidence of strong motivation, adaptability, and academic promise. A knowledge equivalent to two years of college study of the language of the host country is required, except in Vienna where classes are taught in English. A special fall semester program is available in Freiburg for students with one semester of college German or equivalent. In Versailles, a special interim (quarter) program with emphasis on improving French language skills is offered in the fall. Programs of study must be approved by the student's adviser, the chairman of the department concerned, and a screening committee. Financial aid is available. Further information and application forms may be obtained from Dr. Terrill Kramer located in the geography department.

The university's affiliation with the Institute of European Studies does not prevent a student from exploring other programs of study abroad.

Health Careers for American Indians

Health careers for American Indians is a federally funded program which provides career advisement, counseling, and tutoring to American Indian students interested in careers in the health fields. For further information, contact the coordinator of Health Careers for American Indians, Mackay Science, Room 205.

Historic Preservation

An historic preservation program is offered through the College of Arts and Science. Historic preservation is a rapidly expanding field devoted to the understanding, recording, preservation, restoration or adaptive re-use of significant objects, buildings, sites, neighborhoods, districts or engineering works which reflect or exemplify a portion of the nation's historic and prehistoric cultural heritage. Particular emphasis is placed on the heritage of Nevada and the American West.

Training focuses upon the principles of historic preservation, the structure and purposes of private, municipal, state and federal programs and agencies, historic preservation laws, guidelines and codes, field research projects and internships with local, state and federal historic preservation agencies. Depending upon the student's major program and interests in a particular subfield of historic preservation, related courses taught in other departments and colleges are utilized.

Minor

<i>Required courses for undergraduate minor:</i>	<i>Credits</i>
H P 301 Principles of Historic Preservation	3
H P 401 Historic Preservation Laws and Policies	3
H P 470 Practicum in Historic Preservation Research	3
H P 475 Techniques of Historic Preservation and Conservation	3
ANTH, ART, BIOL, HIST, H EC 309 Museology	3
H P 480, P SC 341 or L SC 407	3

History and Social Theory

History and social theory is a related area of study for students majoring in anthropology, economics, history, philosophy, political science, psychology, or sociology. The purposes of the history and social theory related areas are to introduce students to the interrelationships of history and the social sciences and to the common theoretical foundations of the social sciences. To fulfill the requirements of this related area, each

student must complete a course of study comprising four to seven courses (the number depends upon individual department requirements for related subject areas) chosen from the following three categories:

Theoretical and Special Topic Courses (Each student must take at least four of these courses exclusive of those taken within the major field.): ANTH 440; EC 410, 481; HIST 300; PHIL 494; P SC 323-324; PSY 408; and SOC 491, 497.

Related Courses (Each student must take one or two of these courses exclusive of those taken within the major field.): ANTH 312; EC 463-464; HIST 377-378, 403-404, 427; PHIL 203, 314, 325, 401, 407; P SC 421, 423, 426; PSY 473; and SOC 333, 485.

History Survey Courses (Each student must take one of these courses except that a history major must take an additional course from one of the two preceding categories.): HIST 416, 463, 464.

Additional information is available upon request from the dean of Arts and Science, Room 217, Physics Building.

Honors Study

The honors study program offers talented students additional opportunity for developing their skills and training their powers of observation, thought, and expression. Successful participation in the program gives superior students the personal satisfaction of having met and mastered the most innovative and challenging program the university offers. In accomplishing this, students enjoy a close relationship with their teachers and fellow honors students. Courses completed for honors are recorded on the student's record and honors students may graduate *cum laude*, *magna cum laude*, or *summa cum laude* from the university. These marks of distinction indicate the ability to complete independent study and exhibit superior scholarship.

Students entering the university are considered for acceptance to honors study on the basis of their previous achievement and/or ACT/SAT scores. Students already enrolled are considered on the basis of their performance at the university. Normally each student must maintain a GPA of 3.0 or above in all university courses to participate.

Students elect the courses they wish to attempt for honors by completing an Honors Study Agreement, approved by the instructor and the director of the honors study program. In addition to honors sections of large courses and occasional special offerings of the Honors Study Board, *any course graded A through F* (including independent study courses and graduate courses taken by eligible seniors) may be taken for honors by doing additional work of honors quality. Honors points (equal to, or in some cases less than, the number

of course credits) are awarded at the discretion of the instructor but in no case for course grades of less than B.

The new honors program leads to graduation *cum laude*, *magna cum laude*, or *summa cum laude* and is the only way to achieve these distinctions. Requirements for graduation within the program are: (1) satisfaction of all university and college requirements for the degree program selected; (2) fulfillment of any college or department requirements for graduation with honors; (3) accumulation of 18 or more honors points, at least 9 of which are earned in the major field in courses numbered 300 and above; (4) completion of a senior thesis (which completes 3 of the 9 points) based on independent research, or the equivalent, in the major field; (5) attainment of the indicated GPA, both in the major field and in all courses. Graduation *cum laude*, requires a GPA of 3.5 or above; *magna cum laude* a GPA of 3.7 or above with grade of A on the senior thesis; *summa cum laude* a GPA of 3.9 or above with grade of A on the senior thesis.

Associate degree students may graduate "With Honors" by attaining a GPA of 3.5 (both in the major field and overall) and by accumulating 9 honors points, at least 6 of which are earned in the major field during the second year of study.

Students admitted to the university prior to the 1980 fall semester have the option of graduating "With Honors" under the old honors program. The requirements for graduation are the same as for the new program except that no thesis is required and the student must attain a GPA of 3.0 (both in the major field and overall). The final date a student may graduate under the old program is August 1984.

The honors program is administered by the Honors Study Board, which evaluates all students who apply for graduation with honors. When a student has completed all requirements, the board so informs the registrar for posting on the student's record.

For additional information and Honors Study Agreement forms, contact the director of the Honors Study Program: Prof. Jane Davidson, Room 136 Church Fine Arts (784-6561).

Hydrology and Hydrogeology

Academic guidance of these programs is administered by an Interdisciplinary Faculty Board comprised of faculty members with teaching and/or research interests in the areas of hydrology, hydrogeology, and water resources. The programs are structured to stimulate profes-

sional development of the graduate student by: (1) providing appropriate channels for specialization, (2) broadening knowledge and competence through basic and applied concepts relative to the field(s) of choice, and (3) providing a learning and/or working climate conducive to subsequent professional careers in teaching, research, consulting, and/or administration.

Entering students should have a bachelor of science degree or the equivalent in agricultural engineering, biology, civil engineering, geology, geological engineering, renewable natural resources, or a related field. The master of science degree can be pursued under either Plan A (thesis) or Plan B (non-thesis), and the Ph.D. degree is available for qualified students who intend to pursue a career in teaching or research. Core courses are established by the Interdisciplinary Faculty Board for both the M.S. and Ph.D. programs.

Additional information is available upon request from the Coordinator of Interdisciplinary Programs in Hydrology and Hydrogeology, Department of Civil Engineering, Room 130, Scroggum Engineering-Mines Building or P.O. Box 60220, Reno, NV 89506.

Global Studies

Individuals who wish to broaden their knowledge and understanding of the global issues confronting the world today may earn a minor in *Global Studies* by completing 18 credits in courses approved by the Global Studies and Student Exchange Board. The minor utilizes existing courses offered by the various departments in an interdisciplinary approach which permits students to view from a multiple perspective the current problems common to all countries and peoples of the world.

Requirements:

1. Completion of 3 credits of G S 201.
2. Completion of 15 additional credits selected from the *Global Studies Elective List* distributed as follows:
 - A. At least 8 upper-division credits, including at least one course outside the major department.
 - B. At least 7 additional credits at any level (upper-division or lower-division).
 - C. A maximum of three courses from the student's major department may apply toward the minor.
 - D. Courses must be from at least three departments other than the student's major department.

The list of approved courses is available from the student's dean, department chairman, or any member of the Global Studies and Student Exchange Board. General information may be obtained from Dr. Terrill Kramer located in the geography department.

Land Use Planning Policy

A master of science degree is offered with a major in land use planning policy. The program is interdisciplinary and is offered through the cooperative efforts of several departments — agricultural and resource economics, anthropology, civil engineering, economics, geography, political science and renewable natural resources. The Land Use Planning Policy Board administers the program under the direction of the dean of the Graduate School. Close liaison is maintained with planning and related personnel in government and industry.

The program requires a minimum of 39 credits. Candidates take 21 credits of core requirements, including computer graphics, statistical analysis, environmental law, and seminars in resource and land use policy, in urban and regional planning and in economics of renewable natural resources.

Beyond the core, the student chooses a field of specialization, for example, planning and administration, environmental policy and law, or historic preservation. In this field, the student takes at least 12 credits in lectures, independent research, and seminars, and completes a thesis (6 credits).

Requirements in addition to those for regular graduate standing admission include a minimum grade-point average of 3.0, introductory work in calculus, computer programming and statistics, and reasonable competency in communication. Applications are submitted through the Office of Admissions and Records for evaluation by the Land Use Planning Policy Board, the participating department and its college. Approved applicants must satisfy the requirements of the land use planning policy program and any additional requirements of the specific department and college.

For additional information, contact the dean of the Graduate School, Room 239, Getchell Library, telephone 784-4040, or the Chairman, Land Use Planning Policy Board, MSM 202A, telephone 784-6922.

Medieval and Renaissance Studies

Medieval and Renaissance studies is a minor for students majoring in anthropology, art, criminal justice, English, foreign languages and literatures, history, mathematics, music, philosophy, political science, psychology, sociology, and speech and theatre. The purpose of

this interdisciplinary program is to enable students to understand and explore the culture of the Middle Ages and Renaissance so they may better understand the roots of western civilization.

Students wishing to minor in Medieval and Renaissance studies must complete a total of 18 credits which must include courses from at least two departments. Twelve of these credits must be earned from courses numbered 300 or above. The courses acceptable toward the minor are listed below in two groups, *Group A* (courses with a predominantly Medieval and/or Renaissance content) and *Group B* (courses of an auxiliary nature). At least 12 credits must be chosen from Group A.

Group A: ART 314, 315; ENGL 271, 412, 413, 417, 418, 451, 453, 458, 460, 461, 464, 465; FLL 458; FR 463, 465; GER 458; HIST 373, 384, 393, 473; ITAL 223; MUS 201; PHIL 212; SPAN 462.

Group B: ART 116, 117; ENGL 235, 292, 337; FLL 292; FR 221; GER 221 and 459; HIST 105, 281, 371, 372, 377, 385, 431; ITAL 221; PHIL 211, 410, 411; SPAN 221; SPTH 471.

In addition, several of these departments have courses treating individual authors, artists, themes, etc., as well as independent studies courses. Where the subject matter of such courses is appropriate, they may be used toward fulfillment of the requirements of this minor.

A student minoring in Medieval and Renaissance studies may include a maximum of six credits from courses in the major department. Such credits must be in addition to those used to fulfill the requirements of the major. To insure cohesiveness in a student's program, courses should be chosen with the help of an adviser and the minor program must be approved by the Medieval and Renaissance Studies Committee.

Additional information is available from Dr. Francis X. Hartigan, Room 101, Mack Social Science.

Museology Minor

The interdisciplinary program in museology offers students an opportunity to explore the expanding field of museum work and museum research. The museology minor is designed to provide an introduction to the field, an exposure to some of the skills and techniques required of a career museologist, and an initial apprenticeship experience in a museum setting. Today there are roughly 7,000 public museums in the United States, employing career museologists as well as professional curators, exhibit technicians, educators and others. Students contemplating a career in the museum field, or in a discipline such

as anthropology, art, biology, geology, history, home economics or historic preservation, or one in federal or state agency service, should find the minor particularly useful. Students choosing this minor must complete six credits in required courses as well as twelve credits in elective courses. Because the elective directions can be many and varied, students and their advisers must consult the chairman of the museology committee for a specific program plan (see below). A student minoring in museology may include in the minor a maximum of six credits from courses in the major department. Such credits must be in addition to those used to fulfill the requirements for the major. Nine of the total minor credits must be upper division. For additional information, contact Dr. Catherine Fowler, Chairman, Museology Committee, 202D MSS.

Required:	Credits
ANTH, ART, BIOL, HIST, H EC 309	3
ANTH 480, BIOL 310, HIST 310, H EC 470, or ART 319	3
<i>Additional Electives:</i> ANTH 230, 342, 362, 401, 423, 425; ART 100, 116, 117, 150, 419; BIOL 333, 334, 360, 362, 372, 373, 374, 375, 376, 377, 378; HIST 281, 282, 371, 372, 384, 403, 404, 473; H EC 151, 152, 315, 353; H P 301, 475	12
	18

Suggested Emphases:

History Emphasis: HIST 281, 282, 371, 372, 384, 403, 404, 473; H EC 315, 353; H P 301, 475

Science Emphasis: ANTH 230, 342, 362, 401, 423, 425; BIOL 333, 334, 360, 362, 372, 373, 375, 376, 377, 378; HIST 281, 282.

Exhibits Emphasis: ART 100, 116, 117, 150, 419; ANTH 230, 342; H EC 151, 152.

National Student Exchange

The university is a member of the National Student Exchange (NSE). This program provides qualified undergraduate students with an opportunity to become better acquainted with different social and educational patterns in other areas of the United States. Governed by the philosophy that participation is essential to education, the NSE encourages students to experience new lifestyles and appreciate various cultural perspectives.

Nevada residents may apply for exchange in the sophomore or junior year to one of several regionally accredited state institutions across the United States (currently 59 schools participate). A minimum of 2.5 cumulative grade-point average is required and, if accepted, the student pays in-state fees at the school selected.

Information and applications may be obtained from Dr. Robert G. Kinney, Room 103, Thompson Student Services Center.

Religious Studies

The purpose of this interdisciplinary program is to allow the student to pursue, as an object of academic inquiry, such aspects of religious experience as are subject to study without regard to sectarian sentiment or affiliation.

Minor

Students wishing to minor in religious studies must complete a total of 18 credits to include courses from at least two departments and R ST 101, Introduction to Religious Studies. Twelve (12) of these credits must be earned from courses numbered 300 or above. The introductory course (R ST 101) is a prerequisite for 300 level courses unless waived by the religious studies adviser. The courses acceptable toward the minor are listed below in two groups, *Group A* and *Group B*. At least 12 credits must be chosen from Group A; other courses may be selected from Group B.

Group A: ANTH 322; ENGL 268, 337; HIST 317, 318; PHIL 112, 212, 323; PSY 350; R ST 101; SOC 333.

Group B: ANTH 339, 340; ART 116; ENGL 292, 333, 339, 340, 453, 464; HIST 105, 371, 372, 373, 374, 427, 473; PHIL 201, 203, 211, 401.

In addition, several of these departments have courses treating individual authors, artists and themes, as well as course in independent studies. Where the subject matter of such courses is appropriate, they may be used toward fulfillment of the requirements of this minor. A student minoring in religious studies may include a maximum of six (6) credits from courses in the major department. Such credits must be in addition to those used to fulfill the requirements of the major. To insure cohesiveness in a student's program, courses should be chosen with the help of an adviser and the minor program must be approved by the Religious Studies Committee.

Additional information is available upon request from the chairman of the Religious Studies Committee, c/o Vice-President for Academic Affairs, Clark Administration Building, Room 202, 784-4805.

Teacher Certification

Students who successfully complete the professional education requirements of the teacher preparation degree programs at the university, with major and minor teaching fields, simultaneously meet all requirements for certification by the Nevada State Department of Education. However, proper application must be made to the state certification director. New state

certification requirements are met through appropriate courses listed in this catalog under the College of Education.

Advisement for teacher education programs is offered through the Division of Curriculum and Instruction and the dean of the College of Education, in cooperation with department chairmen and deans of the Colleges of Arts and Science, Agriculture, and Business Administration, and the School of Mines.

The programs for teacher education at the university conform with standards of the National Council for Accreditation of Teacher Education, which are considerably higher than the minimum requirements currently demanded by the Nevada State Department of Education.

Graduates of this or other universities who have not followed the approved teacher education curriculum may obtain information concerning minimum requirements for certification from the State Certification Director, Nevada State Department of Education, 400 West King Street, Carson City, NV 89710. Students who wish to be certified in another state should obtain a statement of requirements from that state's department of education.

A postbaccalaureate certification program for graduates is offered through the College of Education.

Additional information is available upon request from Dr. Edmund J. Cain, Room 101, Education Building.

Western Interstate Commission For Higher Education (WICHE)

The WICHE Student Exchange Program was developed to aid Nevada students to obtain access to certain fields of professional education.

Support for these varied fields is through legislative appropriation. Therefore only a certain number of students are certified to receive WICHE funds.

Requirements for certification are varied for each field of study. The basic eligibility requirement for all students interested in the WICHE Student Exchange Program is to be a resident of Nevada five years prior to application.

Applications and related information must be in the WICHE office by October 30 of the year before the individual expects to enter school.

For information regarding the fields of study, requirements for certification and applications, contact the WICHE office representative, 405 Marsh Avenue, Reno, NV 89509.

Women's Studies

The purpose of this interdisciplinary program is to provide a fuller understanding of the nature and role of women through academic study, to discover and evaluate the accomplishments of women, and to consider the special problems of women in a changing world.

To fulfill the requirements in this minor, each student must complete the introductory course, W S 101, and a program comprising 15 additional credits chosen from the following courses: ANTH 212; ENGL 267; H EC 131*, 274, 315, 341, 422, 430, 431*, 458*; SOC 275, 453, 480; SPAN 441*; C J 498*; HIST 497*; P SC 354; SHR 320, 372*; SPTH 412*.

Suitable courses offered from time to time may be approved by the women's studies coordinator for inclusion in the minor. Nine of the credits must be in 300 or higher level courses.

Students must consult with the women's studies adviser to choose courses suitable to their needs and majors.

Additional information and advisement is available from Dr. Anne Howard, Room 5B, Frandsen Humanities.

*When these courses or term projects within them deal with women's concerns.



Max C. Fleischmann College of Agriculture

Bernard M. Jones, *Dean*

R. Grant Seals, *Associate Dean*

The general objectives of the Max C. Fleischmann College of Agriculture are to help provide a sound educational experience for those who come to the university for their higher education; to study, investigate, and build knowledge concerning the problems of agriculture, agriculturally related industries, renewable natural resources and the quality of life; and to gather, interpret, and transmit that knowledge to the people of Nevada.

The College of Agriculture consists of four segments: School of Agriculture, School of Veterinary Medicine, Agricultural Experiment Station, and Cooperative Extension Service.

Research and Extension

The *Nevada Agricultural Experiment Station* is one of 53 in the United States and its possessions. Federal funds are appropriated to promote efficient production, marketing, distribution, and utilization of agricultural products. A companion piece of legislation termed the McIntire-Stennis Act promotes the development, protection, and utilization of forests and rangelands through research.

The *Nevada Cooperative Extension Service* was established by the passage of the Smith-Lever Act in 1914 by Congress and enabling legislation by the Nevada State Legislature. A central extension staff is located on the campus and a field staff is located in 14 counties. Rural, urban, and suburban families are served by extension.

Campus faculty members are normally on teaching and research or teaching and extension appointments. This arrangement serves to keep the teaching faculty up to date in their course offerings.

School of Agriculture

The School of Agriculture adheres to land-grant missions and policies. "The mission of the land-grant schools of agriculture is to ensure

through education, research, and service programs an abundant and economical supply of high quality food, feed, and fiber; to promote wise management of the natural, renewable resources of America; and to contribute to the improvement of the quality of human life." Students coming from other institutions are awarded credit in the same manner as credit is given by the land-grant institution of that state.

The school continues to emphasize practical experience, including internship, along with theory as an integral part of the education of the student in a chosen field. Instructional and laboratory experiences incorporate concern about the ecology and environmental regulations as the country moves into its third century of consciously encouraging agricultural development.

The School of Agriculture provides resident instruction in various areas of agricultural science at the associate, baccalaureate, and graduate levels. Shorter duration certificate programs are available in specialized subject matter areas as part of the associate degree program. Studies in the agricultural, biological, and physical sciences are coordinated with the humanities and social sciences to give the student a well-balanced education with specialized training in his chosen field. Efforts are made to guide the student into the particular field best suited to his interests and abilities. Programs designed to meet the needs of individual students are provided through judicious selection of elective courses.

Excellent field and laboratory facilities and a new equitation center encourage students to work on specialized areas by applying classroom work to laboratory situations.

School of Veterinary Medicine

The School of Veterinary Medicine offers a three-year preprofessional curriculum which when followed by the successful completion of a fourth-year professional curriculum at another accredited school of veterinary medicine results in a bachelor of science in veterinary science degree from the university.

Certificates

The School of Agriculture grants certificates for the successful completion of 20 or more credits of course work toward an associate degree or for 75 or more credits toward a baccalaureate degree or for duly authorized short courses or travel experiences. The student must apply for a certificate at the Office of the Associate Dean.

Associate Degree Program

An associate of science degree is awarded to students completing the prescribed two-year course of study designed to provide training in agricultural subjects at the technical level. Students may elect programs from three major areas: agricultural mechanics, farm and ranch management, and parks and turf management.

Baccalaureate Program

The School of Agriculture offers the bachelor of science degree with majors in agriculture; agricultural and resource economics; animal science; industrial mechanics; plant, soil, and water science; and renewable natural resources. Needs of students are met through use of options in the major field. Each option includes certain required courses plus electives to be selected by the student in consultation with his adviser. Options in the agriculture major include general agriculture, journalism, and pest control. The community development curriculum is included as an optional area in the agricultural and resource economics major along with the economics option. The industrial mechanics unit offers options in agricultural mechanics, industrial mechanics, and agricultural education. The plant, soil, and water science major provides options in crops and soils, water science, plant science, and soil science. Optional programs in the renewable natural resources major are forestry, wildlife management, range management, recreation area management, wildland conservation, and watershed management.

Master's and Doctoral Programs

Master of science degree programs are offered by five divisions in the School of Agriculture. Programs requiring thesis are available with majors in agricultural and resource economics; animal science; biochemistry; pest control; plant, soil, and water science; and renewable natural resources. Nonthesis programs are offered in

agricultural and resource economics; animal science; plant, soil, and water science; and renewable natural resources. Students with an interest in agricultural education or agricultural mechanics may register for one of the nonthesis majors and supplement with courses from the College of Education. In addition to the above, area of concentration programs can be developed for the individual student.

A doctor of philosophy degree is offered in biochemistry. The doctoral degree in hydrology and hydrogeology offered in the Mackay School of Mines encompasses areas in plant, soil, and water science and renewable natural resources in the College of Agriculture.

Instructional Divisions

Agricultural and Industrial Mechanics Division

Faculty: Butler, Coyle, Hill, Smith, Squires (Ch.)

Agricultural and Resource Economics Division

Faculty: Barmettler, Book, Champney, Garrett, Harris, Knechel, McNeely, Myer (Ch.), Shane, Yanagida

Adjunct Faculty: Drain, Hager

Animal Science Division

Faculty: Armstrong, Bailey, Behrens, Bohman, Brown, Cirelli, Foote, Jones, Lesperance, Norman, Ringkob, Seals, Speth (Ch.), Vaught

Biochemistry Division

Faculty: Blincoc, Blomquist, Dreiling, Heisler, Lewis, Pardini (Ch.), Payne, Reitz, Welch, Woodin

Adjunct Faculty: Jordan, Winicov

Integrated Pest Management Division (Research — Extension)

Faculty: Arnett, Knous, Krall, Lauderdale, Maxfield, Miller, Smith (Ch.)

Plant, Soil, and Water Science Division

Faculty: Bohmont, Gifford, Gilbert (Ch.), Guitjens, Howland, Jensen, Johnson, Leedy, Mahannah, Maxon, Miller, Peterson, Post, Thran, Young.

Adjunct Faculty: McCoy, Thyr

Renewable Natural Resources Division

Faculty: Artz, Barrington, Brown, Bruner, Budy, Buist, Burkhardt, Cluff, Cooper, Davis, Hutten, Kilpatrick, Klebenow, McAdoo, Miller, Skau, Stager, Tueller (Ch.)

Adjunct Faculty: Eckert, Evans, Everett, Gallaway, Meeuwig, Roundy, Yoakum, Young

Associate Degree Offerings

Associate of science degree programs in agriculture are designed to meet the needs of students who desire to continue studying beyond high school to prepare for employment at the technician level. The two-year program is designed to give students the necessary background for technical positions in businesses supplying and servicing agricultural producers, as well as in the production, processing, and distribution of agricultural products. Certificate programs of shorter duration are available to students desiring to take courses for one or two semesters concentrated in a particular subject matter area.

Admission requirements to the associate degree programs are identical to admission requirements of the baccalaureate degree programs.

Certificates are given to students in the associate degree program who successfully complete course work in a given major field but who do not wish to complete the requirements for the associate degree. The certificate is awarded by the School of Agriculture stating that the student has completed a certain number of credits in the particular subject matter area, and includes a listing of courses completed on the back of the certificate. The certificate is awarded at the end of the semester with a new certificate issued after successful completion of additional courses.

The associate degree program in agriculture requires the completion of at least 64 credits specified by the college. An average of C or above is required for the total credits attempted.

The number of credits taken on an S/U basis may not exceed 15. Each academic division sets actual credits allowed for their majors within this maximum.

Candidates for graduation must submit the completed application form to the associate dean of the School of Agriculture by the registration period two semesters before the proposed date of graduation. (See Requirements for Graduation section.)

The 26 credits of Group I requirements must be completed by all students in addition to the 38

hours of specific requirements for the particular major:

<i>Group I Requirements</i>	<i>Credits</i>
Communications (ENGL 101, 102)	6
Constitutional government (HIST 111 or P SC 103)	3
Basic agricultural subjects (AG 20, 150, and 216)	8
ACC 201	3
Electives in any business related course	6

26

A maximum of 6 credits of the 280—Independent Study—courses may apply toward the associate degree requirements.

Agricultural Mechanics Major

The agricultural mechanics major provides training for several areas of employment. Work in this program qualifies students for employment in either sales or maintenance of agricultural machinery and equipment. This program includes work on heavy equipment, the use of which is not confined exclusively to agriculture.

<i>Group II Requirements</i>	<i>Credits</i>
Agricultural and industrial mechanics course	21
Electives*	17

38

Farm and Ranch Management Major

The farm and ranch management major provides a great deal of leeway in the selection of appropriate electives to best fit the student planning to return to the farm or ranch, or enter into professional farm or ranch management.

<i>Group II Requirements</i>	<i>Credits</i>
AREC 100, 211	6
AIM 100	3
A SC 100, 204	6
B CH 120	4
PSW 100, 120, 164	9
Electives	10

38

Ornamental Horticulture Major

This major is designed primarily for those students who plan to be employed in the designing, planting, maintenance, or operation of horticultural installations such as parks, golf courses, greenhouses, or related areas.

<i>Group II Requirements</i>	<i>Credits</i>
AIM 115	3
B CH 120	4
PSW 120, 161, 162, 163, 164, 166, 260, 263, 264	30
Electives in plant, soil, and water science	3
Electives	5

45

*Note: Students emphasizing maintenance should take 12 additional hours of mechanics courses among electives; those emphasizing business should take business and economic courses.

Baccalaureate Offerings

Bachelor of science degree programs in the School of Agriculture are offered with six majors and a series of options in each of the majors. Special course requirements are established for each major and option.

To obtain the bachelor degree in agriculture, the student must meet both university and school requirements consisting of 128 semester credits. At least 40 credits must be in upper-division courses. The number of credits taken on an S/U basis may not exceed 30. Each academic division sets actual credits allowed for its majors within this maximum. Those courses required of all students in agriculture are indicated in university requirements and Group I listing below. Group II requirements for the special field of study are specified by the appropriate subject matter division. Each student's plan of work must be approved by the adviser and the associate dean.

Candidates for graduation must submit the completed application form to the associate dean by the registration period two semesters before the proposed date of graduation. (See Requirements for Graduation section.)

University Requirements

The following are required for all students in the university:

Subject	Credits
ENGL 102 ¹	6
U.S. and Nevada Constitutions ²	(3-6)
	9-12

School of Agriculture Requirements

The following requirements apply to *all* students in the School of Agriculture regardless of major:

Group I Requirements	Credits
SPTH 113	3
Social sciences and humanities (may include courses to meet Constitution requirements)	15
MATH 110 or equivalent (as established by the ACT score, SAT score)	3
BIOL 101, 201 or 202; CHEM 101	11
AREC 202 or EC 102	3
Basic agricultural resources ³ (any two of the following courses not in the student's major: A SC 100; PSW 100; RNR 100; AREC 100; AIM100)	6
	41

¹High school grades and ACT scores determine whether the entering student takes ENGL 101 or goes directly to 102. Students not required to take 101 may use these 3 credits for free electives.

²HIST 111 or P SC 103 may be used to satisfy both requirements. United States Constitution requirements may be satisfied by: P SC 409, 410; HIST 101, 401. The Nevada Constitution requirement may be satisfied by: P SC 208; HIST 102, 217. These courses may be taken as part of the social science electives shown in Group I requirements.

³Transfer students having no agriculture courses must meet this requirement. Transfer students with agriculture courses may substitute in consultation with their advisers, division chairmen, and associate dean.

A maximum of 12 credits of the 280, 480—Independent Study—courses may apply toward the baccalaureate degree requirements.

AGRICULTURE (AG)

The undergraduate agriculture major contains options in general agriculture, journalism, and integrated pest management.

General Agriculture Option: This option is designed for students preparing for positions requiring a general knowledge of agriculture. Many students who plan to operate a farm or ranch select this option.

Group II Requirements	Credits
Agricultural and resource economics courses	6
Agricultural and industrial mechanics courses	6
Animal science courses	6
Plant, soil, and water science courses	6
Renewable natural resources courses	6
Chemistry and biochemistry courses	4
B CH 120	4
IPM 391 or BIOL 360, 362	3-4
Electives to satisfy total credits	

Journalism Option: This program prepares students for positions in communications such as agricultural news reporters, radio and television broadcasters, market news reporters, and newspaper or magazine writers or editors.

Group II Requirements	Credits
JOUR 101, 221, 222, 280, 351, 356, 372, 375	21
JOUR 481 (internship in two or more areas), electives (4 credits)	7
Agriculture electives (must include at least one course in each division of the school)	21
Electives to satisfy total credits	

Integrated Pest Management Option: This program is designed to give the student a broad educational basis for identifying and solving problems of pests affecting humans, animals, and crops. Students taking this course of study obtain sufficient knowledge to obtain employment in sales, technical sales, and research and development with private industry or self-employment in the area of pest control. A student finishing this option may pursue graduate work in pest control, entomology, and other related fields. This option is directed by the faculty of integrated pest management.

Group II Requirements	Credits
IPM 100	3
AG 270	3
IPM 391, 400, 412, or 422, 471	10
PSW 355, 356	6
BIOL 306, 333, 355, 360, 381; 383 or 384	18
CHEM 142	4
Electives to satisfy total credits	

AGRICULTURAL AND RESOURCE ECONOMICS (AREC)

Students enrolled in this major may elect an option in farm management, agricultural business or agricultural economics. The department also offers a minor.

Farm Management Option: This option emphasizes agricultural economics, management, and production. Students take a broad spectrum of courses in agriculture disciplines. A strong background for a variety of career opportunities including farming and ranching is provided.

Group I and II Requirements (suggested course plan may be altered with counseling from adviser)

Freshman Year

	<i>Credits</i>
ENGL 101, 102	6
A SC 100, RNR 100, AIM 100, PSW 100 (choice of two)	6
AREC 100	3
MATH 110	3
AIM electives	3
EC 101	3
CHEM 101	4
Electives in College of Agriculture	3
	31

Sophomore Year

	<i>Credits</i>
BIOL 101, 201 or 202	6
AREC 202, 211	6
A SC 212, 213, 214, 215 (choice of two)	4
PSW 120	3
SPTH 113	3
AG 270	3
ACC 201	3
Electives (humanities and social sciences)	3
	31

Junior and Senior Years

	<i>Credits</i>
AREC 310, 315, 332, 411, 421, 466	18
MGRS 325	3
PSW 304, 344	6
PSW elective or RNR 345 or RNR 341	3
A SC 211 or 203 or A SC upper division courses	3
I S 250	3
EC 321	3
SPTH 113	3
Electives in College of Agriculture	9
Social science and humanities electives	12
Electives	3
	66

Agricultural Business Option: This option is designed for students interested in employment in agri-business. The curriculum stresses business management, accounting, and economics with flexibility of selecting courses in the production area.

Group I and II Requirements (suggested course plan may be altered with counseling from adviser)

Freshman Year

	<i>Credits</i>
ENGL 101, 102	6
A SC 100, RNR 100, AIM 100, PSW 100 (choice of two)	6
AREC 100	3
MATH 110	3
EC 101	3
CHEM 101	4
Electives in College of Agriculture	3
Elective (social science and humanities)	3
	31

Sophomore Year

	<i>Credits</i>
BIOL 101, 201 or 202	6
AREC 202	3
ACC 201, 202	6
I S 250, 251	6
AG 270	3
SPTH 113	3
Electives	4
	31

Junior and Senior Years

	<i>Credits</i>
AREC 310, 315, 332, 411, 421, 460 or 466	18
EC 303, 321, 322	9
MGRS 325, 362 or 365	6
ACC 303 or 307 or 309 or 313	3
U.S. and Nevada Constitution requirement	3
Communications elective	3
I S 480	3
Electives in College of Agriculture	9
Electives (humanities and social science)	12
	66

Agricultural Economics Option: This option is designed for students interested in a career in research and/or advanced degrees. Emphasis is on economics, statistics, and mathematics.

Group I and II Requirements (suggested course plan may be altered with counseling from adviser)

Freshman Year

	<i>Credits</i>
ENGL 101, 102	6
A SC 100, RNR 100, PSW 100, AIM 100 (choice of two)	6
AREC 100	3
MATH 110	3
EC 101	3
CHEM 101	4
Electives in College of Agriculture	6
	31

Sophomore Year

	<i>Credits</i>
BIOL 101, 201 or 202	6
AREC 202	3
MATH 265	3
I S 250, 252	6
AG 270	3
ACC 201	3
Elective in College of Agriculture	3
Electives (social sciences and humanities)	4
	4

Junior and Senior Years

	<i>Credits</i>
AREC 310, 315, 332, 411, 421, 460	18
EC 303, 321, 322	9
EC 441 or AG 705	3
EC 431 or MATH 365	3
SPTH 113	3
AG 470	3
MGRS 325	3
Communications elective	3
Elective in upper division AREC	3
U. S. and Nevada Constitution requirement	3
Elective in College of Agriculture	3
Electives (humanities and social sciences)	12
	66

Minor: The minor is designed for students who may not want to major in AREC but are interested in supplementing their major with a background in economics.

	<i>Credits</i>
AREC 202 or EC 102	3
AREC 211, 332	6
EC 102, 321	6
AREC 315, 364, 368, 411, 421, 460, 466 (choice of two)	6
	21

ANIMAL SCIENCE (A SC)

Students majoring in animal science prepare for careers in livestock production, business, education, research, and services related to livestock. Beef cattle ranching, meat processing and production, livestock extension, university teaching and research, livestock consultants, market livestock analysts, and animal recreationists are examples of some of the professional opportunities available. Flexibility is obtained for each student by appropriate selection of a wide variety of electives to meet educational objectives. Students planning on graduate studies should select appropriate electives early in the baccalaureate program with the assistance of the adviser. The following classes are required for students selecting this option in addition to those required by the university and the College of Agriculture:

<i>Group II Requirements</i>	<i>Credits</i>
A SC 100, 211, 400, 405, 406, 407, 409	23
BIOL 306; BIOL 366 or V M 413; V M 408	11-12
RNR 341 or PSW 304 or 355	3
CHEM 142 or 243; B CH 301	6-12
A SC 212, 213, 214, 215	4
Electives to satisfy total credits	

AGRICULTURAL AND INDUSTRIAL MECHANICS (AIM)

Undergraduates majoring in the agricultural and industrial mechanics division have several op-

tions as major areas of study. Two general areas of concentration are provided, with choices in each area. One major area deals specifically with mechanics and has optional courses leading to concentration in agricultural or industrial mechanics. The other major area provides preparation to teach vocational agriculture and/or other mechanical courses at the high school level.

Industrial Mechanics Option: Prepares student with mechanical and technical background in the broad areas of processing and construction. In addition to a strong technical and mechanical background, students also receive training in the areas of business, industrial psychology, and economics which are needed for advancement in the supervisory and managerial areas of industry. Close supervision and consultation with an adviser are needed to obtain the maximum benefits offered by this major option.

<i>Group II Requirements</i>	<i>Credits</i>
Agricultural and industrial mechanics courses	36
MGRS 310, 323, and electives	9
ACC 201, 202	6
Electives to satisfy total credits	

Agricultural Mechanics Option: Prepares students for occupations utilizing farm equipment and structures in sales, maintenance, installation, and conservation. Emphasis is placed upon the scientific, technical, and economic application for mechanization. The training provides competency for a variety of opportunities in applied mechanics.

<i>Group II Requirements</i>	<i>Credits</i>
Agricultural and industrial mechanics courses	36
AREC 315, 411	6
Electives—animal science	6
Electives—biological and/or physical sciences	6
Electives—plant, soil, and/or water science	6
Electives to satisfy total credits	

Agricultural and Industrial Mechanics Education Option: The course of study is designed to prepare students for high school teaching. With two years of on-the-job training or practical experience and completion of the required program, students are eligible for vocational secondary education teaching certificates.

<i>Group II Requirements*</i>	<i>Credits</i>
AIM 144, 444, 446, 447, 457	17
Agricultural and resource economics electives	3
Agricultural and industrial mechanics electives	12
A SC 405 or BIOL 300	3 or 4
PSW 120 or 222, 164 or 304, electives (3)	10
A SC 211, electives (7)	10
Agriculture electives	8
Electives to satisfy total credits	

*Agricultural education students should include the following courses in meeting Group I requirements: (a) electives in arts, humanities, or social sciences should include EDFM 103; HIST 111 or P SC 103; PSY 101, 231; CAPS 400.

PLANT, SOIL, AND WATER SCIENCE (PSW)

A student pursuing one of the options under this major may gain a thorough understanding of the fundamentals of plant science, soil science, or water science; or of the applied aspects of one or more of the specialties encompassed by this rather broad field.

Crops and Soils Management Option: Orientation is toward management of the soil resource and/or the production of plants for man's benefit. Electives permit specialization in crop science, horticulture, soil science, or combinations of two or more. They may also be chosen to provide familiarization in the area of agricultural business. Students can prepare for farming, greenhouse, nursery businesses, or for positions as county agents or with federal and state agencies or agricultural industries emphasizing crop products, fertilizers, agricultural chemicals, and/or resource management.

<i>Group II Requirements</i>	<i>Credits</i>
PSW 100, 164, 222, 304, 327, 344, 355, 357, 400 or 441	23
AG 270	3
AREC 211 or 411 or ACC 201	3
RNR 341 or A SC 204 or 211	3
CHEM 142	4
IPM 356, 391, 471	10
Electives to satisfy total credits	

Water Science Option: Emphasis is placed on mathematics, engineering, and the physical sciences basic to a thorough understanding of the occurrence, distribution, movement, use, and control of water. Students in this option should be able to expect employment in industry and in private and public management and service agencies. This option prepares the student for graduate study in soils, hydrology, drainage, irrigation, and watershed management.

<i>Group II Requirements</i>	<i>Credits</i>
PSW 100, 222, 304, 344, 422, 446	19
Six credits selected from PSW 331, 441, 444, 445	6
Six credits from C E 241, 242, 367, 368; M E 150, 241	6
AREC 466	3
AG 270	3
BIOL 355, 356; CHEM 142	7
MATH 215, 216, 310; PHYS 151, 152, 153, 154, or PHYS 201, 202, 203	20-21
Electives to satisfy total credits	

Plant Science Option: Course work emphasizes the biological and other sciences basic to an understanding of economic plants. Electives permit some specialization in crop science, and horticulture. Students who pursue this option should be well prepared for graduate study or positions requiring a strong background in the plant sciences.

<i>Group II Requirements</i>	<i>Credits</i>
PSW 100, 222, 304, 327, 331, 357, 400	20
AG 270	3
BIOL 300, 306, 333, 334, 355, 356	16
CHEM 102 and 142	4-8
PHYS 103, 104 or 151, 152	6
IPM 356, 391, 471	10
Electives to satisfy total credits	

Soil Science Option: This option stresses the physical and biological sciences, mathematics, and soil science. It prepares students for graduate study and for positions as soil scientists with federal and state agencies engaged in soil survey, management, or research, and with industries involved in production and sale of fertilizers and soil amendments.

<i>Group II Requirements</i>	<i>Credits</i>
PSW 100, 222, 304, 325, 327, 331, 344, 400, 421, 422, 441	32
AG 270	3
CHEM 101, 102 and B CH 301 ¹ or CHEM 103, 104 and 142 ²	11
CHEM 330; GEOL 101	8
MATH 102; PHYS 151, 152	8
Satisfy the requirements of either <i>Group A</i> or <i>Group B</i> below:	
<i>Group A, Biological Sciences¹</i>	
BIOL 306, 355, 356; or PSW 424 or 471	7-8
<i>Group B, Geological-Plant Sciences²</i>	
RNR 345	3
GEOL 102, 211, 213, 215	8
Electives to satisfy total credits	

RENEWABLE NATURAL RESOURCES (RNR)

The renewable natural resources major offers a program which balances a sound background in basic disciplines, flexibility in choice of specialized education, and emphasis on developing analytical skills necessary for the many positions available in renewable natural resource management.

A student may elect an option in either forestry, wildlife management, range management, outdoor recreation management or watershed management. These options correspond to recognized professions, and each offers a distinct program that meets appropriate professional and civil service requirements. As a rule, a program of study can be arranged to meet special interests of the student, i.e., a student may choose a substantial number of courses in some supporting or related field, such as business, public relations, ecology, or another RNR program.

The renewable natural resources curriculum consists of a preprofessional and professional level

¹Recommended for students specializing in soil fertility or crop-related studies.

²Recommended for specialization in soil survey, soil classification.

program of study. The preprofessional program includes lower-division courses to meet the university and college requirements. These courses are normally completed during the freshman and sophomore years. The professional program includes the upper level courses listed in the RNR division core requirements plus sufficient additional courses in the student's professional field of interest, i.e., forestry, range management, etc. Courses in the professional program are normally completed during the junior and senior years.

The program of study in the student's professional field of interest is defined by the student and presented during the second semester of the sophomore year to the student's academic adviser. After review, the adviser submits the program to the division chairman for approval. The program of study is then filed in the division office and the office of the associate dean. If, at a later time, it is necessary to change the program of study, the student initiates the change in writing and secures the concurrence of the academic adviser and division chairman. The change is filed with the original program of study in the division office and the office of the associate dean.

Required GPA for Graduation: A GPA of 2.25 or higher must be achieved in all major courses, excluding individualized study, such as internships and independent study.

*Preprofessional Program of Study
(Freshman and Sophomore Curriculum)*

	<i>Credits</i>
ENG 101 and 102	6
MATH 110 and equivalent	3
CHEM 101	4
GEOLOG 101	3 or 4
AREC 202 or EC 101	3
BIOL 101, 201 or 202, 212	11
PSW 222	4
AG 270	3
SPTH 113	3
RNR 100	3
A SC 100, PSW 100, AIM 100, AREC 100 (any two of these courses)	6
Computer Sci. (e.g., EE 337, MINE 213 or 324, IS 250, 252; MATH 183)	3 or 4
Electives (humanities, Nevada and U.S. Constitution requirement, social science or fine arts)	*10 or 12
	64

*Professional Program of Study
(Junior and Senior Curriculum)*

The professional program of study is composed of two groups of courses, namely the RNR core and the career courses, as follows:

Renewable Natural Resources Core (all students complete the following courses):

	<i>Credits</i>
RNR 302 - Quantitative Resource Analysis	5
RNR 345 or 393 - Range Plants or Dendrology	3

RNR 351 or 292 - Aerial Photogrammetry or Resource Maps and Land Measurement	3
RNR 420 - Integrated Natural Resource Management	3
RNR 493 - Range and Forest Ecology	3
RNR 494 - Administration and Policy	3

20

Professional Programs: Each student completes a minimum of 15 credits of additional career-related courses plus electives as outlined in the approved program of study to satisfy the 128 credits required for the B.S. degree. Examples of these career-related courses are given for each of the renewable resources professions. Each student, through consultation with the adviser, tailors this specific group of courses to fit the desired career goals.

Forestry Option: The forestry option prepares students for careers as managers of forested lands. Emphasis is placed on a balanced program which includes both biological and social-economic factors influencing the production and use of diversified resources from our nation's forests. Programs of study are developed to meet individual career goals which many include advanced study leading to graduate degrees. Career opportunities are found in a variety of public agencies as well as private timber companies and consulting firms. The following example, when combined with the preprofessional program and the RNR core courses, meet the Federal Civil Service standards for career forestry positions:

	<i>Credits</i>
RNR 302 - Silviculture	4
RNR 303 - Forest Productions	3
RNR 351 - Aerial Photogrammetry**	3
RNR 391 - Wildland Protection	3
RNR 401 - Logging Systems	4
RNR 402 - Forest Management	3
RNR 482 - Watershed Management	3
Electives	21
	44

Outdoor Recreation Option: This program stresses the planning, management and interpretation of areas for the recreational benefits of people. A strong background in both the natural resource and social sciences is suggested. Students may emphasize career development within the planning, management, or interpretive aspects of the field, and may pursue employment opportunities with public agencies or the private sector. The following example, when combined with the freshman and sophomore curriculum and the core requirements, represents various emphases which

**Forestry majors must complete this course in addition to RNR 292-Resource Maps and Land Measurement.

*Total needed for graduation, 15 credits of arts, humanities and social studies.

can be decided on by the student in consultation with the adviser:

	<i>Credits</i>
RNR courses (e.g., 321, 361, 362, 462, 463, 464)	6-20
Planning courses (e.g., PSW 163; C E 401, 402; GEOG 448)	3-19
Management courses (e.g., PSW 166; P SC 341; C J 110, 120; RPED 270; SOC 391)	3-18
Interpretation courses: (e.g., BIOL 309; H P 301, 475; SPTH 320; EDFM 410; JOUR 301, 370)	3-19
Business courses (e.g., ACC 201, 202; AREC 364, 368; MGRS 310; B A 480)	3-18
Social science (e.g., SOC 101, 261, 362, 392; ANTH 101; PSY 101)	3-18
Electives	3-9
<hr/>	
Minimum total credits in Outdoor Recreation	44

Range Management Option: This program provides a wide base for management of the natural forest resources upon which livestock and big game depend for food and cover. Range science courses provide specialization in range plants and ecology, range evaluation methods, and range management principles and practices. Related courses such as soils, animal science, forestry, and wildlife management are essential. Students are encouraged to seek summer employment with one of the resource agencies. Employment opportunities are found in a variety of state and federal agencies and ranch management or agribusiness. The following example, when combined with the preprofessional and core courses, meets the Federal Civil Service standards for range conservationist careers:

	<i>Credits</i>
RNR 341 - Principles of Range Management	3
RNR 346 - Range Resources Field Trip	2
RNR 348 - Range Improvements	3
RNR 441 - Range Agrostology	2
RNR 450 - Management Planning	3
RNR 482 - Watershed Management	3
A SC 211 - Feed and Feeding or A SC 406 - Animal Nutrition	3
A SC 212 - Beef Cattle Production or A SC 213 - Sheep Production	2
PSW 325 - Soil Morphology and Classification	3
BIOL 334 - Systematic Botany of Flowering Plants Laboratory	2
BIOL 355 - Plant Physiology	3
Electives	15
<hr/>	
	44

Watershed Management Option: This program is designed to provide: (1) a basic background in hydrology, and (2) management applications to forest; water quality monitoring; flood prediction; land capability and hazard evaluation; logging; grazing, mining and recreational impacts on streamflow and riparian zones. The profession requires a strong background in biological and physical sciences combined with coursework in hydrology and land management. The sug-

gested sample program of courses below qualifies a student as a hydrologist using Civil Service criteria:

	<i>Credits</i>
MATH 265, 365 - Calculus	6
PHYS 151 and 152 or PSW 422	6
RNR 482, 484 - Watershed Management	6
C E 498 - Water Quality	3
C E 364 - Engineering Hydrology	2
C E 415 - Water Rights	3
GEO 341 - Geomorphology or PSW 325	3
PSW 331 - Bioclimatology	3
Electives	12
<hr/>	
	44

Wildlife Management Option: This program stresses aspects of wildlife species based on ecological principles. Emphasis is given to habitat management and wildlife management under multiple-use programs on public and private lands, game management programs and non-game management. It prepares students for further advanced study or careers in private or public agencies as manager, biologists or administrators. The program of study must consider the student's professional goals. The following example, when combined with the freshman and sophomore curriculum and the core requirements meets the standards developed by the Wildlife Society for certification as a wildlife biologist. Additional references for program development may include Federal Civil Service standards and Nevada Personnel Division requirements.

	<i>Credits</i>
Biology courses (e.g., BIOL 347, 355, 366, 376, 377, 378, 381, 385, 481; A SC 407, 409) (total must include 9 credits of botany and related plant sciences)	13
Wildlife management (e.g., RNR 421, 425, 427)	6
Related resource management (e.g., RNR 341, 423, 402; BIOL 470)	3
Journalism or technical writing (e.g., JOUR 221, 222, 370) ..	3
Electives	19
<hr/>	
	44

Renewable natural resource students are advised that suggested courses may in some instances require additional prerequisite courses.

Graduate Offerings

Graduate study leading to the master of science degree is offered by each instructional division. Both major-minor and area of concentration programs are available. The master's program includes both Plan A (thesis program requiring 30 credits) and Plan B (nonthesis program requiring 32 credits). A doctor of philosophy degree is offered in biochemistry. The doctoral program in hydrology and hydrogeology offered in the Mackay School of Mines encompasses areas in the

plant, soil, and water science and the renewable natural resources division.

The plan of study for each student is worked out by the student and the advisory committee. The program must meet the minimum graduate school requirements as stated in the Graduate School section. The student must also meet any additional requirements specified by the advisory committee or the division concerned.

The doctor of philosophy degree is primarily a research degree with a course of study determined by the student and an advisory committee. The program must meet the minimum graduate school requirements as stated in the Graduate School section.

Graduate research fellowships are available. Applications for graduate research fellowships should be submitted to the chairman of the appropriate subject matter division.

Agricultural and Resource Economics Division

Graduate study in agricultural and resource economics may be pursued in the following major areas: production economics, farm and ranch management, agricultural marketing, land and water economics, recreation and wildlife economics, agricultural policy, price analysis, and agricultural business.

Two plans are available to the student pursuing the master of science degree. Plan A requires the writing of a thesis. Plan B involves the writing of a professional paper plus additional course work in lieu of the thesis requirement.

A minor may be selected from any approved area in the university, including among others, business management, economic theory, technical agriculture and renewable natural resources, political science, psychology, and sociology.

Written and oral examinations are required.

The department also participates in the interdisciplinary master of science degree with a major in land use planning policy in cooperation with several other departments. For further information refer to the Interdisciplinary and Special Programs section of this catalog.

Animal Science Division

A master's degree in animal science is contingent upon filling the requirements of the Graduate School and the student's advisory committee. The number and nature of graduate examinations are determined by the student's advisory committee. A master's degree may be

obtained either with or without a thesis requirement. A thesis may be written on research completed in animal breeding, meats, nutrition, physiology, production, management, and general animal science.

A nonthesis degree has the following requirements in addition to those required by the Graduate School. Each candidate must have at least five years' professional experience in agriculture related to animal science or complete an approved professional project. This project is selected by the candidate and adviser for approval by the assigned committee. The project is designed to train the individual for increased proficiency in the livestock industry. It may consist of (1) a field study carried out under the direction of the adviser or other appropriate university staff member or (2) the student may work full time in a progressive agricultural program of a nature that involves the student in the administrative and other problems of the livestock industry. The duration of this project is at least one semester or three months during the summer. Satisfactory completion of the project and a detailed written report of the nature and results of this experience are required. A student may receive a salary under (2) above. Each candidate must select an approved topic appropriate to his major and write a professional paper incorporating and interpreting pertinent literature. This paper satisfies 3 graduate (700) credits. The literature review and the report on the professional project may be incorporated into one paper, if appropriate.

Biochemistry Division

Graduate programs in this division are offered in both biochemistry and integrated pest management. The plan of study may involve either a major-minor or field of concentration type of program.

Master of Science Degree in Biochemistry: Graduates with a bachelor's degree in the physical or natural sciences including agriculture, having at least 3 hours each in biology, and organic chemistry, and meeting the requirements of the Graduate School, may be accepted in biochemistry. Before completing the requirements for the master's degree, the student must have completed the following courses or their equivalents: one year of physics; one year of biology, botany, zoology, or physiology; and CHEM 243, 244, 245, 246, 330, 353, 354, 355. In the major-minor option, these minors may be pursued: organic, inorganic, physical, or analytical chemistry; nutrition; physiology;

botany; zoology; microbiology; genetics; and statistics. Thesis research is required and may be pursued in many areas of biochemistry. Further information may be obtained from the *Graduate Studies in Biochemistry* publication in the departmental office.

Master of Science Degree in Integrated Pest Management: Students with a broad background in agricultural science and other biological and physical sciences may be accepted. Thesis research may be in a number of entomological areas. The program may include appropriate courses in entomology, plant pathology, weed control, and others to fit the student's needs.

Doctor of Philosophy Degree in Biochemistry: The general requirements of the Graduate School must be satisfied by all candidates for the Ph.D. degree. The minimum credit requirements for the major-minor program are:

	<i>Credits</i>
Biochemistry course work and seminar	24
Biochemistry research and dissertation	24
Minor courses	12
Electives	12

72

For further information, consult the departmental publication *Graduate Studies in Biochemistry*.

Plant, Soil, and Water Science Division

Within this division, the master of science degree may be pursued under either Plan A or Plan B with either a major or a field of concentration. Approved thesis areas are bioclimatology, crop science, horticulture, soil science, and water science. Within these areas students may select from several specialties including crop production, crop improvement, crop physiology, ornamental horticulture, soil fertility and management, soil chemistry, soil classification, soil physics, bioclimatology, irrigation, and drainage.

College graduates with training in agriculture, biochemistry, biology, chemistry, physics, geology, and/or engineering are encouraged to enter the program with the understanding that deficiencies must be ascertained and made up as determined by the advisory committee. A student should ordinarily plan on two years to complete the master's program.

Special requirements of the division include (1) an examination during the first semester to assist the advisory committee in developing the study program; (2) attendance at all divisional seminars; (3) written final examinations at the option of the advisory committee; and (4) the successful

completion of PSW 711 — Research Methodology, 3 credits.

Students pursuing Plan B must also complete a 2-credit professional paper (PSW 796) on a subject approved by the advisory committee. Transfer from Plan A to Plan B or from Plan B to Plan A is permitted at any time by fulfilling the appropriate requirements of the plan to which transfer is made.

Renewable Natural Resources Division

Graduate study is directed at management and understanding of renewable natural resources. Thesis may include planning, research of implementation phases as they pertain to forests, range, wildlife, outdoor recreation, or watersheds.

This program recognizes that today's complex and accelerating demands require breadth of view and specialized training and skills of numerous disciplines if these resources are to be intelligently managed. It follows that the applicant with a narrow technical background is encouraged to take course work that adds breadth; that the *generalist* is encouraged to develop specialized skills. Graduates from other disciplines are encouraged to enter the program with the understanding that deficiencies must be ascertained and made up as determined by the advisory committee in preliminary review. Experience at levels of responsibility is considered in satisfying deficiencies.

Plan A (Thesis)

See Graduate School section.

Plan B (Nonthesis)

1. Minimum of 32 course credits.
2. Fifteen credits at 700 level.
3. Professional paper with 2 credits at 700 level.
4. Two years' experience necessary to qualify.
 - a. Experience to be determined by renewable natural resources ad hoc committee.
 - b. Exceptions to experience requirement to be made for students of exceptional ability.
5. Final comprehensive oral examination.

The department also participates in the interdisciplinary master of science degree with a major in land use planning policy in cooperation with several other departments. For further information refer to the Interdisciplinary and Special Programs section of this catalog.

School of Veterinary Medicine

This program provides a basic three year pre-professional curriculum which satisfies the entrance requirements for the four year professional curriculum at all of the schools of veterinary medicine with which Nevada has a contract. The pre-professional program provides intensive advisement, an internship with veterinary practitioners, and scholarships from the Gordon MacMillan endowment. Selection into the professional program is made on the basis of high academic performance, practical experience in some phase of veterinary medicine, references, motivation, personal interview and results of written examinations.

Students who satisfactorily complete the three year university pre-professional curriculum, including the resident credit requirements, and are accepted into the professional program, may qualify for a bachelor of science in veterinary science degree from the university after the satisfactory completion of the first year at the professional school.

Since not all students are admitted to the professional program, pre-professional students are encouraged to select courses allowing them to receive a bachelors degree at the end of four years.

Veterinary Medicine Pre-Professional Curriculum

	<i>Credits</i>
V M 100	1
MATH 110, 265	6
CHEM 101, 102, 243, 244, 245, 246	16
B CH 301 or 302	3
BIOL 101, 201, 202, 206, 207, 306, 364	18
PHYS 151, 152, 153, 154	8
ENGL 101, 102	6
HIST 111 or P SC 103	3
SPTH 113	3
A SC 405	4
Humanities	9
Social sciences	9
Electives	3

Animal science majors: A SC 211, 212, 213, 406 or V M 408	6 or 7
Animal health technologists emphasis:	or
MEDT 111 301	2
V M 101, 202	6

95-97

Pre-professional students may receive a bachelor of science with a major in animal science in the School of Agriculture after they complete the basic three year veterinary medicine pre-professional curriculum by completing the following courses during their fourth year:

	<i>Credits</i>
V M 413, 408	7
A SC 400, 406, 407, 409	13
Courses in College of Agriculture outside of major	6
AREC 202	3
RNR 341, or PSW 304 or PSW 335	3

32

Pre-professional students may receive a B.S. in veterinary science under the animal health technologist option after they complete the basic three year veterinary medicine pre-professional curriculum by completing the following courses during their fourth year:

	<i>Credits</i>
V M 102, 408, 416	9
CHEM 330	4
MEDT 311, 312, 331, 332, 333, 334, 421, 422	20
X-ray technology*	

Students who wish to change from the pre-professional curriculum to a curriculum designed specifically for a career in animal health technology should consult their adviser. A minimum of 75 credit hours of specific course work is needed to qualify students to take the Nevada State Licensing Examination in Animal Health Technology.

*Offered at community college



College of Arts and Science

Paul Page, *Dean*

Departments of Instruction: anthropology, art, biochemistry, biology, chemistry, criminal justice, English language and literature, foreign languages and literatures, geography, history, journalism, mathematics, military science, music, philosophy, physics, political science, psychology, recreation and physical education, social and health resources, sociology, and speech and theatre.

Objectives

The College of Arts and Science, through its undergraduate and graduate programs, offers students the discipline and knowledge of a traditional liberal education. Students are encouraged to develop intellectual curiosity and habits of creative, but disciplined thought.

The student's education is directed through certain broad requirements in the natural and social sciences and the arts and humanities. College requirements also ensure acquisition of the basic skills necessary to use this knowledge — skills, for example, in the student's own and a foreign language and in following procedures for orderly investigation. Requirements for a field of concentration (major and minor subjects) are intended to equip the student with a deeper understanding of at least one body of knowledge, sometimes in preparation for a profession or for advanced study.

Requirements for the Baccalaureate Degree

To be recommended for the degree of bachelor of arts, bachelor of science, bachelor of arts in criminal justice, or bachelor of arts in journalism, a candidate must earn a minimum of 128 credits in required and elective courses.

To accomplish the aims of the college, a candidate for the baccalaureate degree must:

1. Complete the requirements listed under Prescribed Courses in Arts and Science.
2. Complete courses totaling 40 credits or more in courses numbered above 300.
3. Complete requirements for a field of con-

centration (major and minor subjects), usually 50 credits. The particular grouping of courses depends on the particular educational goals of the student but must be in accord with departmentally sponsored fields of concentration or cross-disciplinary fields outlined in this catalog.

It is advisable that students plan their work for their junior and senior years as early as the sophomore year, sometimes as early as the freshman year, in order that the studies then elected may fit in with their work later. At the beginning of the junior year, each student, in consultation with the adviser and with the approval of the chairman, must submit to the office of the dean a written notice selecting a field of concentration (major and minor subjects); such selection requires approval of the chairman of the department sponsoring the field of concentration.

The remaining credits necessary to make a total of 128 in the chosen course of study may be freely elected from any department in the university.

Candidates for graduation must submit an application for graduation to the dean of the College of Arts and Science at the beginning of the senior year.

Prescribed Courses in Arts and Science:

1. Satisfactory completion of courses in United States and Nevada Constitutions as required by the state law.
2. The university requirement is the completion of ENGL 102.
3. The successful completion of a fourth semester college course in a foreign language, or evidence of equivalent proficiency as determined by placement examination, or other means, by the department of foreign languages and literatures. A student who successfully completes the fourth year course of a foreign language in high school satisfies the requirement. Information on options that may be permitted or required by certain departments may be obtained from those departments or from the office of the dean of the College of Arts and Science.
4. A minimum of 26 credits to be earned in Groups I, II, and III. A student must pass three courses in each group in a minimum of two departments in each group. No course may be counted as more than one of the nine required courses, but interdepartmental courses may be

counted in any *one* of the participating departments. Courses satisfying university requirements may not be used to fulfill the group requirements. Group I includes courses dealing with the principles and methods of the natural sciences and mathematics. Group II includes courses dealing with interpretations and objective descriptions of peoples, of institutions, and of social and political phenomena. Group III includes courses dealing with the history, appreciation, and analysis of the arts, language, and literature; the principles of logic and thought; and the reconstruction and interpretation of the past.

Courses Which Satisfy Group Requirements: *

Group I, Natural Sciences and Mathematics: ANTH 102; BIOL 101, 130, 201, 202, 204, 206, 210, 212; CHEM 100, 101, 102, 103, 104; ENGR 204; ENV 101; GEOG 103; GEOL 101, 102, 106; HIST 282; MATH 110, 140, 201, 215, 265; PHYS 101, 106, 108, 109, 110, 117, 151-152.

Group II, Social Sciences: ANTH 101, 201, 202, 205; C J 110, 120; EC 101, 102; GEOG 106; HIST 101, 102, 281; JOUR 101; P SC 104, 205, 210, 211, 231; PSY 101, 203-204; SHR 220; SOC 101, 202, 205; SPTH 210; W S 101.

Group III, Humanities: ART 116, 117, 214, 257 (3 cr. only); ENGL 131, 235, 236, 241, 244, 253, 261, 281, 291, 292, 293; FR 221, 223; GER 221, 223; ITAL 221, 223; SPAN 221, 222, 223; HIST 105, 106; MUS 121, 201-202; PHIL 100, 110, 125, 130, 211, 213; SPTH 100.

Major and Minor Programs: By their junior year, students must declare a major by filing a field of concentration form. The field of concentration may consist of a major only, for some departments or programs (see biology, chemistry, criminal justice, journalism, music, physics), or a major interest area and a minor interest area for other departments. Majors are offered in each department in the College of Arts and Science, and in prelegal studies. Approved minors exist in most departments within the college, in interdisciplinary programs, and some departments outside the college.

1. The requirements for most fields of concentration consist of major requirements and minor requirements. The total number of credits in the combined major and minor programs may not exceed 54 credits. For departments requiring a major only, the field of concentration includes courses required in the department and specific courses required in other fields which together constitute between 45 and 54 credits.

2. Students have the option of completing a minor program if they wish, even if a minor is not required for completion of the field of concentration.

3. The completion of an approved minor is recorded on the student's permanent record at the time of graduation.

4. Minor programs in the same department as the major are not accepted, except in foreign languages and literatures and speech and theatre.

5. With justification, a student may petition the dean through the department to have a special related field substituted for a required minor. The special field, however, is not recorded on the student's transcript as a minor.

Approved Minors: Minor interest areas that may be used for the field of concentration, or completed by a student within the college, are listed below. A description of the required courses for each minor may be found under the heading of the appropriate department or interdisciplinary program that offers the minor. Accounting, anthropology (cultural anthropology, archaeology), art, biology (biology, botany, ecology, microbiology, zoology), chemistry, computer sciences, criminal justice, economics (with College of Business Administration), English (literature, language and linguistics, dramatic literature), environmental studies, ethnic studies, French (in Department of Foreign Languages and Literatures), geography, German (in Department of Foreign Language and Literatures), historic preservation, history (general history, American history, European history, Third World History), journalism, mathematics, medieval and renaissance studies, museology, music, philosophy, physics, political science (general, foreign affairs, public administration, American government, public policy), psychology, recreation and physical education, religious studies, social and health resources, sociology (general sociology, applied sociology), Spanish (in Department of Foreign Languages and Literatures), speech and theatre (speech communications, theatre), women's studies.

Suggested Curriculum for First Two Years: In order that these requirements may be used to the best advantage in assuring a well-balanced curriculum and at the same time give the student some freedom of choice in the selection of courses, the following course of study is recommended for the first two years. A minimum of two courses each semester in at least two of the groups or foreign languages listed in the foregoing should be selected. Because of the variation

*Some courses have prerequisites; students are advised to see course descriptions.

in the language requirements, each lower-division student should consult with the assigned adviser and the appropriate official of the department of foreign languages of the department of foreign languages for proper advisement.

Freshman Year

	<i>Credits</i>
<i>(16 credits per semester)</i>	
ENGL 101-102 (3 credits each)	6
Foreign language, natural science, social science or humanities	5-8
Electives	5-9

Sophomore Year

	<i>Credits</i>
<i>(16 credits per semester)</i>	
Foreign language, natural science, social science, or humanities	5-8
Electives or field of concentration courses	6-10

General Regulations: Except as otherwise specified, all students, including transfer students, must fulfill the foregoing requirements before the bachelor's degree may be received from the College of Arts and Science.

In addition to the graduation requirement of the university that every student must have an average of 2 grade points for each credit registered, the College of Arts and Science requires that each of its students earn a GPA of 2.0 in the major interest portion of a field of concentration.

S/U Option: Students may register in certain courses on a satisfactory/unsatisfactory basis and may elect to take such courses among either the group requirements of the College of Arts and Science or electives.

The college's policy on S/U courses conforms in every respect to the university policy, but with the restriction that courses taken for S/U credit may not count toward the field of concentration (major and minor subjects) except upon the recommendation of the adviser and department chairman with the approval of the dean.

Graduate Study

Graduate programs leading to the degrees of master of arts or master of science are offered in anthropology, atmospheric physics, biochemistry, biology, botany, chemistry, English, foreign languages (French, German, Spanish), history, journalism, mathematics, music, philosophy, physical education, physics, political science, psychology, public administration and policy, sociology, speech communication, teaching of English, theatre, and zoology.

The doctor of philosophy degree is offered in biochemistry, biology, chemistry, English, history, physics, political science, psychology, social psychology, and sociology.

Further information on these programs should be sought from the chairman of the department concerned.

Prelegal Curricula in the University

Law schools neither prescribe nor encourage any specific undergraduate major. A broad general education with emphasis on courses that develop clear and systematic thinking is better preparation for the study of law than is specialized study in subjects closely related to the law. Most important for prospective law students is that they develop their command of the English language and their ability to communicate ideas clearly, logically and critically.

Students should read the catalogs of law schools in which they are interested and the "Preparation for Law School: Prelaw Study" sections in the *Prelaw Handbook* for more detailed discussion of the general education program recommended by legal educators.

Students select approximately 40 credits beyond the major of their choice; that is, prelaw students must meet the regular requirements of their major plus selected courses to a total of 70 credits. Each department has a prelegal adviser with whom the students discuss their programs. For general information contact the Chairman, Political Science Department, 138 Mack Social Science Building.

Premedical and Predental Programs

There is no one prescribed program for admission to medical or dental schools. Students must prepare themselves with a basic background in chemistry, physics, mathematics and biology as well as the social and behavioral sciences and the humanities. Beyond this basic preparation, students should choose a major in conjunction with an adviser or the Office of Health Career Advisement. Most medical and dental school applicants have pursued majors in biology, chemistry, physics, premed, pre dentistry, or

psychology. However, successful medical school and dental school applicants have also had majors in the humanities or other social or behavioral sciences. The major can be in any subject, but should be based on the student's own interests, abilities, and needs, as long as medical or dental school entrance requirements are completed.

Office of Health Career Advisement

In addition to seeking advice from their academic advisers, students planning a career in any of the health professions should consult with the Coordinator, Office of Health Career Advisement, 223 Mackay Science. The office functions within the College of Arts and Science as a centralized resource for all UNR students interested in health careers. The coordinator can assist students with information on the many career options and the health related degree programs at UNR. The office has information about professional school admissions requirements and applications for national admission tests. Additionally, this office coordinates faculty and community resources regarding health-related fields.

ANTHROPOLOGY (ANTH)

Faculty: d'Azevedo (Ch.), Eudey, C. Fowler, D. Fowler, Hardesty, Knudson, Winzeler
Adjunct Faculty: Hanes, Hatoff, Kennard, Rusco, Thomas, Tuohy
Cooperating Appointments: Hattori, Liljeblad, Pippen

The department offers courses leading to the degrees of bachelor of arts and master of arts.

Bachelor of Arts Degree

<i>Major Interest Subject</i>	<i>Credits</i>
ANTH 101, 102, 103 (1 credit), 201, 305, 312, 335, 440 (3 credits each)	22
3-6 credits from 202, 316, 411, 415 (3 credits each) to be selected with adviser after completion of the student's freshman year	3-6
Additional credits in anthropology, 6 of which should be in area courses	8-11

33-39

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Anthropology accepts any minor approved by the College of Arts and Science.

History and social theory is an approved area of study for anthropology majors. See Interdisciplinary and Special Programs section for description.

Minor in Anthropology

Students majoring in another field may minor in anthropology by completing the following:

<i>Minor Interest Subject (Cultural Anthropology)</i>	<i>Credits</i>
ANTH 101, 102, 103	7
Either ANTH 201, 265, 267 or 268	3
Additional courses to be selected from: ANTH 312, 316, 322, 339, 360, 362, 440, 460, 475	9

19

Minor Interest Subject (Archeology)

ANTH 101, 102, 103, 202	10
Additional courses to be selected from: ANTH 310, 360, 362, 392, 400, 401, 402, 403, 423, 425, 470	9

19

Master of Arts Degree

Applicants for admission to the program must satisfy all admission requirements of the Graduate School and, in addition, satisfy the following departmental requirements: (1) at least a B average in their undergraduate major field; (2) provide to the Department of Anthropology *three* letters of recommendation from university instructors who know their qualifications for graduate work. Applications for admission should be made on or before March 1 for admission to the fall semester and on or before September 1 for admission to the spring semester. Preference for admission is given to those with an undergraduate major (or the equivalent) in anthropology. If a student is accepted with a background that is deemed inadequate by the department, additional preparation is required prior to being admitted to candidacy (see below). No student is admitted whose letters of recommendation do not indicate competency for graduate work.

To become a candidate for the master of arts degree in anthropology, a graduate student must satisfy the general requirements of the Graduate School as well as the special departmental requirements. The student must maintain a minimum B average in anthropology courses and be accepted to candidacy by his graduate committee at a meeting in the first year of graduate work. It is in consultation with this committee that the candidate plans the completion of a degree program, the scheduling of the comprehensive written examination, and selecting a thesis or professional paper. The candidate may choose the option of either Plan A (thesis), or Plan B (non-thesis), as described in the Graduate School requirements for the master's degree. With the Plan B option, however, the department requires the submission of a professional paper. The candidate may select a program emphasis in general anthropology, or in a special applied field such as conservation archaeology or museology. However,

the candidate who intends to proceed to a Ph.D. program in anthropology at another university is expected to take the comprehensive examination in general anthropology and is urged to demonstrate a reading knowledge of at least one foreign language by passing the Graduate School Foreign Language Test.

A limited number of teaching fellowships and occasional research funds are available to graduate students in anthropology. More information may be obtained from the department chairman. Applications for financial aid should be made directly to the department; the deadline for such applications is March 1.

The department also participates in the interdisciplinary master of science degree with a major in land use planning policy in cooperation with several other departments. For further information refer to the Interdisciplinary and Special Programs section of this catalog.

ART (ART)

Faculty: Davidson, Griffin, Howard, Martinez (Ch.), McCormick, Moroni, R. Morrison, Reid, Rosenberg, Unterseher

The department offers courses leading to the degree of bachelor of arts.

<i>Major Interest Subject</i>	<i>Credits</i>
ART 100, 121	6
ART 135, 235, 236 or 150, 250, 251 or 163, 263, 264 or 175, 275, 276 or 185, 285, 286	9
ART 116, 117 and one additional art history course	6-7
ART 403	2
Art courses numbered 300 or above, chosen with the approval of the adviser and dean	15
38-39	

It is recommended that art majors with a two-dimensional concentration elect either ART 163 or 175, and those with a three-dimensional concentration elect ART 135 sometime during the early parts of their programs.

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Art accepts any minor approved by the College of Arts and Science.

Minor in Art

Students majoring in another field may minor in art by completing the following:

<i>Minor Interest Subject</i>	<i>Credits</i>
ART 100, Visual Foundations	3
ART 121, Drawing	3
ART 116, Survey of Art of Western Civilization I	2
ART 117, Survey of Art of Western Civilization II	2

The student taking a minor program in art must select three (3) of the courses listed below to a total of nine credits.

	<i>Credits</i>
ART 135, Painting	3
ART 150, Photography	3
ART 163, Sculpture	3
ART 175, Ceramics	3
ART 185, Printmaking	3

For further information, please contact the Department of Art.

Secondary School Teacher Certification: Students in the College of Arts and Science majoring in art may work toward certification to teach at the secondary level (middle, junior, and senior high schools) by electing required courses offered through the College of Education, approximately 20 credits to include EDFM 210; CAPS 330, 400; C I 401, 457 (student teaching); and ART 346 — Art Education: Secondary Schools — in addition to the departmental major.

A teaching minor concentration is available to students engaged in securing a major other than art. It consists of approximately 26 credits, most of which are prescribed.

BIOCHEMISTRY (B CH)

Faculty: Blincoe, Blomquist, Dreiling, Heister, Lewis, Pardini (Ch.), Reitz, Welch, Winicov, Woodin

Graduate Degrees

Advanced degrees are offered at the master of science and the doctor of philosophy levels and may be pursued under the direction of the graduate faculties in the College of Agriculture, College of Arts and Science, or School of Medicine. Since requirements are determined by the Graduate School and not by the individual colleges, they are identical and are shown under Graduate Offerings from the College of Agriculture. Further information may be obtained in the publication *Graduate Study in Biochemistry* from the department.

BIOLOGY (BIOL)

Faculty: Bedell, Benedict, Gill, Gubanich, Jenkins, Kleiner (Ch.), Knorr, Mead, Mazingo, Nellor, Ort, Prusso, Rust, Ryser, Tibbitts, Vig, Vinyard

The department offers courses leading to the degrees of bachelor of science, master of science, and doctor of philosophy.

Bachelor of Science Degree

All students in the department are required to complete certain core courses, whatever their particular area of specialization. These are listed below:

<i>Major Interest Subjects</i>	<i>Credits</i>
BIOL 101	4
BIOL 201	3
BIOL 202	3
Genetics or evolution	3
Cell biology or physiology	4
Ecology	3

20

Other required courses:

General Chemistry (CHEM 101 and 102 or 103 and 104)
Analytical Chemistry (CHEM 330) or Organic Chemistry (CHEM 243 or 244) or
Biochemistry (B CH 301 or 302)

11-12

Additional credits in biology, botany or zoology

18

49-50*

Beyond the major interest subjects, the biology department does not require a fixed curriculum. Students electing a program leading to the bachelor of science degree with a major in biology, botany, or zoology may pursue several options. The student and adviser should develop a curriculum which is tailored to the individual's needs. This should be done whether the student is interested in a general background in the biological sciences or in one of the specialized areas of concentration, which include options in ecology and microbiology. The curricula of each of the following areas are designed to prepare the student for professional work or continuing education at the graduate level.

Botany Major

A student majoring in botany follows the curriculum listed under Major Interest Subjects. Each student should take courses in plant physiology and the taxonomy of lower and higher plants.

Recommended Electives: general physics, statistics, mathematics (through calculus).

Zoology Major

A student majoring in zoology follows the curriculum listed under Major Interest Subjects. A curriculum in zoology would include comparative anatomy.

Recommended Electives: general physics, statistics, mathematics (through calculus).

Ecology

A student desiring to specialize in ecology follows the curriculum listed under Major Interest Subjects. Depending upon the student's particular orientation in ecology, relevant courses available elsewhere in the university should be elected.

Other Required Courses: general physics, statistics.

Recommended Electives: soils, geology, climatology, mathematics (through calculus), computer programming.

Microbiology

A student wishing to specialize in microbiology follows the curriculum listed under Major Interest Subjects. Each student should take courses in microbiology, mycology, and invertebrate zoology in addition to the core courses, for a total of 38 credits.

Recommended electives: biochemistry, mathematics, physics.

Minors in Biology

Students majoring in another field may minor in biology by completing one of the following:

<i>Minor Interest Subject (Biology)</i>	<i>Credits</i>
BIOL 101, 201 or 202, 206, 207, 212	11
9 credits from BIOL 300, 306, 315, 364, 366, 385, 386, 405, 408, 481 and 482	9
19-20	
<i>Minor Interest Subject (Botany)</i>	
BIOL 101, 202, 232 and 233	10
9 credits from BIOL 331, 333, 334, 335, 336, 345, 347, 355, 356, 430, 431 and 432	9
19	
<i>Minor Interest Subject (Zoology)</i>	
BIOL 101 and 201	7
12 credits from BIOL 360, 362, 364, 366, 368, 372, 373, 374, 375, 376, 377, 378, 383, 384, 385, 386, 414, 460, 464, 468, 475, 481, 482 and 484	12
19	
<i>Minor Interest Subject (Ecology)</i>	
BIOL 101, 201 or 202, and 212	11
9 credits from BIOL 345, 346, 347, 380, 381, 410, 420 and 485	9
20	
<i>Minor Interest Subject (Microbiology)</i>	
BIOL 101, 206, 207 and 306	12
9 credits from BIOL 335, 336, 337, 339, 406 and 415	9
21	

Preparation for Transfer to Dental and Medical Schools

Students enrolling as biology majors and planning to apply to out-of-state medical or dental schools should take the following courses: general biology (one year), genetics, comparative anatomy, animal physiology, embryology, histology, and at least one course in systematic

*A maximum of 8 credits in special problem courses may be applied towards the total of 49-50 credits from biology, botany, and zoology offerings.

zoology. This curriculum meets the entrance requirements of the accredited dental and medical schools in this country. If the student changes educational goals and decides against a professional school, this curriculum is appropriate for entrance into graduate school or for a career in teaching.

Those students who intend to go to a dental or medical school and who complete three years of approved work prior to entering an accredited medical school may obtain a baccalaureate degree with a major in biology after meeting all department, college, and university requirements and completing one year of professional school.

Additional Required Courses: general physics with laboratory (one year), organic chemistry (one year), analytical chemistry.

Recommended Electives: mathematics through calculus, psychology (6 credits) required by some medical schools.

Master of Science Degree

The Department of Biology offers graduate programs leading to the master of science degrees in botany, zoology, and biology. Two plans are available: (A) thesis, or (B) nonthesis. Further details may be obtained from the Office of the Dean of the Graduate School or from the chairman of the department.

Doctor of Philosophy Degree

Prospective students must meet the requirements established by the university and the Graduate School for admission to the graduate program. Candidates for the Ph.D. degree must fulfill all general university, Graduate School, and departmental requirements for obtaining the doctorate degree at the university.

Minimum Credit Requirements:

Course credits	48
Credits for research and dissertation	24
	72

At least two-thirds of the total credits, including thesis research, must be taken in the major field.

CHEMISTRY (CHEM)

Faculty: Baglin, Burkhart (Ch.), Fickes, Harrington, Kemp, LeMay, Lightner, Nelson, Rose, Scott, Shin

The department offers courses leading to the degrees of bachelor of science, master of science, and doctor of philosophy.

Bachelor of Science Degrees

The bachelor of science in chemistry is a professional degree certified by the American Chemical Society; students are prepared for graduate study, civil service positions, and industry.

The field of concentration in chemistry provides basic training for other professions; graduates usually can enter the chemical profession if the recommended upper division chemistry courses are taken. Students planning to pursue a career in medicine or dentistry may enroll in this program.

Bachelor of Science in Chemistry

<i>Major Interest Subject</i>	<i>Credits</i>
CHEM 103, 104 recommended (or 101-102)	8
CHEM 243, 244, 245, 246	10
CHEM 330, 434	7
CHEM 353, 354, 355	8
CHEM 387	1
CHEM 497	2
CHEM 415, 443 or 456; and two 3-credit 400-level chemistry courses	11-13
	47-49

Additional Required Courses (34 or 36 credits): MATH 215, 216, 310, 320 (14 credits); PHYS 201, 202, 204, 205 recommended (151, 152, 153, 154 acceptable) (8 credits); GER 101, 102, 203, 204, or 101, 102, 205, 209, or equivalent courses in French or Russian.

Recommended Elective: MATH 330.

Bachelor of Science with Field of Concentration in Chemistry

<i>Major Interest Subject</i>	<i>Credits</i>
CHEM 103, 104 recommended (or 101, 102)	8
CHEM 243, 244, 245, 246	8-10
CHEM 330	4
CHEM 353-354 or 357 and 451	6
CHEM 355	2
Two of the following courses, including one laboratory course: CHEM 415, 434, 442, 443, 450 or 456	5-6
	33-36

Additional Required Courses (16 credits): MATH 215, 216, (8 credits); PHYS 201, 202, 204, 205 recommended (151, 152, 153, 154 acceptable) (8 credits).

Recommended Electives: CHEM 456; MATH 310, 320

In addition to the foregoing, all the general requirements of the College of Arts and Science must be satisfied; this includes 16 credits in humanities and social science courses.

Minor in Chemistry

Students majoring in another field may minor in chemistry by completing a maximum of 20 credits which must include an organic chemistry laboratory course and 9 upper division credits in chemistry. A maximum of 2 credits of CHEM 387, 391 and 497 may be applied to make up the 9 upper division credits.

Master of Science Degree

Candidates for the master of science degree with a major in chemistry must satisfy the general requirements of the Graduate School. Of the 24 credits required, 12 (including 2 credits of seminar) are in the major, 6 are in the minor, and the remaining 6 are elective. A reading knowledge of a foreign language is required. Options in the Department of Chemistry include organic, inorganic, and physical chemistry and biochemistry.

Doctor of Philosophy Degree

The general requirements of the Graduate School must be satisfied by all candidates for the Ph.D. degree. The minimum credit requirements are:

Total credits	72
Total course credits	48
Total credits in major, including research	48
Major-minor distribution:	
Course credits in major	24
Course credits in minor	9
Seminar	2
Electives	13

The student must demonstrate a reading knowledge of one foreign language as specified by the student's advisory committee.

The major and minor areas available in the Department of Chemistry are inorganic, organic, physical, and biochemistry. The minor may be taken in another department, such as physics or mathematics, if desired. Every student's program is subject to the approval of an advisory committee.

The graduate curriculum, with its research orientation, provides for an advanced study of theoretical concepts, the methods used to establish these concepts, and the means by which basic observations are made. Emphasis is placed on ability to make valid and relevant observations, to correlate the established facts, and to deduce warranted conclusions and generalizations. A problem in laboratory research is used to determine whether or not the student has the capacity to contribute to the advancing knowledge of chemistry. For further information, contact the chairman of the Department of Chemistry.

CRIMINAL JUSTICE (C J)

Faculty: Barnhill (Ch.), Braunstein, Geary, Young

The bachelor of arts in criminal justice is a professional degree. Students are prepared for

graduate study in criminal justice, law school, public positions in all aspects of the justice system, in justice-related positions, in corrections, or in industrial security. An associate of science degree is no longer offered.

Advisement of all criminal justice majors is mandated by department policy.

Bachelor of Arts in Criminal Justice

At least 15 credits of required criminal justice courses must be completed at UNR.

<i>Major Interest Subject</i>	<i>Credits</i>
C J 110, 112, 120, 220, 226, 230, 320, 324, 410, 420	29
PSY 101, 231, 441	8
SOC 101	3
SPTH 113	3
L SC 135	1
	<hr/> 44

Minor in Criminal Justice

Students majoring in another field may minor in criminal justice by completing the following:

<i>Minor Interest Subject</i>	<i>Credits</i>
C J 110 and 410	5
Additional courses to be selected from C J 120, 220, 226	6
Additional courses to be selected from C J 320, 324	3
Criminal Justice upper division electives	4
	<hr/> 18

NOTE: C J 120 and 220 are prerequisites for C J 320.

Criminalistics

A student desiring to specialize in criminalistics follows the curriculum listed under criminal justice. Courses in biochemistry, biology, and chemistry are recommended to each student. Students are encouraged to see the department chairman during their first semesters of matriculation.

ENGLISH LANGUAGE AND LITERATURE (ENGL)

Faculty: Baker, Boardman, Brown, Brownell, Connor, Diamond, Essa, Francis, Haddawy, Harvey, Hettich, Hooper, Howard, Jacobsen, Merrill (Ch.), Reid, Ronald, Wilborn

Bachelor of Arts Degree

In consultation with the adviser, the student elects a program leading to the bachelor's degree in accordance with one of the following options:

Literature

<i>Major Interest Subject</i>	<i>Credits</i>
ENGL 281, 291, 292, 451, 465	15
Additional courses to be selected from ENGL 305-306, 307-308, 405-406, 407-408, (a total of no more than 6 credits), and other courses numbered above 400—excluding 438	17

At present the department offers courses allowing for the following more specific areas of concentration: English literature, American studies, and drama.

In consultation with the adviser, each student selects courses appropriate to these areas, or may follow a broader principle of selection.

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. English accepts any minor approved by the College of Arts and Science.

Language and Linguistics

<i>Major Interest Subject</i>	<i>Credits</i>
ENGL 281, 311, 415 or 416, 385 or 419.....	9
ENGL 411 or 414, 413, 417, 451	12
Additional courses to be selected from courses numbered 291 and above, plus ENGL 235-236	11

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. English accepts any minor approved by the College of Arts and Science.

Secondary Teaching

<i>Major Interest Subject</i>	<i>Credits</i>
ENGL 281, 291, 292, 321, 385, 411 or 413, 441 or 445 or 446, 465	24
Additional courses to be selected from courses numbered above 400.....	8
<hr/>	
	32

Requirements for Certification In Secondary Education: (18 credits). See "Foundations for Secondary Teaching" in College of Education section.

Students planning to teach in the secondary schools should normally be prepared in a second teaching subject. See "Secondary Teaching Field" under College of Education.

<i>Second Teaching Subject (Minor)</i>	<i>Credits</i>
(Program for teachers selecting English as a minor teaching subject)	
ENGL 281, 291, 321, 385	12
Additional courses to be selected from ENGL 235, 236, 241, 292, or any of the 400-level courses	8
<hr/>	
	20

Students thinking of majoring in English are strongly advised to take 281 and 291 no later than the sophomore year, and 291 by no means later than the second semester after declaring the major.

Minors in English

Students majoring in another field may minor in English by completing one of the following:

<i>Minor Interest Subject (Literature)</i>	<i>Credits</i>
Required: ENGL 291, 465	6
At least 3 credits from ENGL 235, 236, 292, 293, 337	3
At least 9 credits from ENGL 423, 425, 426, 430, 441, 445, 446, 451, 453, 458, 460, 461, 463, 464, 469, 470, 471, 475, 481, 483, 484, 485, 486, 489	9
<hr/>	
	18

<i>Minor Interest Subject (Language and Linguistics)</i>	<i>Credits</i>
Required: ENGL 281	3
ENGL or ANTH 311, 316, 415, 416, FLL 455, or GER 455	3
ENGL 385 or 419	3
ENGL or ANTH 411, 414, or ANTH 305	3
ENGL 413, FLL 458, or GER 458	3
ENGL 417 or 451	3
<hr/>	
	18

<i>Minor Interest Subject (Dramatic Literature)</i>	<i>Credits</i>
Required: ENGL 253, 291, 292	9
At least 9 credits from ENGL 355, 356, 458, 460, 465, 470 and 423, 469 and 489, when the subject matter is drama or dramatists	9
<hr/>	
	18

The Graduate Programs

The Department of English offers graduate programs leading to the master of arts for the teaching of English, the master of arts, and the doctor of philosophy. For further information, write to the chairman of the Department of English to obtain the bulletin *Graduate Study in English*.

Master of Arts for the Teaching of English Degree

The master of arts for the teaching of English (MATE) degree is designed primarily to train teachers. The MATE degree encourages broad preparation in language and literature, with special attention to composition, literary appreciation, applied linguistics, and other subjects needed by teachers in both primary and secondary school. Foreign language proficiency is not required for this degree. Students pursuing the MATE degree normally do not expect to continue their studies beyond the master's level.

Master of Arts Degree

The master of arts degree is intended for students who plan to continue work toward the doctor of philosophy degree, for potential community college teachers, and for individuals who want to acquire overall background in the study of language and literature. The program includes extensive reading in English and American literature and language, as well as practice with basic tools and methods of scholarship. Evidence of proficiency in one foreign language, normally French or German, is required.

Upon admission to the M.A. program, the student follows either Plan A, the thesis program, or Plan B, the nonthesis program.

Doctor of Philosophy Degree

Students who have earned M.A. degrees in English may apply to the doctoral program upon evidence of an overall grade-point of 3.0 or higher in all undergraduate and graduate work, a satisfactory score on the Graduate Record Examination aptitude and advanced tests, and a writing sample indicating superior ability when

discussing literature. Final acceptance depends upon successful performance on a departmentally administered Ph.D. qualifying examination.

All candidates for the Ph.D. degree are required to present an acceptable dissertation and to give evidence of proficiency in two foreign languages, normally French and German, or a more intensive knowledge of one foreign language, normally French or German.

FOREIGN LANGUAGES AND LITERATURES (FLL)

Faculty: Curry, Fricke, Grotegut (Ch.), Hagner, Leneaux, Macura, Manca, Petersen, Rebolledo, Rojas, Tobin, Wagener, Whitenack

The objectives of the study of foreign languages and literatures are practical and humanistic: proficiency in the four basic language skills of oral comprehension, speaking, reading comprehension, and writing; knowledge and understanding of the literature, thought, and culture.

The Department of Foreign Languages and Literatures offers courses of study leading to the degrees of bachelor of arts and master of arts with fields of concentration in French, German, and Spanish language and literature. In addition, students may take courses in Arabic, Basque, Chinese, classical Greek, Hebrew, Italian, Japanese, Latin, Norwegian, Portuguese, and Russian. Most courses offered help fulfill requirements toward a liberal arts degree, and are also designed to assist in the preparation of language teachers and to help provide training for other careers requiring language skills.

Within the major program, the student has the option of emphasizing language or literature, although neither may exclude the other.

In addition, in Spanish, the student may choose either a peninsular or Spanish-American emphasis.

Foreign Language Requirement

The College of Arts and Science and a few departments in other colleges have a foreign language requirement. In the College of Arts and Science, students may meet the requirement by completing course 204 or 209 in any language. Students have a choice of a total skills sequence (listening comprehension, speaking, reading, writing) or a sequence which stresses reading.

Successful completion of two college semesters of Latin and two college semesters of classical Greek also fulfills this requirement.

Secondary School Teacher Certification

Students in the College of Arts and Science who are majoring in a foreign language may be certified to teach in junior high, middle, and high schools by taking a prescribed number of courses in the College of Education, usually about 20 credits. These include 8 credits of supervised teaching in the public schools, and specialized courses in methods.

The teaching *major* consists of 30 credits in one language, all of which must be upper-division except for required courses in culture and civilization. French majors must take FR 221, 301, 305-306, 309 (2 credits), 311, 312, and 455 or approved equivalents. German majors must take GER 221, 301, 305-306, 309 (2 credits), 311, and 455 or approved equivalents. Spanish majors must take SPAN 221 or 222, 305-306, 309 (2 credits), 353, 354, 355, 356. The student must also have a teaching minor. The department strongly recommends a teaching minor in a second foreign language.

The teaching *minor* in a foreign language is available to students who are working for a teaching major in another foreign language or in another subject. It consists of 20 credits in the language of the minor, of which no less than 10 credits must be in upper-division work, most of which are prescribed.

For further information, contact the Department of Foreign Languages and Literatures.

Laboratory Facilities

The department has a language practice laboratory whose records and tapes of different languages are used to improve the command of the spoken language. Laboratory practice is required as part of homework in specified courses.

Bachelor of Arts Degree Requirements for a Field of Concentration in French, German or Spanish

For the bachelor of arts degree, a minimum of 48 credits are required in the field of concentration, distributed as follows:

Major Interest Subject

In the major interest subject (French, German, or Spanish) 30 credits are required, all of which must be upper-division except for required courses in culture and civilization. French majors must take FR 221, 305-306, 309 (2 credits), and 311, 312. German majors must take GER 221, 305-306, 309 (2 credits), and 311. Spanish majors must take SPAN 221, 222, 305-306, 309 (2 credits), 311, 357, and 359.

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Foreign languages and literatures accepts any minor approved by the College of Arts and Science.

Minor in Foreign Languages and Literatures (French, German, Spanish)

Students majoring in foreign languages and literatures and other fields may minor in foreign languages and literatures by completing one of the following:

For a minor, 18 credits are required of which 12 must be numbered above 300. French minor: 204, 221, 305, 306, 309 (2 credits) and two other 3-credit French courses numbered above 300. (FR 311 is recommended.) German minor: 204, 221, 305, 306, 309 (2 credits) and two other 3-credit German courses numbered above 300. (GER 311 is recommended.) Spanish minor: 204, 221 or 222, 305, 306, 309 (2 credits) and two other 3-credit Spanish courses numbered above 300.

Secondary School Teaching: to include all the courses in education required by the College of Education, usually 20 credits. The teaching major must include an approved course in linguistics. A teaching minor in a second foreign language is strongly recommended, consisting of from 20 to 26 credits (at least 10 must be at the upper-division level), and must include courses 305-306.

Master of Arts Degree

The Department of Foreign Languages and Literatures offers programs of graduate study leading to the degree of master of arts in French, German, or Spanish. The student must meet the general university requirements for admission to graduate standing. In addition, each student must have acquired a degree of proficiency in a major language acceptable to the department, and must have generally no less than a 3.0 GPA, on a scale of 4, in the undergraduate language major.

Plan A requires 30 graduate credits. No less than 18 credits, including 6 thesis credits, must be in courses numbered 700 or above. If a minor is approved, no less than 6 graduate credits are required in the minor area.

Plan B requires 32 graduate credits, of which no less than 15 must be in courses numbered 700 or above. No thesis is required. If a minor is approved, a minimum of 8 graduate credits are required in the minor area.

Further details of the programs may be obtained from the department.

GEOGRAPHY (GEOG)

Faculty: Exline (Ch.), James, Kersten, Kramer

The department offers courses leading to the degree of bachelor of science in geography.

Geography Program

Students of modern geography develop an unusual combination of knowledge, techniques and theory that can be applied to an almost limitless variety of problems. This versatility is the product of the geographer's concern with both the natural and cultural features of the earth's surface and the manner in which they are bound together in a web of intricate relationships. Today's geographer focuses on two kinds of inquiry — locational patterns and processes and understanding the cultural and environmental systems found on the earth.

The geography student completes a core of 16 credits and then works with a departmental adviser to develop an area of concentration suited to the individual's needs. Examples may be found in areas such as physical geography (including environmental impact analysis), cultural and international studies, urban and regional planning (including the analysis and management of growth), cartography and graphics, and climatology.

Students must complete a minimum of 36 credits in geography. Because of the necessity of tailoring programs to the students' needs and desires, close contact between the student and the departmental adviser is required.

<i>Major Interest Subject</i>	<i>Credits</i>
GEOG 103-Geography of Man's Environment	4
GEOG 106-Cultural Geography	3
GEOG 109-Economic Geography	3
GEOG 212-Cartography	4
GEOG 418-Geographic Thought	2
<hr/>	
	16
Additional geography courses are determined in conjunction with a departmental adviser	20
<hr/>	
Total	36

Minor in Geography

Students majoring in another field may minor in geography by completing the following:

<i>Minor Interest Subject</i>	<i>Credits</i>
GEOG 103 (laboratory required)	4
GEOG 106 or 109	3
An additional 11 credits, 9 of which must be upper division, are determined in conjunction with a departmental adviser ..	11
<hr/>	
	18

Earth Science

The geography department provides courses in cooperation with the Department of Geological Sciences for a bachelor of science degree in earth sciences in the Mackay School of Mines. The curriculum is listed under geological sciences.

Land Use Planning Policy

The department also participates in the interdisciplinary master of science degree with a major in land use planning policy in cooperation with several other departments. For further information refer to the Interdisciplinary and Special Programs section of this catalog.

HISTORY (HIST)

Faculty: Brodhead, Coray, Davies, Edwards, Ferguson, Folkes, Hartigan, Hulse, Marschall, Moran, Rowley, Shepperson (Ch.), Tigner

Adjunct Faculty: Bandurraga

The Department of History offers courses of study leading to the degrees of bachelor of arts, master of arts, and doctor of philosophy.

Bachelor of Arts Degree

<i>Major Interest Subject</i>	<i>Credits</i>
HIST 101-102	(required) 6
HIST 105-106 (3 credits each)	6
24 additional credits in history courses numbered 200 and above to be selected in consultation with adviser. From among these credits a total of at least 6 credits must be selected from the following non-American and non-European courses: HIST 343, 344, 345, 346, 351, 352, 353, 361, 362, 371, 372, 447, 448, 449. A total of 30 credits exclusive of HIST 101 and 102 are required	24
	30

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. History accepts any minor approved by the College of Arts and Science.

Minor in History

Students majoring in another field may minor in history by completing one of the following:

<i>Minor Interest Subject (General History)</i>	<i>Credits</i>
To be chosen from HIST 101, 102, 105, 106	6
From 300 level or above American history courses	6
From 300 level or above European history courses	6
From 300 level or above Third World history courses	3
	21
<i>Minor Interest Subject (American History)</i>	
HIST 101 and 102	6
plus 12 additional credits in American history 200 level and above (nine credits of which must be 300 and above), but no more than three credits in 495-497	12
	18
<i>Minor Interest Subject (European History)</i>	
HIST 105 and 106	6
plus 12 additional credits in European history courses numbered 200 and above (nine credits of which must be 300 and above)	12
	18

<i>Minor Interest Subject (Third World History)</i>	
HIST 105	3
plus 15 upper division credits from African, Latin American, Far Eastern, Middle Eastern history or ancient history 371	15
	18

Master of Arts Degree

Students wishing to work toward the master of arts degree in history should read the section relating to graduate study and obtain from the department a brochure on *Graduate Study in History*. The department requires that applicants hold a baccalaureate degree with a major (or 24-semester-credit minor) in history, have a cumulative undergraduate GPA of 2.5, and achieve a satisfactory score on the Graduate Record Examination. There are optional programs for the Master of Arts degree. The Option A program requires a written comprehensive examination (after completion of 20 credits of graduate work), reading knowledge of one foreign language, 24 semester credits, a 6-credit thesis, and a final oral examination. The Option B program requires a written comprehensive examination (in the semester in which 30 credits of graduate study are completed), reading knowledge of one foreign language, 32 semester credits, and a final oral examination. Further details may be obtained from the Office of the Dean of the Graduate School and from the chairman of the department.

Doctor of Philosophy Degree

Students wishing to work toward the Ph.D. degree in history should read the section relating to graduate study and obtain from the department a brochure on *Graduate Study in History*. The department requires that applicants hold a master of arts degree, have a cumulative GPA in all undergraduate and graduate work of 3.0, and achieve a satisfactory score on the Graduate Record Examination. The Ph.D. degree program requires an oral qualifying examination, 48 semester credits of approved course work beyond the bachelor's degree, a reading knowledge of one foreign language and meeting of the university language requirement, written and oral comprehensive examinations in three fields of history, 24-semester-credit dissertation, and a final oral examination.

As subjects for special research and for the required dissertation are limited to areas in which the department has particular strengths, applicants should expect to major in American history and develop a research emphasis in the history of Nevada, Western North America, or American

immigration. Further details may be obtained from the Office of the Dean of the Graduate School and from the chairman of the department.

For information contact the chairman of the department.

JOURNALISM (JOUR)

Faculty: Alexander, Conover, Highton, Kaiser (Ch.), Metz

The department offers courses leading to the degrees of bachelor of arts in journalism and master of arts.

Bachelor of Arts in Journalism

Journalism today requires its practitioners to be broadly educated and professionally skilled. Combining the arts and sciences with professional courses, undergraduate journalism students take about three-fourths of their courses for a B.A. degree outside the journalism curriculum.

A core program is required of all journalism majors, and four sequences are offered to prepare men and women for careers in print and broadcast media, advertising, and public relations. In addition, the department helps its students work out special study programs involving engineering, agriculture, social service, business, home economics, education, mining, political science, international relations, and other fields.

Journalism undergraduate majors in all sequences complete requirements for the B.A. degree in the College of Arts and Science.

Some electives in journalism may be taken to complete the individual student's program in each sequence.

The Core Program

The core program is designed to introduce the student to aspects of professional journalism that are applicable to all the sequences.

	<i>Credits</i>
JOUR 101-Interpreting the Day's News	3
JOUR 221-Introduction to News Writing	3
JOUR 222-News Gathering and Writing	3
JOUR 280-Introduction to Broadcasting	2
JOUR 351-News Editing	2
JOUR 354-Advanced Reporting	2
JOUR 356-Principles of Advertising	2
JOUR 375-Photojournalism	3
JOUR 372-Law of the Press	3
JOUR 404-History and Ethics of Journalism	3

26

In addition, journalism majors must take such courses as literature, philosophy, political science, economics, business administration, and the fine arts, as recommended by the adviser.

The Sequential Programs

I-Newspaper and Other Print Media

	<i>Credits</i>
JOUR 373-Typography and Layout	2
JOUR 454-Public Affairs Reporting	2
JOUR 480-Publication Production and Management	2
JOUR 481-Journalism Internship	3
9	

In addition, for those planning a career in newspaper or other print media, courses in areas to reinforce their programs and particular interests of specialization, as recommended by the adviser, are required.

II-Broadcast News

	<i>Credits</i>
JOUR 311-Radio and Television News Writing and Editing	3
JOUR 312-Radio and Television News Writing and Editing	3
JOUR 481-Journalism Internship	3
9	

In addition, such courses as public speaking, radio-television, and film production and theatre, as recommended by the adviser, are required.

III-Public Relations

	<i>Credits</i>
JOUR 301-Public Relations Principles and Practice	2
JOUR 302-Public Relations Problems	2
JOUR 373-Typography and Layout	2
JOUR 481-Journalism Internship	3
9	

In addition, for those planning a career in public relations, courses in psychology, economics, sociology, and speech and theatre, as recommended by the adviser, are required.

IV-Advertising

	<i>Credits</i>
JOUR 358-Advertising Media	2
JOUR 359-Advertising Copy Writing	2
JOUR 373-Typography and Layout	2
JOUR 481-Journalism Internship	3
9	

In addition, for those planning a career in advertising, courses in speech and theatre, psychology, economics, marketing, and art, as recommended by the adviser, are required.

Minor in Journalism

Students majoring in another field may minor in journalism by completing the following.

<i>Minor Interest Subject</i>	<i>Credits</i>
JOUR 101-Interpreting the Day's News	3
JOUR 221-Introduction to News Writing	3
JOUR 222-News Gathering and Writing	3
JOUR 351-News Editing	2
JOUR 354-Advanced Reporting	2
JOUR 372-Law of the Press	3
JOUR 375-Photojournalism	3
19	

Journalism Teaching

Students may prepare for the teaching of journalism in high school through a combination of

courses in journalism and education. The program is offered in cooperation with the College of Education.

Agricultural Journalism

This curriculum prepares students for positions in communications such as agricultural news reporters, radio and television broadcasters, market news reporters, and newspaper or magazine writers or editors.

<i>Group II Requirements</i>	<i>Credits</i>
JOUR 101, 221, 222, 280, 351, 356, 372, 375	21
JOUR 481 (internship in two or more areas), electives (4 credits)	7
Agriculture electives (must include at least one course in each division of the school)	21
Electives to satisfy total credits	

Accreditation

The Newspaper and Other Print Media sequence is accredited by the American Council on Education in Journalism. The sequence was first accredited in 1970 and reaccredited in 1977.

Master of Arts Degree

Thirty credits in graduate courses, including a thesis (6 credits) are required. See the Graduate School section for general master of arts degree requirements.

LIBRARY SCIENCE (L SC)

Not a department; however, information may be obtained from the director of libraries.

MATHEMATICS (MATH)

Faculty: Blackadar, Brady, Collison, Constantino, Davis, Hooper, Kimble, Krinik, Macauley, McMinn, Pfaff, Tompson (Ch.), Wagner, Wishart

The department offers courses leading to the degrees of bachelor of science or bachelor of arts (student's option), and master of science.

Mathematics

<i>Major Interest Subject</i>	<i>Credits</i>
MATH 215, 216, 251, 310, 311, 320, 330, 331, 341	29
Courses selected from the following:	
mathematics courses numbered above 300	1-7

30-36

Students who are preparing for secondary school teaching may substitute two of the three courses: MATH 373, 374, 375 for MATH 311 and 320.

Additional Required Courses: The total number of credits in the field of concentration must be 50. In addition to credits for the major, students must complete 18-21 credits in a minor or selected program of study chosen with the adviser and approved by the department chairman. This program usually consists of courses from other departments which support the student's mathematical interest or which comprise a substantial program in a single area. Mathematics accepts any minor approved by the College of Arts and Science.

Computer Science Option

<i>Major Interest Subject</i>	<i>Credits</i>
MATH 215, 216, 251, 283, 310, 330, 385, 386, 485	30
Courses selected from MATH 307, 320, 321, 351, 353, 354, 383, 387, 422, 423, 429, 435, 453, 486, 489	4-6

34-36

Additional Required Courses: The field of concentration should cover a recognized subarea of computer science and total 50 credits. Attention is invited to various courses in computing applications or computer science foundations from other departments.

Minor in Mathematics

A student in any college who satisfies the university requirement—18 credits in the Department of Mathematics including 9 credits at upper-division (300-400) level—and who completes at least four upper-division courses in the mathematics department satisfies the requirement for a minor in mathematics.

Master of Science Degree

The Department of Mathematics offers a graduate program leading to the degree of master of science. Further details may be obtained from the Office of the Dean of the Graduate School, or from the chairman of the department.

The Department of Mathematics offers a graduate program leading to the master of science degree and participates in an interdisciplinary program leading to a master of science degree with a major in computer and information science. For further information, contact the department chairman or refer to the interdisciplinary section of this catalog.

MILITARY SCIENCE (MIL)

Faculty: Del Carlo, Gebhardt, Jefferson, KegLovits, Perdew (Ch.), Scott, Sheets

The Army Reserve Officers Training Corps (ROTC) is the only military commissioning program of any armed service within the University of Nevada System. ROTC is available at university request and represents a contractual agreement between the Army and the university. The ROTC program in the Military Science Department is administered by career Army officers, carefully nominated by the Department of the Army, subject to approval by the university president.

*Major interest subjects required
for commissioning*

	<i>Credits</i>
Basic Course requirement	
Option I-MIL 101, 102, 201, 202	8
Option II-MIL 204—Basic Summer Camp	2
Option III-Students with 3 or 4 years of JROTC or 12 or more months continuous federal service may by-pass basic courses	0
Advance Course requirement	
MIL 301, 302, 303, 401, 402	14
Additional elective hours for credit	
MIL 203, 304, RPED 181	4-10
	20-34

Program Objective

The overall objective of the ROTC program is to develop in the student/cadet—through both classroom theory and practical application—the necessary traits, knowledge, proficiency, and experience for a commission in the United States Army. This includes a broad educational base including, in addition to those subjects integral to the degree field, certain academic subjects of particular value in both civilian and military pursuits; a general knowledge of the historical development of the United States Army and of its role in support of national objectives; a working knowledge of the general organizational structure and of how the various components operate as a team in the fulfillment of overall objectives; a strong sense of personal integrity, honor, and individual responsibility; knowledge of the human relationships involved and an understanding of the responsibilities inherent in assignments within the military service; the ability to communicate effectively both orally and in writing; sufficient knowledge of military life to insure a smooth transition from the normal civilian environment. The curriculum is designed to prepare the student for either career service or reserve service.

Program Description

The Military Science Department offers an academically challenging and practical curriculum which can be accomplished in eight semesters or a compressed program of either six or four semesters. The military science curriculum is intended to enrich the student and supplement baccalaureate or postgraduate studies with the degree-producing departments. The Army recognizes the need for officers with varied academic credentials and is prepared to award a commission to any deserving student based on ROTC achievement upon graduation.

The scope of the military science curriculum is

oriented toward developing the best possible all-around student who demonstrates leadership and managerial skill; reacts well under pressure; and understands general military subjects. This goal is accomplished by classroom conferences and a leadership laboratory program.

The leadership laboratory program provides academic credit and is an essential gauge in evaluating the student as a prospective second lieutenant. The leadership laboratory for the freshman and sophomore years is an introduction to the skills required in the Army. Practical exercise and hands-on training are emphasized. Subject areas include but are not limited to map reading, unarmed defense, weapons familiarization and firing, and familiarization with Army tactical vehicles and Army aircraft. Junior year leadership laboratory consists of individual leadership training, parade and combat drill, and field exercises. During the senior year students perform actual military duties in local Army Reserve and National Guard units as well as within the Military Science Department.

Basic Program

Freshmen (MIL 101-102): Introduction to the organization, mission, history, and functions of each of the armed services, the Reserves, National Guard, and the ROTC; multiple options available for military service; the combat and support role of squad-size units; basic individual weaponry; the objectives and instruments of national power, strategy, and security.

Sophomores (MIL 201-202): Provision of a sound foundation in the principles of the art of warfare as exemplified in the United States military history; development of an appreciation of the fundamentals and techniques of small unit tactics and map reading.

Advanced Program

Juniors or selected graduate students (MIL 301-302): Development of individual qualities and capabilities inherent in a successful leader and manager by illustrating effective leadership traits; instruction in methods of instruction; development of an appreciation of the principles of combat at platoon and company levels, techniques of command, control, and management at all levels; attendance at any Army-paid, six-week, advanced summer camp (usually between the student's junior and senior years) immediately after spring semester.

Senior or selected graduate students (MIL 401-402): Seminar on the organization, mission,

functions, and capabilities of battalion and larger units and the interrelationships of the combined arms team; the numerous administrative and logistical problems which confront leaders at platoon and company level; the role of the United States as a world power to include military alliances and global commitments; introduction to military law.

The advanced course is open to undergraduate and graduate students with at least four remaining semesters as full-time students. Students who successfully complete the basic program or the six-week ROTC basic summer camp (usually held at Fort Knox, Kentucky), may apply for admission into the advanced program. The basic summer camp is normally scheduled after the student's sophomore year or during the summer preceding the four remaining semesters at the university. The basic summer camp substitutes for the basic program and is geared to students who join the ROTC program late and wish to accomplish the curriculum in four semesters (two years).

The advanced program differs from the basic program in that the student enters into a contract with the Army whereby the individual agrees, contingent upon continued university enrollment, to complete the ROTC program (including advanced summer camp) and to accept a commission, if offered, upon termination of the degree program. To be eligible for commissioning, each student must have earned at least a baccalaureate degree.

For acceptance into the advanced program a student must:

1. Be a citizen of the United States and be regularly enrolled as a full-time student at the university.
2. Be able to complete the course, graduate, and be commissioned prior to the twenty-eighth birthday (can be waived).
3. Have successfully completed such survey and screening tests as may be prescribed.
4. Have successfully passed a prescribed physical examination.
5. Be selected by the professor of military science and the college dean.
6. Have executed a written contract with the United States government.

Volunteer Extracurricular Activities

Sierra Search and Rescue—A voluntary organization of students who wish to offer their services in emergency situations and learn valuable skills. The training is mentally and physically rigorous and includes advanced first

aid, mountaineering, evacuation procedures, emergency survival, land navigation, communication procedures, and search techniques. Students do not have to be enrolled in military science subjects to be participants in this activity.

Sierra Guard—A competitive precision drill team which has the added distinction of being the personal honor guard of the governor of Nevada. The Sierra Guard competes in drill meets throughout the western United States and is well regarded for its professional competence and esprit de corps. A distinctive uniform is issued.

Colonel's Coeds—A women's honorary organization which supports the University of Nevada Army ROTC and the university. Membership enhances knowledge of the armed services and provides enjoyment by being a part of the many ROTC activities. A distinctive and fashionable uniform is purchased by each member.

Rifle Team—Interested students can compete on the .22 caliber indoor rifle range without personal expense. Rifles and ammunition are furnished and an Army coach is available full time to assist. Members of this nationally ranked rifle team participate in intercollegiate and National Rifle Association matches throughout the United States.

Career Opportunities

Advanced program students who demonstrate outstanding academic, military, and leadership proficiency may be selected as distinguished military students (DMS) at the beginning of their senior years. As a DMS, a student may apply for a commission in the Regular Army. A commission in the Regular Army gives the student the same status and benefits as a graduate from the United States Military Academy. The student is not required to make the Army a career but simply agrees to serve the minimum time of three years before deciding whether or not to remain. The vast majority of career officers and numerous generals are ROTC graduates from the nearly 300 colleges and universities in the United States which offer ROTC. For detailed information regarding a professional or Regular Army career, contact the Military Science Department.

Active Duty and Reserve Obligations

Students commissioned from the ROTC program normally must serve on active duty in the Army as reserve officers for a period of up to three years upon graduation from the university. After completion of this active duty they are assigned to reserve units for an additional four years if a

vacancy exists in a unit within a reasonable distance from their homes.

Reserve Forces Duty

Students commissioned from the ROTC program may serve with the U.S. Army Reserve or the Army National Guard. This consists of three to six months' active duty, and a six-year obligation with the reserve forces.

Financial Assistance

Students taking the basic course receive no pay unless they have ROTC scholarships. Students awarded Department of the Army one-, two-, three-, and four-year ROTC scholarships receive \$100 per month subsistence pay while enrolled in school (ten months per year maximum) and payment for books, tuition, and fees. All other students formally enrolled in the advanced course are paid subsistence at a rate of \$100 per month while enrolled in school, not to exceed a total of 20 months. Students are paid one-half of the base pay of a second lieutenant while attending the six-week summer camp training plus travel pay to and from summer camp. The Military Science Department has a limited number of in-state and out-of-state fee waivers available each semester for students requiring financial assistance.

Additionally, the Nevada National Guard pays one-half of the credit costs for students who elect to serve simultaneously in the Nevada National Guard and in Advanced ROTC. This is a particularly valuable option which can be worth over \$10,000 for veterans and students with junior ROTC experience.

Textbooks, Uniforms, and Equipment

The United States government provides each basic course student with the necessary textbooks, uniform, and equipment.

Students in the advanced course, in addition to receiving the \$100 monthly stipend, texts, and instructional equipment at the expense of the United States government, are provided an officer-type uniform. The United States government provides the university with a uniform allowance for each student enrolling in the advanced course and this allowance is used to purchase the officer-type uniform, which the student may retain upon graduation. In the event the student withdraws from the advanced course for his own convenience, he must return the uniform or reimburse the university a proportionate amount of the cost.

MUSIC (MUS)

Faculty: Booth, Cleveland, Ehrke, Goddard, Jones (Ch.), Lenz, McGrannahan, Puffer, Smith, Williams

The department offers courses leading to the degrees of bachelor of arts with a major in music, bachelor of music with majors in applied music or music education, and master of arts or master of music.

Bachelor of Arts with Field of Concentration in Music

Courses in the areas of music theory, music history, applied music, and methods of music teaching are offered for cultural benefit or for professional preparation of performing musicians and/or music teachers.

All students in the university may participate in one or more of the performance organizations. These include university band, concert choir, symphonic choir, opera theater, university-community symphony, and chamber music ensembles. Solo performance is possible in class recitals or in connection with the performance organizations.

For the bachelor of arts degree, a minimum of 38 credits is required, distributed as follows:

<i>Major Interest Subject</i>	<i>Credits</i>
Applied individual instruction in a single area of study	6
Music Theory-MUS 207-208, 209-210, 301-302, 307-308	16
Music History-MUS 201-202	6
Ensemble	6
To be chosen from theory or history and literature courses, 300 or above	4
	38

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Music accepts any minor approved by the College of Arts and Science.

The bachelor of arts is a liberal arts degree. For information about teacher certification with this program, students should consult the College of Education.

Bachelor of Music

The bachelor of music is a professional degree with a major in music education which meets present state of Nevada music certification requirements.

<i>Major Interest Subject</i>	<i>Credits</i>
Applied major instrument or voice (a senior recital of 25 minutes is required)	8
Applied minor instrument (non-keyboard majors enroll in piano until the 4 credits are completed, or until the Piano Proficiency Examination is passed; remaining credits are taken in a single applied area)	4

Music Theory-MUS 207, 208, 209-210, 301-302, 307-308 . . .	16
Music History-MUS 201-202, Orchestration-MUS 310, Form and Analysis-MUS 408	12
Ensemble	7
Methods courses in the department-MUS 103, 104, 113, 123, 124, 324, 349	13
Conducting-MUS 321 and 322	4
	64

The requirement of a minor in an area outside the music department is waived.

Professional Education: requirements for certification as Music Special K-12 in Nevada	28
	92

The bachelor of music degree with a major in applied music is available to only the very few students approved by the entire faculty as showing professional promise in their applied performance areas.

<i>Major Interest Subject</i>	<i>Credits</i>
Applied major, 4* credits per semester	32
Minor instrument, 1 credit per semester (non-keyboard majors enroll in piano until the piano proficiency examination is passed; remaining credits are taken in a single applied area)	2
Music Theory-MUS 207-208, 209-210, 301-302, 307-308	16
MUS 201-202, 321 or 322	8
MUS 310, 408	6
Ensembles: major 8 credits, secondary 5 credits	13
Literature electives to include 4 credits in MUS 418 for vocal majors, and 4 credits in MUS 483 for piano majors	4
	81

A full recital is required the senior year. The requirement of a minor in an area outside the music department is waived.

Minor in Music

Students majoring in subject areas other than music in the College of Arts and Sciences may minor in music by completing the following 20 credit sequence of courses:

<i>Minor Interest Subjects</i>	<i>Credits</i>
MUS 207-208	6
MUS 201 or 202	3
Major ensembles	3
Instrumental or vocal instruction	3
Electives numbered 300 or above	5
	20

Master of Arts and Master of Music Degrees

The master of arts degree requires a written thesis. The master of music degree (Plan A) requires performance or original composition in lieu of a written thesis. The master of music

degree (Plan B) requires a professional paper, and is offered for candidates who are active music teachers.

University Requirements: Candidates must complete all requirements for the master's degree as published in the Graduate School section of this catalog. The master of arts and the master of music (Plan A) require 30 credits total; the master of music (Plan B) requires 32 credits total.

Music Department Requirements: At least one-third of the candidate's total program must be devoted to the area of specialization. The department faculty must approve the area of specialization for each candidate.

The following core of 11 credits is required of all graduate students in music: MUS 709, 730, 731, 732. Candidates should consult the current Music Department Student-Faculty Handbook for information concerning placement examinations and auditions for entering students, and about comprehensive and oral examinations. Further details may be obtained from the chairman of the department.

PHILOSOPHY (PHIL)

Faculty: Hoffman, Kelly, Lucash, Nickles (Ch.)

The department offers courses leading to the degrees of bachelor of arts and master of arts.

Bachelor of Arts Degree

Philosophy as a field of concentration is designed for those students interested in acquiring a comprehensive understanding of the various areas of philosophy, either for their cultural enrichment or as a basis for advanced study and teaching of philosophy. It is an appropriate field of concentration for those planning to enter such fields as law or theology. The department also offers sequences of courses which may constitute secondary fields of concentration for students in most academic areas.

<i>Major Interest Subject</i>	<i>Credits</i>
PHIL 211, 213, and either PHIL 114 or 326 (required)	9
At least 6 credits in each of the following three groups with at least 3 credits at the 400 level in each group:	
Group A—History of Philosophy:	
PHIL 212, 314, 315, 316, 410, 411, 413, 414, 415	6
Group B—Metaphysics and Epistemology:	
PHIL 130, 224, 403, 404, 405, 406	6
Group C—Ethics and Value Theory:	
PHIL 125, 202, 203, 207, 323, 325, 401, 402, 407	6
Additional credits in philosophy	9

*Vocal students for the first four semesters register for 3 credits with concurrent registration in MUS 218, 1 credit each semester, to a total of 4 credits. MUS 218, Vocal Repertory Coaching, is devoted to the study of diction in English, French, Italian and German, which with the Arts and Science foreign language requirement fulfills NASM requirements that vocalists have specialized work in languages.

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Philosophy accepts any minor approved by the College of Arts and Science.

History and social theory is an approved area of study for philosophy majors. See Interdisciplinary and Special Programs for description.

Minor in Philosophy

Students majoring in another field may minor in philosophy by completing the following:

<i>Minor Interest Subject</i>	<i>Credits</i>
PHIL 211 and 213	6
At least six credits from Group A and three credits from Group B	
Group A—PHIL 314, 315, 316, 403, 404, 405, 406, 410, 411, 413, 414, 415	6
Group B—PHIL 323, 325, 401, 402, 407	3
Additional credits in philosophy	3
	18

Master of Arts Degree

Candidates are expected to complete all requirements set for the university through the Graduate School, including the course and thesis requirements, and the final examination. In addition, the department of philosophy has specific requirements enumerated below.

Departmental Requirements

To be admitted for graduate study leading to the degree of master of arts in philosophy, a student must:

1. Currently hold a B.A. degree in philosophy from an accredited institution of higher learning, or
2. Have received from an accredited institution of higher learning a minimum of 18 undergraduate credits in philosophy.

The candidate for the M.A. degree must complete a minimum of 18 credits, including thesis, in 700-level philosophy courses. A total of 30 graduate credits is required. A maximum of 6 of the total credits may be in a related field, as determined in each case by the department. While not required, a reading knowledge in at least one foreign language is highly recommended; especially if the candidate wishes to pursue further graduate studies beyond the master's level.

Every candidate for the degree of master of arts is required to pass a written examination administered by the philosophy department, as well as a final oral examination.

PHYSICS (PHYS)

Faculty: Altick, Barnes, Cathey (Ch.), Frazier, Kliwer, Marsh, Moore, Winkler

Cooperating DRI Faculty: Hallett, Hoffer, Lamb, Pitter, Telford, Vaziri, Warburton

The department offers courses leading to the degrees of bachelor of science, master of science, and doctor of philosophy.

Bachelor of Science Program

The bachelor of science program in physics is designed to prepare the student for a variety of scientific careers such as would be offered by industry, or high school and junior college teaching. After appropriate graduate study, it is possible for the student to go into advanced research and/or university teaching, or into an interdisciplinary field such as astrophysics, biophysics, or the philosophy of science.

<i>Major Interest Subject</i>	<i>Credits</i>
PHYS 201, 202, 203, 204, 205, 206	12
PHYS 351, 352	6
PHYS 473-474 or 421 and either 422 or 426	6
Credits at the 300 level or above including a minimum of 3 laboratory credits	6
	30

Additional Required Courses (22 credits): CHEM 103, 104 (8 credits); MATH 215, 216, 310, 320 (14 credits). Either German or Russian is recommended to fulfill the foreign language requirement. A qualified student may participate in the physics honors program; details may be obtained from the physics department.

The above requirements are considered minimum. A student who wishes to enter the field of physics is advised to take both the PHYS 473-474 and the PHYS 421 and 422 or 426 sequences as well as PHYS 361-362, 363-364, 355, and 466.

A bachelor of science degree in engineering science with an emphasis on physics is offered by the College of Engineering (see Engineering Science). This program is for the student who desires a strong emphasis on technical and applied courses. The bachelor of science in geophysics offered by the School of Mines also includes a good background in physics. Either of these degrees can be used as preparation for graduate work in physics.

Minor in Physics

Students majoring in another field may minor in physics by completing the following:

<i>Minor Interest Subject</i>	<i>Credits</i>
PHYS 201, 202, 203	9
(By petition to the department chairman, PHYS 151-152 may be substituted for PHYS 201, 202)	
PHYS 351	3
Six credits in courses numbered 300 or above, including at least one credit of laboratory	6
	18

Advanced Degrees

Consult regulations of the Graduate School for

general admission requirements. Requirements for admission to graduate standing in physics are:

1. A bachelor's degree from an institution offering an approved major in physics (as defined by the American Institute of Physics).

2. Completion of regular junior-senior courses in mechanics, optics, electricity and magnetism, heat and thermodynamics, and modern physics.

3. An average grade of B or better in all physics and mathematics courses, and an overall average of B or better in all undergraduate courses.

Applicants whose records indicate a deficiency in any of the requirements listed above may be admitted on a probationary basis and may be required to take certain undergraduate courses (which do not carry graduate credit). All new graduate students are required to take a preliminary examination in general physics during the first year of graduate study. Graduate students who hold half-time assistantships are not permitted to enroll for more than 10 credits in graduate courses in any one semester. The general requirements of the Graduate School must be followed by each student in physics working for an advanced degree.

Master of Science Degrees

Master of science degrees are offered in physics or atmospheric physics. The physics option courses should include PHYS 701, 702, 711, 721-722, 751, and 712 when feasible. The atmospheric physics option courses should include PHYS 701, 740, 741, 742, 743, 749, and 751. Additional credits may be in a minor, usually mathematics. A student who needs laboratory experience is advised to register for experimental work. The program of courses is planned in consultation with a graduate adviser and is subject to approval by the student's advisory committee.

To be admitted to candidacy, the student must complete 10 graduate credits with a grade of B or better, and achieve a satisfactory score on the Graduate Record Examination. Subject to the approval of the committee, a student may elect a master's degree program with or without thesis. The requirements for the master of science degree with thesis include the completion of 30 semester credits, of which 6 credits must be in thesis research; the thesis should demonstrate the student's ability to carry out independent research. For the master's program without thesis, 32 credits are required, with no more than 6 credits in special problems courses. All M.S. candidates must pass a final oral examination administered by the student's advisory committee. The emphasis in the examination will be on the thesis

when one is presented; otherwise, it will be on mastery of the graduate-level course work.

Doctor of Philosophy Degree

The chief requirement for the doctor of philosophy degree is the completion of original research, the results of which represent a significant contribution to the knowledge of physics and warrant publication. The purpose of the formal course work is twofold: to give the student a broad background in classical and modern physics, and to prepare for the research work which will form the subject of the dissertation.

Before becoming a candidate for the doctor of philosophy degree, a student ordinarily is expected to earn the master of science degree. The following courses or their equivalents must be satisfactorily completed for the doctor's degree in physics:

	<i>Credits</i>
PHYS 701—Mathematical Physics	3
PHYS 702—Classical Mechanics	3
PHYS 711-712—Electromagnetic Theory I and II.	6
PHYS 721-722—Quantum Theory I and II.	6
PHYS 732—Statistical Mechanics	3
PHYS 761—Theoretical Spectroscopy	3
PHYS 795—Comprehensive Examination	0
At least 3 credits of PHYS 751	3
Credits selected from other 700-level physics and/or mathematics courses	12
Credits of approved electives	9

48

For persons with a specialization in atmospheric physics, PHYS 745 and 748 may be substituted for PHYS 732 and 761.

Before being accepted as a candidate, the student must demonstrate a reading knowledge of one language other than his native tongue (languages normally acceptable are French, German, and Russian, but the student's choice is subject to the approval of his advisory committee), and pass a comprehensive examination on graduate-level material in physics.

POLITICAL SCIENCE (P SC)

Faculty: Crowley, Driggs, Eubank, Fox, Ganzel, Hansot, Roberts, Rusco, Siegel, Weinberg, Wilcox (Ch.)

The department offers courses leading to the degrees of bachelor of arts, master of arts, master of public administration, and doctor of philosophy.

Bachelor of Arts Degree

Major Interest Subject (30 credits)

P SC 103 and at least one additional course in each of the following five fields:

1. American government
2. Public administration and public policy
3. Political theory
4. Comparative government
5. International relations

Eighteen of the 30 credits must be in courses numbered above 300. Only 6 credits of internship courses may be used to fulfill the 30-credit major requirement.

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Political science accepts any minor approved by the College of Arts and Science.

History and social theory is an approved area of study for political science majors. See Interdisciplinary and Special Programs section for description.

Minor in Political Science

Students majoring in another field may minor in political science by completing one of the following:

<i>Minor Interest Subject (General)</i>	<i>Credits</i>
P SC 103	3
Three courses from the following: 104, 210, 211, 231 and 341	9
plus three additional upper-division courses	9
	21
<hr/>	
<i>Minor Interest Subject (Foreign Affairs)</i>	
P SC 103, 211, 231	9
plus four upper-division courses, including at least one comparative politics course and one course in inter- national relations	12
	21
<hr/>	
<i>Minor Interest Subject (Public Administration)</i>	
P SC 103, 210, 341, 441, 442	15
plus two additional courses selected from the following: 443, 444, 445, 446 and 450	6
	21
<hr/>	
<i>Minor Interest Subject (American Government)</i>	
P SC 103, 304, 305, 309	12
plus three additional courses selected from the following: 208, 400, 404, 406, 407, 409, 451 and 452	9
	21
<hr/>	
<i>Minor Interest Subject (Public Policy)</i>	
P SC 103, 210	6
plus five of the following courses: 205, 354, 400, 406, 421, 453, 456, 457 and 458	15
	21

Congressional Intern Program

A program in which the student spends one semester in a senator's office in Washington, D.C. For details and application forms, contact the chairman of the Political Science Department.

Master of Arts Degree

The Department of Political Science offers a graduate program leading to the degree of master of arts. Further details may be obtained from the office of the dean of the Graduate School or from the chairman of the department.

Master of Public Administration Degree

An interdisciplinary master of public administration degree is offered through the Department of Political Science. The program is designed to prepare young people for specific careers in public service and to increase the administrative and policy analysis skills of persons presently employed in government service. The program involves three areas of study: public administration, public policy, and a third area which may be another academic discipline or an interdisciplinary grouping of courses. For more detailed information contact the M.P.A. adviser in the Department of Political Science.

The department also participates in the interdisciplinary master of science degree with a major in land use planning policy in cooperation with several other departments. For further information refer to the Interdisciplinary and Special Programs section of this catalog.

Doctor of Philosophy Degree

Applicants for the Ph.D. degree in political science must meet general university requirements for admission, Graduate School requirements, including a satisfactory score on the Graduate Record Examination, and department requirements. In addition to the course and dissertation requirements for the degree, the candidate must demonstrate a reading knowledge of at least one foreign language other than his or her native tongue. A second language may be required at the discretion of the Ph.D. committee. The candidate must also demonstrate proficiency in the use of a research tool to the satisfaction of the department.

Detailed information on requirements may be obtained from the dean of the Graduate School and the graduate adviser of the department.

Certificate in Public Administration

This program provides a course of study for employees and officers of federal, state, and local governmental agencies in Nevada. The program is designed to provide an understanding of the fundamentals of public administration and an opportunity to study in some detail some of the problems and techniques of public administration. In some cases the course of study supplements inservice training programs. In other cases an individual program can be developed to fit particular needs. The certificate in public administration requires a minimum of 40 credits of specified course work.

College courses already taken at the University of Nevada or elsewhere may be applied toward the certificate, but a minimum of 20 credits must be earned at the University of Nevada, 15 of which are earned after acceptance in the certificate program. To qualify for the certificate, a person must have been employed by some governmental agency for a period of at least six months or have participated for a period of six months in a governmental internship or trainee program.

For further information contact the chairman of the Department of Political Science.

Value of Quantitative Skills

Students who intend to do graduate study as well as those who wish to pursue careers in law, business, or public service, will find training in quantitative analytical skills extremely helpful in the pursuit of their career goals. The Political Science Department offers an elective course, Research in Political Science (P SC 481), designed to help students develop their quantitative skills. Students are also encouraged to take courses in social science research methods, statistics and computer science. Graduate students pursuing master of arts, master of public administration and doctor of philosophy degrees with a major in political science are required to take Research in Political Science (P SC 681), and Advanced Research Methods in Political Science (P SC 782).

Foreign Affairs

For information, contact the chairman of the Department of Political Science.

PSYCHOLOGY (PSY)

Faculty: Davis, Day (Ch.), B. Gardner, R. Gardner, Ginsburg, Harrington, McQueen, McReynolds, Mikawa, Peterson, Varble, Wallace, Wood

The department offers courses leading to the degrees of bachelor of arts, master of arts, and doctor of philosophy.

Bachelor of Arts Program

The general psychology major includes training in all the major areas of psychology; social psychology is a broader major that also includes areas in sociology and anthropology.

General Psychology

<i>Major Interest Subject</i>	<i>Credits</i>
PSY 101, 210, 301, 408	14

Additional credits in psychology	18
	32

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Psychology accepts any minor approved by the College of Arts and Science.

Social Psychology

<i>Major Interest Subject</i>	<i>Credits</i>
ANTH 101	3
PSY 101, 210, 261, 362, 392	16
SOC 101	3
Additional credits in psychology	12
	34

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Social psychology accepts any minor approved by the College of Arts and Science.

Minor in Psychology

Students majoring in another field may minor in psychology by completing the following:

Minor Interest Subject

For a minor in psychology, the department recommends a total of 24 credits in psychology courses. However, an acceptable minor may be completed by taking a minimum of 18 credits, 9 of which must be upper-division credits in psychology that must include the following:

PSY 101 (3 credits)

At least three of the following courses: 210, 233, 261, 301, 403, 405, 408, 421, 435, 441, 480 or 481

Electives from additional course offerings in psychology (which may also include additional courses from #2 above).

Advanced Degrees

Master of Arts Program

The master of arts degree program attempts to give the student a broad knowledge of the field, with emphasis in the social, clinical, or experimental fields.

Doctor of Philosophy Program in General Psychology

The student in this program must meet all the requirements for admission to the Graduate School and the general requirements for obtaining a doctorate degree at the university. Also required is one full year in teaching or research which may be satisfied by spending a suitable fraction of time in teaching or research concurrently with graduate study.

Students in this program may elect a concentration in either experimental psychology or clinical psychology. Details may be obtained by writing the Department of Psychology.

Doctor of Philosophy Program in Social Psychology

This is an interdisciplinary program offered jointly by the departments of psychology and

sociology. The student may register in and receive a degree basically in one department or the other, although work is done in both.

The student in this program must meet all the requirements for admission to Graduate School and the general requirements for obtaining a doctorate degree at the university. Also required is one full year in teaching or research which may be satisfied by spending a suitable fraction of time in teaching or research concurrently with graduate study.

Admission Information

To be accepted as a graduate student requires the earning of the bachelor's degree from an accredited college or university. To be accepted in full standing, a minimum of 18 credits of undergraduate work in psychology is required. The student must also meet the following requirements:

1. Credit in a laboratory course in experimental psychology and a course in statistics. In addition, students in a program emphasizing clinical psychology must have a course in abnormal psychology and a course in theories of personality.
2. A GPA of 3.0 for the four years of undergraduate work.
3. Recommendations from former instructors to the effect that the student is capable of doing graduate work at an acceptable level of performance.

In some instances in which a student is deficient in the above requirements, it is feasible to make up such deficiencies before entering the degree program. The department advises students with deficiencies whether they are likely to be considered as graduate students in full standing after such deficiencies have been made up.

The student interested in the social psychology program may substitute 18 credits of undergraduate work in sociology. The laboratory course in experimental psychology is not required for admission if the student's undergraduate work is in sociology, but it is highly desirable.

Preliminary Screening

Individuals wishing to attend as graduate students should write to the chairman, Department of Psychology, at the earliest possible date stating the degree program desired and whether or not financial assistance is needed. Preliminary information forms are provided for completion and return with a transcript of all undergraduate work.

Applicants should make arrangements at the nearest college or university to take the Graduate

Record Examination (Aptitude and Advanced) as soon as possible on one of several test dates each year. The scores are to be forwarded to the department for consideration.

Selected applicants are encouraged to make formal application for admission to the university (refer to section on Admission Information).

Financial Assistance

A variety of graduate assistantships, fellowships, and traineeships are available to well-qualified students. Stipends begin at \$4,700 plus tuition and registration fee exemptions. *If the student is applying for financial assistance, the application should be completed no later than February 1.* Normally the candidate receives notification by April 1 and has until April 15 to accept or reject the offer. In some instances, financial awards become available after this date and late applications are considered.

RECREATION AND PHYSICAL EDUCATION (RPED)

Faculty: Bailey, Ballew, Cook, Eoff, Gross, Laughter, Legarza, Loper (Ch.), Magney, Newell, Plummer, Twardokens

The department offers courses leading to the degrees of bachelor of science or bachelor of arts (student's option) with majors in physical education and recreation, and master of science with a major in physical education.

Baccalaureate Degree

Curricula in this area are designed to enable the student to meet the requirements for a field of concentration in physical education in the College of Arts and Science. Students are required to complete a field experience approved by the department which requires the development of teacher-leadership skills. This experience must be completed before the beginning of the junior year.

Students may qualify for teacher certification by meeting the requirements in Professional Foundations for Teaching as stated for the respective levels in the College of Education.

<i>Major Interest Subject</i>	<i>Credits</i>
Required: RPED 201, 372, 401, 403*, 405, 406	17
RPED 220 through 230 (select 8 credits)	8
RPED (11 credits selected by advisement), 8 credits of 300 level or above and not included in above listed requirements	11

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Recreation and physical education accepts any minor approved by the College of Arts and Science.

Physical Education with Emphasis in Dance

<i>Major Interest Subject</i>	<i>Credits</i>
RPED 100-199, 220-230	6
RPED 201, 202, 219, 224, 261 (Select any 4 courses)	8
RPED 301, 360, 361, 372, 396, 403 (Select 10 credits)	10
RPED 406, 460	5
29	

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Recreation and physical education accepts any minor approved by the College of Arts and Science.

Recreation (Municipal Recreation Option)

<i>Major Interest Subject</i>	<i>Credits</i>
RPED 100-183	3
RPED 220-230	3
RPED 201, 240, 250, 251, 290, 340, 373, 402, 421, 440	22
RPED 495	4
RPED 496	3
35	

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Recreation and physical education accepts any minor approved by the College of Arts and Science.

Minor in Recreation and Physical Education

Students majoring in another field may minor in recreation and physical education by completing the following:

<i>Minor Interest Subject</i>	<i>Credits</i>
RPED 201, 403*, 405, 406	12
To be selected from 301, 302	3 or 5
To be selected from 220 thru 230	3
18-20	

Master of Science Degree

The Department of Recreation and Physical Education offers a graduate program leading to the degree of master of science. Further details may be obtained from the office of the dean of the Graduate School or from the chairman of the department.

SOCIAL AND HEALTH RESOURCES (SHR)

Faculty: Dangott, Larsen, McCoy, Pickard, Pillard (Ch.), Stotler, Thornton, Willans

The department offers a bachelor of arts degree with a major in social work and a bachelor of science degree with majors in health education, predentistry, premedicine and prephysical therapy. The department also administers a two-year program in prepharmacy.

Social Work Major

The department offers course and field work that prepares the graduate for a job in social work. The student is also prepared for admission to graduate school in such programs as social work, public health, counseling, corrections, law, or public administration. Through the unique combination of course work and field experience students learn the knowledge, theories, skills and professional values that enable them to become social workers in such programs as public assistance, child welfare, mental health, mental retardation, rehabilitation, delinquency, corrections, community development, and planning and administration.

The student is required to complete 36 credits in the department; 32 credits must be completed in required courses, the remaining 4 credits are elective and should be selected in consultation with the adviser. In addition, the student must complete 18-21 credits in an approved minor.

The department's program is accredited by the Council of Social Work Education, the national accrediting association.

<i>Major Interest Subject</i>	<i>Credits</i>
SHR 220-Introduction to Social and Health Services	4
SHR 234-Clinical Interviewing Skills	3
SHR 320-Individual in Society	3
SHR 330-Methods of the Social Services I	3
SHR 331-Methods of the Social Services II	3
SHR 390-Introduction to Social Work Research	3
SHR 450-Social Welfare Policy	3
SHR 480-Field Experience in Social Work	5
SHR 481-Field Experience in Social Work	5
32	
<i>Plus 4 credits selected from electives in the department with adviser</i>	4
36	

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Social and health resources accepts the following minors: anthropology, computer sciences, criminal justice, economics, English, environmental studies, ethnic studies, French, German, Spanish, geography, historic preservation, history, philosophy, political science, prelegal, psychology, recreation and physical education, religious studies, sociology, speech communication, women's studies.

Minor in Social Work

Students majoring in another field may minor in social work by completing the following:

<i>Minor Interest Subject</i>	<i>Credits</i>
SHR 220	4
SHR 320	3

*BIOL 262 or 263 must be successfully completed prior to enrollment in RPED 403.

SHR 450	3
Other 300-400 level courses offered by SHR department (excluding SHR 331, 480-481)	10
	20

Premedicine and Pre dentistry

The department offers course and field work that prepares the student for admission to health related graduate or professional schools such as medical school and dental school. The graduate is also prepared for advanced training in such fields as public health, health planning and administration, and community health education.

Students wishing to pursue a premedical or pre dental course of study should complete a bachelor of science degree. Occasionally, a student is accepted to professional school prior to completing baccalaureate degree requirements. Premedical or pre dental students who transfer to approved professional schools, and who wish to earn a baccalaureate degree from UNR, should consult the Registration and Records section of this catalog under Requirements for Graduation—Resident Credits Requirement. Additional information about this option and about admission requirements for schools of medicine and dentistry are available from the Office of Health Careers Advisement, Room 223, Mackay Science.

<i>Required Courses</i>	<i>Credits</i>
Social and Health Resources Core:	
SHR 220 Introduction to Social and Health Services	4
SSH 234 Clinical Interviewing Skills	3
SHR 340 Human Values and Professional Ethics	3
SHR 354 Personal Health and Life Styles	3
SHR 452 Advanced Studies in Health Systems and Policy	3
<i>General Requirements</i>	
Chemistry:	
CHEM 101 General Chemistry	4
CHEM 102 General Chemistry	4
CHEM 243 Organic Chemistry	3
CHEM 244 Organic Chemistry	3
CHEM 245 Organic Chemistry Laboratory	1
CHEM 246 Organic Chemistry Laboratory	1
Behavioral Science:	
PSY 101 General Psychology	3
PSY 441 Abnormal Psychology	3
Additional behavioral science course to be selected from a variety of courses in consultation with adviser	3
Biology:	
BIOL 101 General Biology	4
Additional credits to be selected from the following (6 credits must be upper-division):	
BIOL 201, 206, 207, 300, 306, 364, 366, 385, 386, 468	12
Physics:	
PHYS 151 General Physics	3
PHYS 152 General Physics	3
PHYS 153 General Physics Laboratory	1
PHYS 154 General Physics Laboratory	1
Mathematics:	
MATH 213 Calculus	3
	68

meet the admissions requirements of accredited schools of physical therapy as recommended by the Council of Medical Education and the American Medical Association. It can also lead to a bachelor of science degree with a major in prephysical therapy at the University of Nevada Reno.

To be certified as a physical therapist, the student must complete a professional or certification program from an accredited school of physical therapy. Currently, Nevada has no such program. Students can apply to accredited certification programs out of state at the beginning of their junior year. A few schools accept transfers at the end of the junior year.

A prephysical therapy student who wishes to earn a baccalaureate degree from the University of Nevada Reno may complete the 128 required credits in residence. The student may also choose to complete the required 96 credits of prephysical therapy curriculum in residence at UNR and earn the remaining 32 credits by satisfactorily completing a 12 to 24 month certification course in an approved school of physical therapy. (It should be noted the last 40 credits of the 96 credits earned at UNR must be earned in approved residence.) For additional information on the prephysical program and the various options available to the student, contact the office of Health Career Advisement, Room 223, Mackay Science or a department adviser.

<i>Required Courses</i>	<i>Credits</i>
Social and Health Resources Core:	
SHR 220 Introduction to Social and Health Services	4
SHR 234 Clinical Interviewing Skills	3
SHR 340 Human Values and Professional Ethics	3
SHR 354 Personal Health and Life Styles	3
SHR 452 Advanced Studies in Health Systems and Policy	3
Mathematics:	
MATH 110 College Algebra	3
Biology:	
BIOL 101 General Biology	4
BIOL 201 Animal Biology	3
BIOL 262 Human Anatomy and Physiology I	3
BIOL 263 Human Anatomy and Physiology II	3
Chemistry:	
CHEM 101 General Chemistry	4
CHEM 102 General Chemistry	4
CHEM 142 Introductory Organic Chemistry	4
Recreation and Physical Education:	
RPED 403 Kinesiology	3
RPED 406 Physiology of Exercise	3
Physics:	
PHYS 151 General Physics	3
PHYS 152 General Physics	3
PHYS 153 General Physics Laboratory	1
PHYS 154 General Physics Laboratory	1
Behavioral Science:	
PSY 101 General Psychology	3
PSY 441 Abnormal Psychology	3

Prephysical Therapy

The prephysical therapy major is designed to

Health Education

The health education major prepares in-

dividuals to help others understand their health needs and aids in developing methods of meeting these needs. The curriculum emphasizes training in the biological and social sciences which enables the graduate to explain and interpret the latest knowledge and developments in the health sciences and to assist others to utilize such knowledge.

<i>Required Courses</i>	<i>Credits</i>
<i>Social and Health Resources Core:</i>	
SHR 220 Introduction to Social and Health Services	4
SHR 234 Clinical Interviewing Skills	3
SHR 320 Individual in Society	3
SHR 340 Human Values and Professional Ethics	3
SHR 452 Advanced Studies in Health Systems and Policy	3
SHR 470 Health Education Seminar	3
SHR 488 Field Experience in Health Care	3

<i>General Requirements</i>	
Behavior and Social Sciences	9
MEDT 111 Medical Terminology	1

<i>Science and Mathematics</i>	
BIOL 262, 263 Human Anatomy and Physiology I and II	6
BIOL 101 General Biology	4
MATH 110 College Algebra	3
Electives (chemistry, statistics and measurement, physical sciences)	9

<i>Education</i>	
EDFM 101 Educational Experience	3
EDFM 420 Audiovisual Methods in Teaching	3

Area of Concentration 28
 Each student selects an area of concentration by the beginning of the junior year. Specific courses in most areas of concentration are planned individually by the student and the adviser. Examples of possible areas of concentration are school health education, journalism and media, nutrition, patient education and counseling, management and administration.

For further information concerning the health education major, contact the office of Health Career Advisement, Room 223, Mackay Science or an adviser in the department.

Prepharmacy

The prepharmacy program is a two-year curriculum which satisfies the preprofessional requirements of most pharmacy schools and prepares the student to transfer to one of these schools and be accepted with advanced standing in his professional program.

Suggested Curriculum

<i>First Year</i> <i>First Semester</i>	<i>Credits</i>
CHEM 101-General Chemistry	4
ENGL 101-Composition I	3
BIOL 101-General Biology	4
MATH 110-College Algebra	3
Elective	2
	16

<i>Second Semester</i>	<i>Credits</i>
CHEM 102-General Chemistry	4
ENGL 102-Composition II	3

BIOL 202-Plant Biology (or BIOL 130-Survey of the Plant Kingdom, 2 crs.)	2-3
MATH 213-Elements of Calculus	3
EC 101-Principles of Microeconomics	3
	15-16

<i>Second Year</i> <i>First Semester</i>		<i>Credits</i>
CHEM 243-Organic Chemistry		3
CHEM 245-Organic Chemistry Laboratory		1
PHYS 151-General Physics		3
PHYS 153-General Physics Laboratory		1
BIOL 262-Human Anatomy and Physiology I		3
Electives (B CH 301-General Pharmacology, recommended. Also psychology, sociology, humanities, etc.)		5
		16

<i>Second Semester</i>		<i>Credits</i>
CHEM 244-Organic Chemistry		3
CHEM 246-Organic Chemistry Laboratory		1
PHYS 152-General Physics		3
PHYS 154-General Physics Laboratory		1
BIOL 306-Microbiology		4
Electives		4
		16

Students interested in preparing for a professional career in pharmacy should contact the office of Health Careers Advisement, Room 223, Mackay Science or an adviser in the department.

SOCIOLOGY (SOC)

Faculty: Backman (Ch.), Berberoglu, Harvey, Kreplin, Richardson, Warner

The department offers courses leading to the degrees of bachelor of arts, master of arts, doctor of philosophy, and, in conjunction with the Department of Psychology, a doctor of philosophy degree in social psychology.

Bachelor of Arts Degree

<i>Major Interest Subject</i>	<i>Credits</i>
SOC 101 (3 credits); 210 (4 credits); 392, and 491-492 or 207; and one of 342, 371, 373, 391, 393; and one of 333, 376, 463, 480, 485	22
Additional courses in sociology	9
	31

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Sociology accepts any minor approved by the College of Arts and Science.

History and social theory is an approved area of study for sociology majors. See Interdisciplinary and Special Programs selection for description.

Social Psychology

<i>Major Interest Subject</i>	<i>Credits</i>
SOC 101 (3 credits), 210 (4 credits), 261, 362, 392 (3 credits each)	16

PSY 101	3
ANTH 101	3
Additional credits in sociology	12
	<hr/>
	34

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Social psychology accepts any minor approved by the College of Arts and Science.

Minor in Sociology

Students majoring in another field may minor in sociology by completing one of the following:

<i>Minor Interest Subject (General)</i>	<i>Credits</i>
Required: SOC 101 and 207	6
Two courses from the following: SOC 342, 371, 373, 391, 393	6
Two courses from the following: SOC 333, 376, 480, 485	6
	<hr/>
	18
 <i>Minor Interest Subject (Applied)</i>	
Required: SOC 101 and 379	6
A choice of SOC 102 or 202; one course from SOC 352, 366, 464; SOC 275 or 480; SOC 376 or 342	12
	<hr/>
	18

Advanced Degrees

The Department of Sociology offers a graduate program leading to the degree of master of arts in sociology, the Ph.D. in sociology, and, in cooperation with the Department of Psychology, a graduate program leading to the Ph.D. degree in social psychology. Further details may be obtained from the dean of the Graduate School, the Graduate School section of the university catalog or from the director of the sociology graduate program.

The program of graduate studies in sociology is designed to prepare sociologists for careers in the academic world and in areas of policy-related research. Strong emphasis is given to theory, classical and modern, traditional and critical, but always within a context which actively translates that theory into concrete research activity. Firm foundations in both theory and research technique are emphasized, but only as tools developed to study modern social relations in their historical and comparative perspectives.

Emphasis in the graduate programs is placed upon scholarship.

General Requirements for Admission

In addition to the general requirement that the applicant have a bachelor's degree and a minimum of 18 hours of undergraduate work in sociology, the following departmental requirements must be met.

1. Credit in a course in statistics.
2. An overall undergraduate GPA of 2.5 for

master of arts program and an overall undergraduate GPA of 3.0 for the doctoral program.

3. Recommendations from former instructors to the effect that the student is capable of doing graduate work at an acceptable level of performance.

4. Adequate scores in the aptitude and advanced tests portion of the Graduate Record Examination. *Applicants are not considered unless they have submitted Graduate Record Examination scores.*

In some instances where a student is deficient in the above requirements, it is feasible to make up such deficiencies before entering the degree program. The department advises students with deficiencies whether they are likely to be considered as graduate students in full standing after such deficiencies have been cleared.

Master of Arts Program

Master of arts degrees may be taken with emphasis in general sociology or social psychology. The program in social psychology is interdisciplinary, the student taking work in psychology as well as in sociology.

An M.A. degree is granted when the student (1) satisfactorily completes 30 semester credits in graduate-level courses, including SOC 691 — History of Social Thought, 3 credits; SOC 692 — Contemporary Sociological Theory, 3 credits; SOC 706-707 — Intermediate Statistics, 6 credits; SOC 718 — Advanced Research Methodology, 3 credits; and one other seminar in sociology; (2) earns a minimum of 21 graduate credits while in residence; (3) passes a comprehensive examination made up of four parts, two of which are required (methodology-statistics and sociological theory), and two of which are selected from fields of substantive sociology; and (4) produces a thesis under the supervision of three faculty members, and passes an oral examination given by the department faculty.

An alternate method of earning an M.A. degree is the nonthesis approach. This method includes items (1) through (3) and in addition the completion of a professional paper under the supervision of three faculty members and passing an oral examination given by the graduate advisory committee (with the total of 32 semester credits required).

Doctor of Philosophy Program in Social Psychology

This is an interdisciplinary program which is administered by a social psychology committee.

The student may register and receive credits in either the sociology or psychology department, although work is done in both. Students who complete this program receive a Ph.D. degree with a major in social psychology.

The student in this program must meet all the requirements for admission to graduate school and the general requirements for obtaining a doctorate degree at the university. Also required is one full year in teaching or research which may be satisfied by spending a suitable fraction of time in teaching or research concurrently with graduate study.

For additional information, contact the director of the Interdisciplinary Social Psychology Doctorate Program.

Doctor of Philosophy Program in Sociology

The doctor of philosophy degree in sociology is designed for students who wish to obtain a broad mastery of sociology combined with a high level of competence in research and intensive exposure to two specific areas of the discipline.

For admission into the sociology Ph.D. program, a completed master's degree in sociology is required.

Additional information about this program is available from the director of graduate study, Department of Sociology.

Preliminary Screening

A person desiring to become a graduate student in the Department of Sociology should write at the earliest possible date to the director of graduate study, Department of Sociology, stating the desired degree program and whether or not consideration for financial assistance is requested.

Departmental application forms are then sent which should be returned together with two copies of official transcripts of all undergraduate work. The prospective applicant should arrange to take the Graduate Record Examination (Aptitude and Advanced Tests) at any university that is convenient and have these scores forwarded to the department. It is most important to make arrangements early for taking the Graduate Record Examination as it is given only at certain times of the year. Tentative approval of a student by the department *does not constitute admission* to the University of Nevada; selected students are encouraged to make formal application for admission to the university (refer to section on Admission Information).

Financial Assistance

A variety of graduate assistantships, fellowships, tuition waivers, and other forms of aid are available to well-qualified students. The stipend for these range up to \$3,000 plus tuition and registration fee exemptions. *If the student is applying for financial assistance, the application should be completed prior to February 1.* Normally the candidate receives notification by April 1 and has until April 15 to accept or reject the offer. In some instances financial awards become available after this date, and late applications are considered.

SPEECH AND THEATRE (SPTH)

Faculty: Bernardi, Dillard, Owen, Page, Seibert (Ch.), Vogel, Walters, Zimmerman

Adjunct Faculty: Stumpf

The department offers the bachelor of arts degree with a major in speech and theatre including emphasis in speech communication or theatre arts and interpretation. A master of arts degree is offered with majors in speech communication or theatre.

Bachelor of Arts Program Speech Communication

Major Interest Subject	Credits
Required: SPTH 113, 210, 212	9
Electives (A minimum of 18 credits must be taken at the 300-400 level)	24
	33

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Speech and theatre accepts any minor approved by the College of Arts and Science.

Theatre and Interpretation

Major Interest Subject	Credits
Required: SPTH 100*, 118, 119, and 221	12
To be selected from SPTH 203, 403	9
To be selected from SPTH 250, 251, 350, 351, 452, 453, 454, 455	6
To be selected from SPTH 471, 472, 473	6
	33

Additional Required Courses: In addition to credits for the major, students must complete 18-21 credits in a minor. Speech and theatre accepts any minor approved by the College of Arts and Science.

Minor in Speech and Theatre

Students majoring in another field may minor

*SPTH 100 should be taken prior to or concurrently with all other theatre courses.

in speech and theatre by completing one of the following:

<i>Minor Interest Subject (Speech Communication)</i>	<i>Credits</i>
SPTH 210	3
To be selected from 113, 217, 319, 320, 329, 480	6
To be selected from 212, 315, 410, 411, 412, 427, 428, 433, 434 (At least 9 credits must be 300-400 level)	9
18	
<i>Minor Interest Subject (Theatre)</i>	
SPTH 100, 118, 119	9
To be selected from: All upper-division courses in theatre	9
18	

(After completion of the 3 required courses, the student may select an area of specialization: history of the theatre, acting, technical theatre, etc.)

Foreign Language Option for Speech and Theatre

Students majoring in the department may satisfy the college requirement in foreign languages with any of the following options:

For Theatre Majors:

- a. Completion of regular college requirement.
- b. Successful completion of one year of study in each of two foreign languages.

For Speech Communication Majors:

- a. Completion of the regular college requirement.
- b. Successful completion of one year of study in each of two foreign languages.
- c. Successful completion of one year of study in one foreign language, plus 6 credits in a linguistics option, to be selected from ENGL 281, and one course selected from ENGL 311, ENGL 411, or ANTH 305.

Master of Arts Program in Speech Communication

The department offers a graduate program leading to the M.A. degree in speech communication. Two plans are available: A with a thesis, or B without a thesis.

Internships in such areas as advertising, biomedical communication, conference management, organizational administration, and negotiation may be included as part of the candidate's program.

Requirements for admission to graduate standing in speech communication include:

1. An undergraduate GPA of 3.0 (B average, or higher);
2. A 900 (or higher) composite score on verbal and quantitative sections of Graduate Record Examination;
3. At least 18 undergraduate credits in speech communication with grades of B or better (graduate faculty may approve 9 upper-division credits in speech communication and 9 upper-division credits in a related field, all 18 credits B or better).

Applicants must take the Graduate Record Examination (GRE) before applying for admission to graduate-level courses as a "Graduate Special" while awaiting admission to regular standing; up to 9 credits of graduate special courses may apply toward the M.A. degree.

Graduate teaching fellowships are available to qualified applicants. Stipends begin at approximately \$4,700 per year. Applications for graduate fellowships should be received by the director of graduate programs in speech communication by March 1. Applicants must be approved for admission to graduate standing in speech communication to be eligible for a teaching fellowship.

See the Graduate School section for general master of arts degree requirements. For additional information, contact the director of graduate programs in speech communication.

Master of Arts Program in Theatre

The department offers a graduate program leading to the M.A. degree in theatre. Students may design a program emphasizing acting and directing, technical theatre, and/or oral interpretation. Two plans are available: A with a thesis, or B without a thesis. The graduate program in theatre includes opportunities to work with the Nevada Repertory Company.

See the Graduate School section for general master of arts degree requirements. Contact the director of graduate programs in theatre for further information.



College of Business Administration

Richard E. Hughs, *Dean*

Departments of Instruction: accounting and information systems, economics, and managerial sciences.

Accreditation

The baccalaureate and the master of business administration programs of the College of Business Administration are fully accredited by the American Assembly of Collegiate Schools of Business.

Objectives

The College of Business Administration strives to maintain a proper balance between general education and professional preparation for careers in the business world, in government, for research, and for teaching.

The Bureau of Business and Economic Research is the official research unit of the college. It focuses on providing opportunities for faculty and students to engage in research studies of business and economic issues of special concern to Nevada.

The Center for Economic Education carries on research, consulting services, and other programs related to the teaching of economics from preschool through adult levels.

Programs

The College of Business Administration offers the following programs:

Baccalaureate Degrees: (a) bachelor of science in business administration with majors in accounting (including options in information systems), economics, finance (including an area of concentration in real estate or insurance), management, and marketing; (b) bachelor of arts in economics.

Master's Degrees: (a) master of business administration; (b) master of science with majors in accounting, economics, finance management or marketing; and (c) master of arts with a major in economics.

Academic Standards

Students enrolled in the College of Business

Administration either as pre-major or accepted to a major must have their courses reviewed by a faculty adviser before registering. Students placed on college or university probation are not eligible to progress from pre-major to a major program. A student may remain on probationary status in the College of Business Administration for a maximum of two consecutive semesters. After that period, the student must appear before the college's Academic Standards Committee before registering for any additional courses in the college.

Requirements for Acceptance to a Major

1. Completion of 60 credits or more with an overall GPA of 2.0 or better.

2. Completion of the lower division business core with an overall GPA of 2.3 or better. The following courses presently constitute the lower division core: ACC 201, 202; I S 250; EC 101, 102, 261, 262; MATH 265.

These requirements are minimum standards which all students are encouraged to surpass. Success in a major program is dependent upon a student possessing strong quantitative and English usage skills.

Sample Schedule for Premajor Students

<i>Freshman Year</i>		
<i>First Semester</i>		<i>Credits</i>
EC 101 or 102	.....	3
ENGL 101	.....	3
HIST 111 or P SC 103	.....	3
Math or Natural Science	.....	3
Social Science	.....	3
Elective-nonbusiness	.....	1
		16
<i>Second Semester</i>		<i>Credits</i>
EC 101 or 102	.....	3
ENGL 102	.....	3
Philosophy	.....	3
Math or Natural Science	.....	3
Social Science	.....	3
Elective-nonbusiness	.....	1
		16
<i>Sophomore Year</i>		
<i>First Semester</i>		<i>Credits</i>
ACC 201	.....	3
EC 261	.....	3
MATH 265	.....	3
Humanities	.....	3
Social Science	.....	3
Elective-nonbusiness	.....	1
		16

<i>Second Semester</i>	<i>Credits</i>
ACC 202	3
EC 262	3
I S 250	3
Humanities	3
Social Science	3
Elective — nonbusiness	1
	16

Requirements for Graduation in a Major

1. Complete 128 credits or more with an overall GPA of 2.0 or higher.
2. Complete lower division business core with a GPA of 2.3 or higher to be accepted to a major.
3. Complete all College of Business Administration courses with a GPA of 2.3 or higher.
4. Complete all courses in the major field with a GPA of 2.5 or higher.

Baccalaureate Degree Requirements

Bachelor of Arts (See Economics)

Bachelor of Science in Business Administration

Basic Curriculum for All Majors

Upon completion of any one of the following four-year curricula with satisfactory grades and upon the recommendation of the faculty and the dean, the bachelor of science in business administration is granted. An economics major may elect a program leading to the bachelor of arts degree.

A student may elect to graduate under the degree requirements of the year of admission and registration, the year of acceptance to the major in which the student is graduating, the year of reentry to the university if not enrolled for a period of five years or more or the year of graduation. In the case of reentry after an extended leave of absence of more than five years, a student may use the requirements of the years of reentry or graduation only. Students transferring into business administration may elect only the year of transfer, acceptance to a major, or graduation. Adjustments of the individual curricula to fit the needs of individual students may be made with the consent of the adviser and the dean of the college. Courses to be included in the subject matter areas shown in each curriculum (humanities, natural science and mathematics, and social science) are to be selected with the approval of the student's adviser. No changes are considered that bring the curriculum into conflict with any of the

following requirements which must be met by every student:

1. The requirements of the university for admission to regular standing and residence credit as well as general university graduation requirements.
2. A minimum of 128 credits is required for graduation.
3. Of the total 128 credits presented for graduation, each student must successfully complete:
 - a) A maximum of 8 100- and 200-level credits in recreation, physical education and military courses.
 - b) A minimum of 40 credits in courses numbered 300 or above.
 - c) A minimum of 51 credits in nonbusiness which include the following:

	<i>Credits</i>
ENGL 101-102	6
Humanities	9
(including 3 credits in philosophy)	
Natural science and math	9
(including MATH 265 and 3 credits in natural science and excluding MATH 101)	
Social science (excluding economics)	15
(including satisfaction of university requirements for study of the United States and Nevada Constitutions. ¹⁾)	
Other nonbusiness courses	12

d) A minimum of 51 credits in business and economics subjects which include the following courses:

	<i>Credits</i>
ACC 201-Introductory Accounting I and ACC 202-Introductory Accounting II	6
MGRS 325-Legal Environment or MGRS 373 and 374-Business Law I and II	3-6
EC 101-102-Principles of Macroeconomics and Microeconomics	6
EC 261-262-Principles of Statistics I and II	6
EC 300 (or above)-theory course	3
I S 250-Introduction to Business Information Systems	3
MGRS 310-Marketing Principles	3
MGRS 323-Organization and Interpersonal Behavior	3
MGRS 352-Operations Management	3
MGRS 365-Corporation Finance	3
MGRS 488-Policy Formulation and Administration	3
International Business	3
Must be selected from the following:	
ACC 420-International Accounting	
EC 301-Comparative Economic Systems	
EC 458-International Economics	
EC 459-Economic Development	
EC 410-Multinational Corporations. (Course content varies and does not always satisfy the international business requirement. Check with Economics Department for details.)	
MGRS 420-International Finance	
MGRS 452-Comparative Management	
MGRS 470-International Marketing	
Other College of Business Administration courses to an overall total of	51

e) Completion of course requirements for the selected major.

¹Both constitution requirements may be satisfied by HIST 111 or P SC 103. United States Constitution by P SC 409, HIST 101, 401, 402. Nevada Constitution by P SC 208, 408; HIST 102, 217.

Lower Division Courses Which Satisfy Requirements

The courses open to freshmen which may be used to fulfill the foregoing requirements in natural sciences, social sciences, and humanities are listed below.

Group I, Natural Sciences and Mathematics: ANTH 102; biology, all 100- and 200-level courses; chemistry, all 100- and 200-level courses except 291; ENV 101; GEOG 103, 212; GEOI 101, 102, 105, 160; mathematics, all 100- and 200-level courses except 101, 173, and 174; METE 151; physics, all 100- and 200-level courses except 103 and 104.

Group II, Social Sciences: Anthropology, all 100- and 200-level courses except 102; C J 110, 120, 220; EC 109, 200; GEOG 106, 109, 292; HIST 101, 102, 111, 217; JOUR 101, 102; political science, all 100- and 200-level courses; psychology, all 100- and 200-level courses except 210; social and health resources, all 100- and 200-level courses; sociology, all 100- and 200-level courses except 210; SPTH 210.

Group III, Humanities: ART 115, 116, 117, 140, 210, 212, 214, 215, 218, 256, 257; English, all 100- and 200-level courses except 101, 102, 105, 111, 112, 181; foreign languages and literatures, all 100- and 200-level courses; HIST 105, 106; MUS 121, 201, 202; philosophy, all 100- and 200-level courses; B V 264; SPTH 100, 217, 221.

Upper-Division Courses Which Satisfy Requirements

Courses requiring a prerequisite or sophomore or upper-division standing which may be used to fulfill requirements in natural sciences, social sciences, and humanities include:

Group I, Natural Sciences and Mathematics: ANTH 335, 430, 435; biochemistry, all 300-level courses; biology, all 300- and 400-level courses; chemistry, all 300- and 400-level courses; GEOG 322, 335, 423; geology, all 300- and 400-level courses; mathematics, all 300- and 400-level courses; physics, all 300- and 400-level courses.

Group II, Social Sciences: Anthropology, all 300- and 400-level courses except 310, 311, 322, 335, 339, 342, 411, 415, 416, 423, 425, 430, 435, 455; geography, all 300- and 400-level courses except 322, 325, 331, 334, 335, 338, 341, 420, 423, 431, 432, 462; history, all 300- and 400-level courses except 317, 318, 328, 371, 372, 373, 384, 385, 403, 404, 427; JOUR 372, 479; MINE 454, 472; political science, all 300- and 400-level courses; psychology, all 300- and 400-level courses; social and health resources, all 300- and 400-level courses; SPTH 315, 410, 411, 412, 427, 428, 433, 434.

Group III, Humanities: ANTH 310, 311, 322, 339, 342, 388, 411, 415, 416, 423, 425, 455; ART 309, 314, 315, 316, 319, 355, 357, 381, 416, 417, 418, 419; ENGL, all 300- and 400-level courses except 305, 306, 321, 405, 406, 438; foreign languages and literatures, all 300- and 400-level courses; Basque, all 300- and 400-level courses; French, all 300- and 400-level courses; German, all 300- and 400-level courses; RUSS 357, 358; Spanish, all 300- and 400-level courses; HIST 317, 318, 328, 371, 372, 373, 384, 385, 403, 404, 427; MUS 350, 407, 408, 414, 422, 423, 424, 426, 428, 495; philosophy, all 300- and 400-level courses; SPTH 317, 319, 320, 321, 401, 430, 471, 472, 473, 480, 490, 495, 496.

Upper-Division Courses

Courses numbered 300 or above in business are open only to:

- 1) business students who have been accepted to a major;
- 2) nonbusiness majors with the approval of the instructor and department chairman; and
- 3) others with the approval of the chairman and the dean.

Satisfactory/Unsatisfactory Courses

Students in the College of Business Administration may apply a maximum of 15 S/U credits, including CLEP, (physical education and military science excluded) toward the baccalaureate degree. Premajor or major students may not register for courses in business administration or MATH 265 or 215 on an S/U basis, except for thesis or internship.

ACCOUNTING AND INFORMATION SYSTEMS (ACC, I S)

Faculty: Chism, Cuttler, Foroughi, Fuller, Greenlees, Hoyt, Hughs, Moscovice (Ch.), Neidert, Simkin, Strefeler, Zane.

The department offers the disciplines of accounting and information systems. The student in this department majors in accounting and may choose options which incorporate information systems. These options are outlined in detail below. Upon choosing an option, the student must meet course requirements established by the department, the college and the university.

Accounting and Information Systems

Accounting, by its nature, operates within a broad socio-economic environment. Therefore, great emphasis is placed upon conceptual knowledge; that is, the student must not only know, but understand.

The accounting major is provided with the theories and procedures which prepare the student for the many facets of the accounting profession, such as public, industrial, managerial, tax, and governmental accounting. Additionally, programs are provided in the field of information systems (including data processing) in order that the student may become prepared in the expanding area.

Freshman Year

	<i>Credits</i>
ENGL 101-Composition I & II	6
MATH 265-Elements of Calculus I	3
EC 101-102-Principles of Macroeconomics and Micro-economics	6
Mathematics or natural science	3
Philosophy	3
Humanities	3
Social Sciences	6
P SC 103 or HIST 111	3

33

*See college core requirement.

Sophomore Year

	<i>Credits</i>
ACC 201-Introductory Accounting I	3
ACC 202-Introductory Accounting II	3
I S 250-Introduction to Business Information Systems	3
EC 261-262-Principles of Statistics	6
Humanities	3
Social Science	6
Mathematics or natural science	3
Electives-nonbusiness	6
<hr/>	
	33

Accounting Option

Junior Year

	<i>Credits</i>
ACC 303-304-Intermediate Accounting	6
ACC 309-Management Accounting I	3
ACC 313-Federal Tax Accounting I	3
MGRS 373-374-Business Law I and II	6
MGRS 323-Organization and Interpersonal Behavior	3
MGRS 365-Corporation Finance	3
EC 300 (or above)-theory course	3
Electives-nonbusiness	3
International Business	3
<hr/>	
	33

Senior Year

	<i>Credits</i>
ACC 405-Advanced Accounting	3
ACC 411-Auditing I	3
I S 480-Accounting Systems and Automation	3
MGRS 352-Operations Management	3
MGRS 310-Marketing Principles	3
MGRS 488-Policy Formulation and Administration	3
O A 404-Business Communications	3
Electives-nonbusiness	4
Electives-any area	4
<hr/>	
	29

Accounting and Information Systems Option

Junior Year

	<i>Credits</i>
ACC 303-304-Intermediate Accounting	6
ACC 309-Management Accounting	3
I S 251-COBOL	3
International Business	3
MGRS 310-Marketing Principles	3
MGRS 323-Organization and Interpersonal Behavior	3
MGRS 373-374-Business Law I and II	6
EC 300 (or above)-theory course	3
Elective-nonbusiness	3
<hr/>	
	33

Senior Year

	<i>Credits</i>
ACC 313-Federal Tax Accounting I	3
ACC 405-Advanced Accounting	3
ACC 411-Auditing I	3
I S 450-Computer Operating Systems	3
I S 451-Advanced Computer Problems	3
I S 480-Accounting Systems and Automation	3
MGRS 365-Corporation Finance	3
O A 404-Business Communication	3
MGRS 488-Policy Formulation and Administration	3
MGRS 352-Operations Management	3
Electives-nonbusiness	3
<hr/>	
	33

Information Systems Option

Freshman Year

	<i>Credits</i>
ENGL 101-Composition I ¹	3
ENGL 102-Composition II ¹	3
MATH 265-Elements of Calculus I	3
EC 101-102-Principles of Macroeconomics and Micro-	
economics	6
Philosophy	3
Humanities	3
Social Science	3
P SC 103 or HIST 111 ¹	3
Mathematics or science	3
Other nonbusiness core requirements	2
<hr/>	
	32

Sophomore Year

	<i>Credits</i>
ACC 201-Introductory Accounting I	3
ACC 202-Introductory Accounting II	3
I S 250-Introduction to Business Information Systems	3
I S 251-COBOL	3
EC 261-262-Principles of Statistics	6
Humanities	3
Social Science	9
Mathematics or science	3
<hr/>	
	33

Junior Year

	<i>Credits</i>
Accounting elective	3
International Business	3
I S 352-Computer Applications	3
I S 451-Advanced Computer Problems	3
Electives-any area	2
Electives-nonbusiness	5
MGRS 310-Marketing Principles	3
MGRS 323-Organizations and Interpersonal Behavior	3
MGRS 352-Operations Management	3
EC 300 (or above)-theory course	3
<hr/>	
	31

Senior Year

	<i>Credits</i>
I S 450-Computer Operating Systems	3
I S 480-Accounting Systems and Automation	3
I S 488-Seminar in Information Systems	3
MGRS 365-Corporation Finance	3
O A 404-Business Communications	3
MGRS 488-Policy Formulation and Administration	3
Electives-nonbusiness	5
MGRS 373-374-Business Law I and II	6
Electives-any area	3
<hr/>	
	32

Minor in Accounting

	<i>Credits</i>
ACC 201-Introductory I	3
ACC 202-Introductory II	3
I S 250-Introduction to Business Information Systems	3
Plus upper division courses in accounting and/or infor-	
mation systems	9
<hr/>	
	18

¹See college core requirement.

ECONOMICS (EC)

Faculty: Atkinson, Cargill, Chu, Dahl, Dobra, Badington, Houwink (Ch.), Kimzey, Larsen, Reed, Rosen, Walker, Wilson

The economics major is designed to prepare students for positions as economic and statistical analysts in business, government and non-profit organizations, and for the teaching profession. In addition, it provides a strong foundation for graduate study and research in the fields of economics, business, public policy and law.

There are two economics degree programs offered. One leads to the bachelor of science in business administration and complies with all the requirements of the American Assembly of Collegiate Schools of Business, as administered through the College of Business. The other program leads to the bachelor of arts with a major in economics and follows the traditional liberal arts approach.

The department also offers a minor or related area program in economics (see Minor or Related Area).

Bachelor of Science

This program is intended for economics majors desiring a curriculum which includes a foundation in the functional areas of business administration. Candidates for this degree are not required to present credits in a foreign language.

<i>Freshman Year</i>		<i>Credits</i>
ENGL 102-Composition II ¹		3
P SC 103-Principles of American Constitutional Govern- ment ¹		3
MATH 265-Calculus for the Social and Biological Sciences ..		3
EC 101-102-Principles of Macroeconomics and Micro- economics		6
Philosophy		3
Social Science		6
Electives		3
Nonbusiness electives		3
		30

<i>Sophomore Year</i>		<i>Credits</i>
ACC 201-Introductory Accounting I		3
ACC 202-Introductory Accounting II		3
I S 250-Introduction to Business Information Systems		3
EC 261-262-Principles of Statistics		6
Humanities		3
Mathematics or natural science		3
Electives		9
		30

<i>Junior Year</i>		<i>Credits</i>
MGRS 325-Legal Environment		3
MGRS 323-Organization and Interpersonal Behavior		3
MGRS 352-Operations Management		3

MGRS 365-Corporation Finance	3
MGRS 310-Marketing Principles	3
EC 303-Money and Banking	3
EC 321-Price Theory	3
EC 322-Income Theory	3
Natural science	3
Social science	3
International business	3
Electives	1
	34

<i>Senior Year</i>		<i>Credits</i>
Humanities		3
Social science		3
Other economic courses (300 or above)		12
MGRS 488-Policy Formulation and Administration		3
Nonbusiness electives		12
Electives		1
		34

Bachelor of Arts

This program is intended for economics majors desiring a curriculum which emphasizes a foundation in the social sciences. Candidates for this degree are required to successfully complete a fourth semester college course in a foreign language or evidence of equivalent proficiency. They are also required to complete a minimum of 38 credits in economics courses.

<i>Freshman Year</i>		<i>Credits</i>
P SC 103-Principles of American Constitutional Govern- ment ¹		3
Foreign language ²		8
ENGL 102-Composition II ¹		3
MATH 265-Calculus for the Social and Biological Sciences ..		3
EC 101-102-Principles of Macroeconomics and Micro- economics		6
Social science		3
Electives		4
		30

<i>Sophomore Year</i>		<i>Credits</i>
Foreign language ²		6
Mathematics or natural science		3
PHIL 110-Introduction to Philosophy		3
SOC 101-Principles of Sociology		3
EC 261-262-Principles of Statistics		6
Electives		9
		30

<i>Junior Year</i>		<i>Credits</i>
PSY 101-General Psychology		3
EC 303-Money and Banking		3
EC 321-322-Intermediate Economic Theory		6
Social science		3
Natural science laboratory course		4
Humanities		3
Electives		12
		34

¹University requirement. (ACT scores may also require a student to take ENGL 101 as a prerequisite for ENGL 102.)

²Students may meet the foreign language requirement by completing course 204 or 209 in any language.

<i>Senior Year</i>	<i>Credits</i>
Humanities	4
Economic history	3
EC 481-History of Economic Doctrines	3
EC 431-Introduction to Mathematical Economics	3
Other economics courses (300 or above)	8
Electives	13
34	

Minor or Related Area

The minor or related area program in economics is designed for those who do not want to major in economics, but would like a background in economics to complement their own major programs.

EC 101-102-Principles of Macroeconomics and Micro-economics	6
EC 321-Intermediate Price Theory	3
EC 322-Intermediate Income Theory	3
Other economics courses	6
(300 or above)	
18	

MANAGERIAL SCIENCES (MGRS)

Faculty: Ansari, Barone, Cotter (Ch.), Ettman, Evans, Ghymn, Grant (Adj.), Haig, Heflin, Hughs, Kaye, Sekiguchi, Severance, G. White, S. White, Winne

The Managerial Sciences Department offers major fields of study in finance (including options in insurance and real estate), management and marketing. The department also offers courses in business law.

The following program outline is suggested for freshmen and sophomores planning to major in finance, management, or marketing:

<i>Freshman Year</i>	<i>Credits</i>
EC 101-102-Principles of Macroeconomics and Micro-economics	6
ENGL 101-102-Composition I and II ¹	6
HIST 111 or P SC 103-Survey of American Constitutional History ² or Principles of American Constitutional Government ²	3
Philosophy	3
Mathematics or natural science	6
Social science	6
Elective—nonbusiness	2
32	

¹University requirement. (ACT scores may also require a student to take English 101 as a prerequisite for ENGL 102.)

²Both requirements may be satisfied by HIST 111 or P SC 103; United States Constitution requirement by P SC 409, HIST 101, 401, 402; Nevada Constitution by P SC 208, HIST 102, 217.

<i>Sophomore Year</i>	<i>Credits</i>
ACC 201-202-Introductory Accounting I and II	6
EC 261-262-Principles of Statistics I and II	6
IS 250-Introduction to Business Information Systems	3
MATH 265-Elements of Calculus I	3
Humanities	6
Social science	6
Elective-nonbusiness	2
32	

Finance Major

Finance majors may concentrate in financial management, banking, insurance, or real estate with appropriate course selection. Course requirements for the finance major include:

1. Satisfaction of the basic curriculum requirements for all business administration majors. As part of those requirements, finance majors should complete:

MGRS 373-374-Business Law I and II	6
MGRS 420-International Finance	3
EC 303-Money and Banking	3

2. Nine credits required for all finance majors:

MGRS 370-Investments	3
MGRS 404-Problems in Business Finance	3
MGRS 462-Business and Society	3

3. Twelve credits chosen from the following list. Course selection should be related to the student's area of concentration and requires the written approval of the adviser and department chairperson.

MGRS 270-Principles of Real Estate	3
MGRS 353-Risk and Insurance	3
MGRS 378-Real Estate Law	3
MGRS 401-Life Insurance	3
MGRS 402-Property Liability Insurance	3
MGRS 403-Risk Management Seminar	3
MGRS 415-Commercial Bank Management	3
MGRS 430-Real Estate Evaluation	3
MGRS 481*-Intercollegiate Business Games	3
MGRS 482*-Internship	3
MGRS 490*-Independent Study	3
MGRS 493-Advanced Seminar in Finance	3
B A 480*-Small Business Institute	3
EC 403-Monetary Institutions and Policy	3
EC 451-Public Finance	3
ACC 309-Management Accounting I	3

The following program outline is suggested for finance majors during their junior and senior years:

<i>Junior Year</i>	<i>Credits</i>
MGRS 310-Marketing Principles	3
MGRS 323-Organization and Interpersonal Behavior	3
MGRS 352-Operations Management	3
MGRS 365-Corporation Finance	3
MGRS 370-Investments	3
MGRS 373-374-Business Law I and II	6
EC 303-Money and Banking	3

*A maximum of 3 credit hours may be applied to major requirements from courses marked with an asterisk.

Electives-nonbusiness	5
Electives-business or nonbusiness	3
	32

Senior Year

	<i>Credits</i>
MGRS 404-Problems in Business Finance	3
MGRS 420-International Finance	3
MGRS 462-Business and Society	3
MGRS 488-Policy Formulation and Administration	3
Finance courses (with written approval)	12
Electives-nonbusiness	3
Electives-business or nonbusiness	5
	32

Management Major

Students with career objectives in general management, institutional management, personnel and industrial relations, or public administration may choose a management major. The course requirements for the management major include:

1. Satisfaction of the basic curriculum requirements for all business administration majors. As part of the college requirements in business and economics subjects, management majors should complete:

MGRS 452-Comparative Management	3
EC 365-Labor Economics	3

2. Twelve credits required for all management majors:

MGRS 362-Production Management	3
MGRS 460-Management: Theory and Practice	3
MGRS 462-Business and Society	3
MGRS 491-Advanced Seminar in Management	3

3. Nine credits chosen from the following list. Course selection requires the written approval of the adviser and department chairperson.

MGRS 367-Personnel Administration	3
MGRS 404-Problems of Business Finance	3
MGRS 415-Commercial Bank Management	3
MGRS 453-Organizational Change and Development	3
MGRS 461-Advanced Operations Management	3
MGRS 471-Marketing Research	3
MGRS 481*-Intercollegiate Business Games	3
MGRS 482*-Internship	3
MGRS 489-Marketing Management	3
MGRS 490*-Independent Study	3
B A 480*-Small Business Institute	3
PSY 362-Social Psychology II: Group Structure and Process	3
PSY 480-Motivation	3
SOC 391-Bureaucracy and Large Scale Organizations	3

The following course outline is suggested for management majors during their junior and senior years:

Junior Year

	<i>Credits</i>
MGRS 310-Marketing Principles	3
MGRS 323-Organization and Interpersonal Behavior	3

MGRS 325-Legal Environment	3
MGRS 352-Operations Management	3
MGRS 362-Production Management	3
MGRS 365-Corporation Finance	3
EC 365-Labor Economics	3
Electives-nonbusiness	5
Electives-business or nonbusiness	6
	32

Senior Year

	<i>Credits</i>
MGRS 452-Comparative Management	3
MGRS 460-Management: Theory and Practice	3
MGRS 462-Business and Society	3
MGRS 491-Advanced Seminar in Management	3
MGRS 488-Policy Formulation and Administration	3
Management courses (with written approval)	9
Electives-nonbusiness	3
Electives-business or nonbusiness	5
	32

Marketing Major

Marketing embraces those economic activities directed toward and incident to the flow of goods from the producer to the consumer or user. The marketing major may be appropriate for students with career objectives in advertising management, consumer behavior, general marketing, international marketing, marketing research, quantitative marketing, and retailing and distribution. The course requirements for marketing major include:

1. Satisfaction of the basic curriculum requirements for all business students. As part of those requirements, marketing majors should complete:

EC 321-Intermediate Price Theory	3
MGRS 470-International Marketing	3

2. Twelve credits required for all marketing majors:

MGRS 312-Consumer Behavior	3
MGRS 462-Business and Society	3
MGRS 471-Marketing Research	3
MGRS 489-Marketing Management	3

3. Nine credits chosen from the following list. Course selection requires the written approval of the adviser and department chairperson.

MGRS 314-Marketing Structure and Channels	3
MGRS 351-Transportation	3
MGRS 422-Promotion Management	3
MGRS 455-Business Logistics	3
MGRS 481*-Intercollegiate Business Games	3
MGRS 482*-Internship	3
MGRS 490*-Independent Study	3
MGRS 492-Advanced Seminar in Marketing	3
B A 480*-Small Business Institute	3
PSY 362-Social Psychology II: Group Structure and Process	3
JOUR 356-Principles of Advertising	3

*A maximum of 3 credit hours may be applied to major requirements from courses marked with an asterisk.

The following course outline is suggested for marketing majors during their junior and senior years:

Junior Year		Credits
MGRS 310-Marketing Principles		3
MGRS 312-Consumer Behavior		3
MGRS 323-Organization and Interpersonal Behavior		3
MGRS 325-Legal Environment		3
MGRS 352-Operations Management		3
MGRS 365-Corporation Finance		3
EC 321-Intermediate Price Theory		3
Electives-nonbusiness		5
Electives-business or nonbusiness		6
		32
Senior Year		Credits
MGRS 462-Business and Society		3
MGRS 470-International Marketing		3
MGRS 471-Marketing Research		3
MGRS 488-Policy Formulation and Administration		3
MGRS 489-Marketing Management		3
Marketing courses (with written approval)		9
Electives-nonbusiness		3
Electives-business or nonbusiness		5
		32

Graduate Programs

The College of Business Administration offers the following advanced degrees:

1. Master of business administration.
2. Master of science with majors in accounting, economics, finance, management or marketing.
3. Master of arts with a major in economics.

All master of science and master of arts degrees require the successful completion and defense of a thesis (Plan A). A nonthesis option (designated Plan B) is available to candidates for the master of business administration degree.

Admission to Graduate Standing: The graduate standing classification is for those students who wish to pursue a program leading to an advanced degree. Admission to graduate standing permits a student to plan a degree program, to request the formation of an advisory committee, and to select a major adviser or thesis director. Meeting the requirements for admission to graduate standing is a prerequisite for enrollment in business administration courses for graduate credit. In addition to meeting the requirements of the Graduate School, the following are the minimum standards normally required for admission to graduate standing in the College of Business Administration.

For master's degrees in business administration:

A baccalaureate degree from an accredited institution with a satisfactory combination of undergraduate grade-point average and scores on

the Graduate Management Admission Test (GMAT). GMAT scores must be submitted prior to admission.

For master's degrees in economics:

1. A baccalaureate degree from an accredited institution with an overall grade-point average of at least 2.5 on a scale of 4.0.

2. A satisfactory score on the GMAT or Graduate Record Examination (Aptitude and Advanced Economics tests), submitted prior to admission.

3. Previous completion of at least 18 semester credits of undergraduate course work in economics. Undergraduate prerequisites may be completed while enrolled at the university, as a graduate special student (see below).

The GMAT and the Graduate Record Examination are administered at many locations by the Educational Testing Service. Information and application forms may be obtained by writing directly to Educational Testing Service, Box 966, Princeton, NJ 08540.

Admission to Graduate Special: The graduate special classification is for students who do not wish to pursue a program leading to an advanced degree; those who wish to pursue a program leading to an advanced degree, but need to complete additional undergraduate course work in order to meet the admission requirements for graduate standing; and those who can demonstrate that they meet the requirements for admission to graduate standing but are unable to complete the application for admission prior to registration.

The academic requirement for admission is the filing of official transcripts showing that the applicant has a baccalaureate degree from a fully accredited four-year college or university. With graduate special status a student may enroll for undergraduate credit in the College of Business Administration. Special approval from the director of graduate programs is required to permit graduate special students to enroll in courses for graduate credit. Such approval normally is given only when the student can demonstrate that the requirements for admission to graduate standing are satisfied.

Course Requirements: The course requirements for master's degrees are:

Prerequisites, required by master of business administration and master of science programs, may be completed after admission. Equivalent courses taken at other schools may satisfy prerequisite requirements.

EC 261, 262-Principles of Statistics I and II
MATH 265-Elements of Calculus I

First-year Business Administration Core, required for all graduate business programs, but may be waived for students with appropriate undergraduate preparation. Waivers of specific courses may only be accomplished by examinations administered prior to initial registration.

	<i>Credits</i>
ACC 715-Accounting Concepts and Analysis	3
IS 716-Management and the Computer	3
MGRS 714-Legal Environment of Business	3
MGRS 715-Business Finance	3
MGRS 716-Advanced Management	3
MGRS 717-Marketing Analysis and Strategies	3
MGRS 758-Business Policy*	3

21

Minor Fields: For a minor in business administration a student should complete at least three of the second-year M.B.A. core courses (described below) as well as any preparatory courses which may be necessary as prerequisites. For a minor in accounting, finance, management, or marketing at least 6 credits of graduate work beyond the first-year core, including the second-year core courses in that area, are required.

Probation. Graduate students in the College of Business Administration who do not maintain an overall grade-point average of at least 3.0 in all graduate courses are considered to be on probation. Those on probation are discouraged from further enrollment if they fail to raise their overall grade-point average to at least 3.0 by the end of the first probationary semester.

Master of Business Administration

The master of business administration degree program requires a major in business administration. A minor field or a field of specialization may be chosen from the disciplines of accounting, economics, finance, management, or marketing, or from another department of the university. At least 15 semester credits are required in graduate courses outside of the minor field or field of specialization. Minimum requirements are as follows:

Plan A (Thesis Option)

1. Completion of prerequisites and the first-year business administration core, except for courses which have been waived by examination.
2. Completion of the entire second-year M.B.A. core (15 credits):

	<i>Credits</i>
ACC 701-Accounting for Management Analysis	3
EC 708-Public Policy and Business Performance	3
MGRS 732-Financial Management	3
MGRS 742-Advanced Marketing Seminar	3
MGRS 752-Seminar in General Management	3

15

3. Nine additional graduate credits including at least 3 credits in 700-level courses.

4. Completion of a thesis in business administration (6 credits).

Major Programs: At least 18 graduate credits beyond the first-year core must be in business administration.

Major-Minor Programs: At least 15 graduate credits beyond the first-year core must be in business administration with at least 6 credits in a minor field. Requirements for a minor field are subject to approval by the minor department.

Plan B (Nonthesis Option)

1. Completion of prerequisites and the first-year business administration core, except for courses which may be waived.

2. Completion of the entire second-year M.B.A. core (15 credits).

3. MGRS 741-Seminar in Research Methodology.

4. Fifteen additional graduate credits including at least 6 credits in 700-level courses.

Major Programs: At least 23 graduate credits beyond the first-year core must be in business administration.

Major-Minor Programs: At least 21 credits beyond the first-year core must be in business administration, with at least 8 credits in a minor field. Requirements for a minor field are subject to approval by the minor department.

Comprehensive Examination: A written comprehensive examination is required. The examination covers the second-year M.B.A. core and the minor field, where applicable.

Students who have not completed the prerequisites and first-year core should select their courses from the following:

<i>Fall Semester</i>	<i>Spring Semester</i>
EC 101	EC 102
EC 261	EC 262
MATH 265	MGRS 714
ACC 715	MGRS 715
IS 716	MGRS 717
MGRS 716	

Master of Science

The master of science degree requires a major in accounting, finance, management, or marketing. A thesis is required. A minor field may be chosen from a second business administra-

*Normally taken after completion of other core courses. If the business policy requirement of the first-year core is waived, MGRS 758 must be substituted for an elective in Plan B master of business administration programs, and may be substituted in Plan A programs.

tion discipline or another department of the university. Requirements for the minor field are subject to the approval of the minor department. Minimum requirements are as follows:

1. Completion of prerequisites and the first-year business administration core, except for courses which may be waived.
2. Completion of a major in accounting, economics, finance, management, or marketing (at least 12 credits).
3. Completion of a minor (at least 6 credits).
4. Completion of a thesis in the major field (6 credits).

At least 30 graduate credits must be completed beyond the first-year core. At least 15 of the graduate credits beyond the first-year core (excluding the thesis) must be in 700-level courses.

The department also participates in the interdisciplinary master of science degree with a major in land use planning policy in cooperation with several other departments. For further information refer to the Interdisciplinary and Special Programs section of this catalog.

Master of Arts

Specific course requirements for degrees in economics are recommended by the student's advisory committee. Each student's program must bear the approval of the dean of the College of Business Administration and the dean of the Graduate School. Course requirements may exceed, but must not be less than, the minimum requirements outlined in the Graduate School section of the university catalog. At least 24 credits of graduate-level courses and 6 credits of research for the thesis must be completed beyond the bachelor's degree. At least 15 credits of graduate courses (excluding the thesis) must be in 700-level courses.

Distinguished Lecture Program

"The College of Business Administration

Distinguished Lecture Series" is sponsored by Harrah's in cooperation with the University of Nevada Reno and the College of Business Administration. This program brings national and international figures in business and economics to the campus.

Public Service

Advisory Board

There is an advisory board to the College of Business Administration, appointed by the board of regents. This board addresses itself to program issues, student needs, faculty recruiting, and community needs and interests. The following members served during the 1980-81 academic year: George Aker, President, Nevada National Bank; Wayne Condon, President, Heritage Bank of Nevada; Joseph N. Crowley, President, University of Nevada Reno; George Drews, President, International Game Technology, Inc.; Tom G. Edwards, Retired Vice President & General Manager, Nevada Bell; Richard Geoglein, President, Harrah's, Inc.; Joe L. Gremban, Chairman & President, Sierra Pacific Power Company; Alan Grant, Chairman, International Rotex, Inc.; E.T. Hermann, President, Pacific Freeport Warehouse Company; William Kottinger, Vice President, Paine, Webber, Jackson & Curtis; Luther Mack, Proprietor, McDonald's; Donald E. McGhie, Partner, Kafoury-Armstrong & Company; William C. McGovern, Manager, J.C. Penney Company Distribution Center; Andrew Pearl, White & Pearl, Ltd.; Neil Plath, Retired Chairman, Sierra Pacific Power Company; John F. Rhodes, Partner, Alexander Grant & Company; John Tom Ross, Member, Board of Regents; William Siart, President & Chief Operating Officer, First Interstate Bank of Nevada; David J. Thompson, President, Thompson & Company; Thomas C. Wilson, President, Thomas C. Wilson Advertising.



College of Education

Edmund J. Cain, *Dean*

Departments of Instruction: counseling and guidance personnel services, curriculum and instruction, educational administration and higher education, and educational foundations and media.

The main goal of the College of Education is to prepare professional personnel to function effectively as teachers and administrators in the challenging and demanding field of education.

A second major goal of the college is to stimulate in the educational profession and the public a deeper interest in the promotion of good teaching practices and sound educational policies.

A third major goal is to contribute directly to the redefinition of educational goals and policies through research and development.

Support for maintaining these objectives is provided through the college departments of instruction, the Learning and Resource Center, the Reading Center, Simulation-Demonstration Facility, Early Learning Center (1-3), the Special Education Classrooms, and the Research and Educational Planning Center.

Degrees Offered

Four-year curricula, leading to the baccalaureate degree, are offered in both elementary and secondary teaching fields and include courses in the other colleges on the campus. The college also offers specific courses for teachers and other school personnel and master's and doctoral degrees are granted with majors or minors in the following basic areas: counseling and guidance personnel services, curriculum and instruction (elementary, secondary, and special education), educational administration and higher education, and educational foundations and media. Specialization may be attained in library education, reading, and early childhood education.

Accreditation

The College of Education is fully accredited by the Northwest Association of Secondary and Higher Schools and Colleges for all teacher education, undergraduate, graduate curricula. It is also fully accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary and secondary teachers

and school service personnel, with the master's degree as the highest degree approved.

Certification

By law all certificates in Nevada are granted by the Nevada State Board of Education. Students in the College of Education enrolled in approved curricula leading to a degree are at the same time meeting the specific requirements of the state board for certification.

General Requirements

Candidates for the baccalaureate degree in the College of Education must satisfy these requirements:

1. Be admitted to regular standing.
 2. Earn 128 credits or more in required and elective courses.
 3. Complete at least 40 credits in courses numbered 300 or above.
 4. Pass a language proficiency examination before enrolling as a junior in the college. Sophomores are provided an opportunity each semester to take this examination.
 5. Earn at least a 2.3 GPA in the major teaching field.
 6. All general university requirements, i.e., GPA, resident credit, and United States and Nevada Constitutions.
 7. Meet requirement for instruction in Nevada school law. This requirement usually is met through EDFM 101. For transfer students who have had a course in educational foundations, this requirement may be met through an EDFM special problems course.
- A maximum of 30 semester credits may be earned with S/U grades subject to the approval of the assigned education adviser.

General Academic Education Required Courses for Elementary Teaching Curricula

(Kindergarten-Primary, Intermediate, Upper Grades)

<i>Communication Skills</i>	
ENGL 101, 102	6

*Minimum
Credits*
15

SPTH 113	3	
ENGL 321	3	
Art, music, other English, or philosophy	3	
<i>Social Science</i> (preferably distributed as follows)	20-26	
U.S. and Nevada Constitutions requirements	3-6	
European or world history or political science	6	
History (American)	6	
Geography, sociology, economics, anthropology	5-8	
<i>Science and Mathematics</i>	15-18	
Biological science	4-6	
Physical science	5-6	
Mathematics (general)	6	
<i>Psychology</i> (general)	3	
<i>Area of Concentration</i>	16	

Student must complete a minimum of 16 credits in an approved field of concentration.

Courses required in general academic areas do not count in this requirement.

General Academic Education Required Courses for Special Education Teaching Curricula

<i>Humanities</i>	14	
ENGL 101	3	
ENGL 102	3	
ENGL 321	3	
SPTH 221	3	
Electives from list below	2-3	
ART 342		
MUS 324		
SPTH 113		
<i>Math/Science</i>	13	
Laboratory Science	4	
Science Elective	3	
(May include H EC 121-Human Nutrition)		
Math Elective	6	
<i>Social/Behavioral Sciences</i>	15	
History/Political Science	6	
PSY 101-General Psychology	3	
EC 101-Principles of Microeconomics or		
C I 448-Curriculum Development in Economics		
Education	3	
C I 270-Human Growth and Development or		
PSY 233-Child Psychology or		
H EC 131-Child Development: Prenatal		
to Six	3	
<i>Professional Education</i>	15	
EDEFM 101-Educational Experience	3	
CAPS 400-Introduction to Counseling and		
Guidance or		
CAPS 401-Introduction to Elementary Educa-		
tion Guidance	3	
C I 300-Teaching of Reading in the Elementary		
School	3	
C I 423-Teaching of Language Arts or		
C I 405-Practicum in the Reading Clinic	3	
C I 420-Multicultural Education	3	
<i>Area of Concentration</i>	15	

Student must complete a minimum of 15 credits in an approved field of concentration.

General Academic Education Required Courses for Secondary Teaching Curricula

The principal purpose of the general education requirement, basic to all teacher education cur-

ricula, is to provide for the subject matter course experiences necessary for effective citizenship, a satisfactory personal life, and a general culture background, regardless of the vocation or professional specialization of the individual student.

Course work should be distributed in at least four or five broad subject matter areas, inclusive of the major teaching field. A detailed outline of general education requirements should be obtained from the Division of Curriculum and Instruction.

Approximately 50 credits in general academic education courses are recommended as follows:

		<i>Minimum Credits</i>
<i>Communication Skills and Humanities</i>		15
ENGL 101, 102	6	
SPTH 113	3	
ENGL 321	3	
Art, music, philosophy, or English	3	
<i>Social Science</i>		9
Requirement for U.S. and Nevada Constitu-		
tions must be met. Remainder of credits may		
be selected from history, political science,		
economics, sociology, geography (cultural),		
and anthropology (cultural)		
<i>PSY 101</i> (general)		3
<i>For Bachelor of Arts Degree in Education</i>		
Foreign languages (see arts and science re-		
quirements)	12	
Biological and physical science	6	
<i>For Bachelor of Science Degree in Education</i>		
Biological and physical sciences	10	
Foreign language or cultural requirement.		
(An approved option)		<i>See adviser</i>

Secondary Teaching Field

Students who wish to prepare to teach in junior and senior high schools must complete one major and at least one minor teaching field. Two teaching minors are recommended, especially for students planning to teach in the junior high school.

Students must select major and minor teaching fields from the list below. In general, it is expected that students will make a choice in the sophomore year, although this decision may be made at the beginning of the freshman year. Each student is assigned an adviser for the major field and the minor field. Outlines of the departmental and interdepartmental curricula requirements are available for major and minor teaching fields given below.

Secondary Education

(Grades 7-12)

Major Teaching Fields

An outline of specific requirements should be

obtained from the Division of Curriculum and Instruction.

Agriculture (vocational)*	Home Economics (vocational)**
Art	Industrial Education
Biological Sciences	Journalism
Business Education	Mathematics
Chemistry	Music
Earth Sciences	Physical Education
English	Physical Sciences
French	Physics
General Science	Political Science
German	Social Studies
Health Education	Spanish
History	Speech and Theatre

(The student should secure adviser's approval before beginning a major.)

Minor Teaching and Supporting Fields

An outline of specific requirements should be obtained from the Division of Curriculum and Instruction.

Agriculture	Italian
Anthropology	Journalism
Art	Latin
Biological Sciences	Mathematics
Business Education	Music
Chemistry	Physical Education
Earth Sciences	Physical Sciences
Economics	Physics
English	Psychology
French	Political Science
General Science	Recreation
Geography	Russian
German	Social Studies
Health Education	Sociology
History	Spanish
Home Economics	Speech and Theatre
Industrial Education	

Professional Education Foundation Areas and Courses

The foundations for teaching provide the framework for the professional education requirements for supervised teaching, certification, and graduation. Enrollment in all foundations for teaching courses must be made with approval of the department chairman. Each student must be accepted for admission to a teacher curriculum before permission to enroll in professional education courses, except for EDFM 101, is granted. Satisfactory completion of the basic requirements in each prior foundation area is required for admission to supervised teaching. Correspondence credit in methods courses is not accepted toward meeting requirements for degrees.

Professional certification requirements in Nevada and surrounding states are generally met in the following patterns.

*Students must enroll in College of Agriculture.
**Students must enroll in School of Home Economics.

Foundations for Elementary Teaching

	<i>Minimum Credits</i>
I. <i>The Sociological Bases for Education</i>	6
EDFM 101-Educational Experiences I	3
C I 250-School Laboratory Experiences	3
II. <i>Psychological Factors-Human Growth and Development</i>	9
C I 270-Human Growth and Development (or equivalent)	3
C I 409-Handicapped Learners in the Regular Classroom	3
CAPS 401-Introduction to Elementary School Guidance	3
III. <i>General Principles, Methods, and Materials for Elementary Education</i>	22
C I 300-Teaching of Reading in the Elementary School	3
C I 402-Reading in the Lower Elementary Grades or C I 403-Reading in the Upper Elementary Grades	3
C I 405-Practicum in the Reading Clinic	3
C I 420-Methodology of Multicultural Education	3
C I 421a-Teaching of Social Studies-Elementary	3
C I 422a-Teaching of Mathematics-Elementary	2
C I 423a-Teaching of Language Arts-Elementary	3
C I 424a-Teaching of Science-Elementary	2
IV. <i>Supervised Teaching in Elementary Education</i>	10
C I 451-Supervised Teaching in the Elementary Grades	10

47

Recommended Supporting Course Work

C I 433-Creative Experiences in Early Childhood Education	3
EDFM 420-Audiovisual Methods in Teaching	2
MUS 324-Teaching of Elementary School Music	2
ART 342-Teaching Elementary School Art	3

Foundations for Special Education

Students must complete the College of Education general requirements and one of the sequences of courses contained below. Completion of option one will lead to certification in learning disabilities and the educationally handicapped. After completion of option two, the student will be certified to teach the mentally handicapped.

	<i>Minimum Credits</i>
<i>Option 1 - Learning Disabilities/Behavioral Disorders</i>	38
C I 310-Introduction to Exceptional Children	3
C I 311-Introduction to Learning and Behavior Disorders	3
C I 312-Exceptional Child Experience	1
C I 412-Curriculum for Children with Severe Learning and Behavior Disorders	4
C I 413-Advising Exceptional Children	3
C I 414-Problems in Special Education	1
C I 417-Curricular Approaches for the Handicapped Adolescent	3
C I 418-Curriculum Development for the Mildly Handicapped	3
C I 418-Lab	1

38

C I 453c-Supervised Teaching with Exceptional Children (Learning Disabilities).....	6
C I 453d-Supervised Teaching with Exceptional Children (Emotionally Handicapped).....	6
C I 471-Assessment for Special Education Teachers ..	3
C I 471-Lab	1
<i>Option 2 - Mild and Severe Mental Retardation</i>	35
C I 310-Introduction to Exceptional Children	3
C I 312-Exceptional Child Experience	1
C I 411-Introduction to Study of Mental Retardation	3
C I 413-Advising Exceptional Children	3
C I 414-Problems in Special Education	1
C I 416-Curriculum for Moderately and Severely Retarded Children	3
C I 416-Lab	1
C I 417-Curricular Approaches for the Handicapped Adolescent	3
C I 418-Lab	1
C I 453a-Supervised Teaching with Exceptional Children (Mental Retardation)	12
C I 471-Assessment for Special Education Teachers ..	3
C I 471-Lab	1
<i>Recommended Education Courses</i>	
C I 422-Teaching of Mathematics	3
C I 240-Manpower Needs and Job Analysis	3
SPA 356-Survey of Speech Pathology	3
EDFM 420-Audiovisual Methods in Teaching	3

Foundations for Secondary Teaching

	<i>Minimum Credits</i>
I. <i>The Sociological Bases for Education</i>	3
EDFM 101-Educational Experiences I	3
II. <i>Human Growth and Development</i>	6
C I 250-School Laboratory Experiences	3
CAPS 330-Educational Psychology	3
III. <i>Evaluation and Guidance</i>	3
CAPS 400-Introduction to Counseling and Guidance	3
IV. <i>General Principles and Special Methods of Secondary Education</i>	14
C I 409, 609-Handicapped Learners in the Regular Classroom	3
C I 420-Methodology of Multicultural Education	3
C I 428-General Principles of Secondary Education	2
Special methods (teaching field)	3
Electives	3
One of the electives below must be taken:	
C I 404, 604-Reading in the Secondary Schools	3
C I 439, 639-the Junior High/Middle School	3
C I course in special methods for chosen minor	3
V. <i>Supervised Teaching in Secondary Education</i>	8
C I 457-Supervised Teaching in Secondary School	8

34

C I 428 and C I 457 must be taken in block form within one semester; C I 420 and special methods should be taken either in the block or in the term preceding the block. English majors should include C I 404 in their programs.

Supervised Teaching

Supervised teaching facilities are provided in the public schools of Reno and Sparks through

the courtesy of the school authorities in these two cities. By this arrangement, students meet typical school problems and secure training for teaching under the most favorable conditions. In every instance the student is assigned to one of the regular teachers in the school system, designated as a cooperating teacher.

Regular staff members of the College of Education are responsible for the supervision of student teachers, making regular visits to observe the student's teaching, and holding conferences with the student and the cooperating teacher concerning the student teaching.

Prerequisites for Supervised Teaching

To protect the interests of the public school children, great care is exercised in according the privileges of supervised teaching to students. Only those students who have shown by their previous record a satisfactory ability in scholarship, dependability, and earnestness and a real interest in the problems of education are accepted for teaching. The failure on the part of the student teacher to meet any requirement imposed may result in the immediate forfeiture of teaching privileges.

Admission to supervised teaching is secured through the Office of the Director of Laboratory Experiences for either the elementary or secondary teaching field. Application must be made for supervised teaching by March 1 of the junior year. Normally a student must have completed a minimum of 12 semester credits at the university prior to admission to student teaching.

Student teachers must submit a completed physical examination form immediately prior to beginning the student teaching. Forms are available from the Director of Laboratory Experiences. In addition to the medical examination, each student is required to complete a speech and hearing screening and present evidence of at least a score of 19 on the English component of the ACT test. Students unable to score 19 must take the Language Proficiency Examination. This is available from the Director of Laboratory Experiences.

Admission to the six-week summer session of student teaching is limited to students who have completed one year or more of teaching. Exceptions to this regulation are made only by affirmative action through a petition to the department chairman concerned.

Prerequisites for admission to supervised teaching for regular university students are available in the office of the dean of the College

of Education. Each student must obtain this information during the freshman year.

Requirements for Graduate Degrees

Master's Degree

Graduate students may major in counseling and guidance personnel services (elementary, secondary, college, and vocational); curriculum and instruction (elementary, secondary, and special education) which may include specialization in reading, early childhood education, mental retardation, or the educationally handicapped; educational administration and higher education (may include specialization in elementary or secondary principalship, school administration, and supervision); and educational foundations and media.

The specific requirements for the curriculum to be followed are adapted to the professional needs of the student. Students should not enroll in any course for graduate credit without first securing the approval of the department chairman that such a course or courses are acceptable toward a major or minor.

General improvement courses for in-service education on the graduate level should also be considered by the student. These courses are also offered in extension or branch centers, workshops, short conferences, evening schools, and individual problem courses by appropriate arrangement. Inquiries are encouraged.

The master of arts and master of science degrees require 24 credits of approved course work with a major in education and a 6-credit thesis. High standards of research work are required. A non thesis master of arts or master of science degree 32-credit option may be selected. Specific programs with emphasis on teaching, counseling, or administration and supervision are available on request. All candidates for these degrees are required to complete EDFM 700-Introduction to Educational Research, and two other core courses outside their fields of specialization (see adviser).

Each candidate for the master of education degree must have completed a minimum of two academic years of satisfactory teaching or administrative experience, or equivalent, and complete 9 credit hours of acceptable core courses.

Education Specialist Certificate

The specialist certificate is granted after com-

pletion of one year of planned course work beyond the master's degree. A certificate may be attained in the Department of Counseling and Guidance Personnel Services, Department of Curriculum and Instruction (elementary, secondary, and special education), Department of Educational Administration and Higher Education, or Department of Educational Foundations and Media. Any student desiring to pursue a program leading to a certificate should consult the dean of Education or the department chairman in whose field specialization is expected.

Doctor of Education Degree

Applicants for the doctor of education degree must meet general university requirements for admission, Graduate School requirements, College of Education requirements, and department requirements.

The basic program includes a minimum of 90 semester credits beyond the baccalaureate degree, including 12 credits of dissertation. A residency requirement of at least two full-time summer or regular semesters with a minimum of 12 graduate credits must be completed.

The doctor of education program provides an opportunity for personalized specialization in one of the approved departments in the College of Education, with an emphasis on improving leadership and breadth of knowledge for those individuals who are now employed in the various areas of education.

For detailed information, refer to the Graduate School section.

Those individuals interested in the doctor of education program should contact the office of the dean, College of Education.

COUNSELING AND GUIDANCE PERSONNEL SERVICES (CAPS)

Faculty: Bailey, Downing, Maples, Meyers, Pierce (Ch.)

Cooperating Field Personnel: Spring 1981: Claybrook, Disilvestro, Limon, Meier, Price, Rohrer, Schott, Shaw;

Fall 1981: Healy, Oberg, Phoenix, Salzenstein, Veltri.

The department offers graduate courses in counseling, guidance and school psychology for schools K to 12, in college student development, in adult vocational counseling, in agency counseling and in marriage and family counseling. Adapted sequences exist to provide academic

structure to meet all certification requirements for professionals within the pupil- and student-personnel team. Entrance requirements and program patterns are available by inquiry.

CURRICULUM AND INSTRUCTION (C I)

Faculty: Casella, Codyre, Croskery, Davis, Elkins, Gickling, Gilman, Gorrez, Guckes, Havertape, Hollingsworth, Johns, Kelly, Lee, Linskie, Phelps, Tower (Dir.), Trent

Adjunct Faculty: Jackson, Langdon, Murphy, Pearson, Pierce, Quirk, Schroeder

Cooperating Field Personnel: Elementary and Special Education-Spring 1981: Barone, Bell, Bullis, Callaghan, Callahan, Canepa, Conner, Couse, Dible, Dinning, Duncan, Epper, Erdman, Folsom, Foster, Grein, Groshong, Hoppensteadt, Howell, Kaiser, Kandaras, Krajewski, Lewandowski, Luke, Manley, Marble, McFahan, McGhie, Mitchell, Molini, Morling, Mulholland, Obara, O'Brien, Papke, Simmons, Singer, Smith, Streeper, Wainscoat, Whitenack, Wienke, Zellmer;

Fall 1981: Artz, Chikowski, Conner, Downing, Jessup, Frazier, Hansen, Hooper, Kaylor, Macaluso, Mason, Mathewson, Mertens, Mulholland, O'Brien, Scott, Seaton, Skau, Tetz, West, Whitenack;

Secondary Education-Spring 1981: Adler, Aiazzi, Albin, Baker, Bohannan, Bolton, Brandt, Burke, Burkett, Carver, Copenhaver, Floyd, Freeman, Gerbatz, Giampapa, Higgins, Hill, Holley, Holmes, Houk, Hutchings, Istrice, Knott, Langhans, McKenna, McNeill, Meyers, Morris, Ohlson, Parks, Pavaluna, Potter, Pursell, Reed, Ruiz, Scattini, Schuster, Stephens, Stolz, Taylor, Terry, White, Wilkens, Wilson, Wiseman, Young;

Fall 1981: Allen, Burke, Carpenter, Casci, Coop, Copenhaver, Coverley, Dailey, Freeman, Houk, Howard, Hutson, Johns, Jones, Klise, Lee, Lomori, Ludlow, Marsh, McCann, McKnight, Oelerich, Olson, Pehrson, Reichman, Rush, Saladino, Scattini, Terranova, Vanderbeek, Wiseman, Zunino.

Elementary Education

Undergraduate and graduate majors are offered in elementary education. A minimum of 47

credits of approved work is required for the undergraduate major and a minimum of 16 credits is required for the graduate major.

Secondary Education

A major is offered in secondary education on the graduate level only. Undergraduate majors and minors are provided by approved curricula in teaching fields listed in the College of Education section. Copies of requirements are available in the division office.

Members of the division will assist graduate students in planning balanced programs suited to their educational objectives.

Special Education

Undergraduate and graduate majors are offered in special education. Completion of the undergraduate program results in certification in mental retardation or the area of the educationally handicapped. A graduate student may focus on either mental retardation, learning disabilities, or behaviorally disordered.

EDUCATIONAL ADMINISTRATION AND HIGHER EDUCATION (EAHE)

Faculty: Bersi, Cain, Dodson (Ch.), Loveless, Whisler

The department offers graduate work only, leading to the master of arts, master of education, and doctor of education degrees with a major in educational administration and higher education. Appropriate selection of courses will enable the graduate student to meet certification requirements for an administrative position in the public schools of Nevada. Sixteen credits acceptable to the department constitute a major.

EDUCATIONAL FOUNDATIONS AND MEDIA (EDFM)

Faculty: Bartl (Ch.), Elkins, Gilman, Krajewski, Peltier

The department offers two undergraduate minors: (1) educational studies; and (2)

media/library science. These minors are particularly applicable to those individuals who anticipate responsibilities involving the storage and utilization of learning materials. In addition, the department offers a graduate major and/or minor in educational foundations and media. Program emphases, recommended programs and entrance requirements may be obtained from the department chairman.

Service Divisions

Learning and Resource Center

Staff: Allard, Mundt (Dir.)

Adjunct Faculty: Bullis

This center encompasses a large simulation-demonstration area, graphics room, five micro-teaching rooms, audio room, and a large media center. Within this complex students have a variety of learning experiences, using a wide range of materials and resources. They design and develop instructional materials so that they may try them out later in teaching/learning situations.

Research and Educational Planning Center

Staff: Broughton, Davis, L., Davis, M., Dickerson, Dufort, Freeman, Kintop, Maher, O'Brien, Trout (Dir.)

Adjunct Faculty: Dangberg

This center houses the Research Coordinating Unit, the School Facility Planning Laboratory, and the Nevada State Drug Abuse Prevention Project, along with a number of short-term research and planning projects of national, state, and local origin.

Reading Center

Paul M. Hollingsworth (Dir.)

The Reading Center provides reading services to students in the state of Nevada. Fees for these services are dependent upon the types of services rendered. The center is equipped to demonstrate diagnostic and remedial techniques. Programs offered through the center may certify teachers as reading specialists and could lead to an advanced degree (master or doctor). For further information contact the Reading Center in the College of Education.

Office of External Relations

This office is responsible for working with the various school districts in the state of Nevada in relation to College of Education graduates, in coordination with the university Placement Office. It serves as the major public relations office for the college, provides information as to college functions, and has the responsibility of coordinating College of Education advisory groups.



College of Engineering

Charles R. Breese, *Dean*

The College of Engineering offers undergraduate instruction in the fields of civil, electrical, and mechanical engineering, with a broader undergraduate program provided by the engineering science curriculum. Graduate-level instruction is provided in civil, electrical, and mechanical engineering.

The Engineering Technologies Department offers curricula leading to an associate of science in engineering design or electronics engineering technology degree.

Objectives

Engineers apply a knowledge of natural and mathematical sciences and a logical discipline of decision-making to the creation of systems needed by society.

The various engineering curricula provide the necessary basic and advanced knowledge to prepare students to positions of responsibility and leadership in their fields of interest, both now and in the future. The curricula prepare the student to meet the technical and ethical demands of the profession and to become an informed citizen in the community.

Accreditation

The civil, electrical, and mechanical engineering programs for the baccalaureate degree and the electronics engineering technology and architectural design option programs in the Engineering Technologies Department are accredited by the Accreditation Board for Engineering and Technology, Inc. (ABET). The members of the faculty maintain affiliations with their professional societies and various industrial and governmental organizations which keep them current in their fields, and also provide stimulation for both undergraduate and graduate research projects.

Cooperative Programs

Several cooperative programs are available, in which students may gain funds and experience

during the summer and attend classes during the rest of the year. For details see the various baccalaureate sections and inquire at departmental offices.

Degrees Offered

Associate Degrees: Upon satisfactory completion of the prescribed curriculum, the student in the Engineering Technology Department becomes a candidate for the degree of associate of science in electronics engineering technology or associate of science in engineering design technology.

Baccalaureate Degrees: Upon satisfactory completion of the prescribed curriculum the student in engineering becomes a candidate for the degree of bachelor of science in civil engineering, electrical engineering, engineering science, or mechanical engineering.

Graduate Degrees: The degree of master of science may be earned in the departments of civil, electrical, and mechanical engineering subject to the general requirements of the university, the department concerned, and the Graduate School.

The interdisciplinary Ph.D. degree in engineering may be earned in the fields of potential field phenomena, information theory, system analysis and research, materials science, applied mechanics, energy systems, water resources, structural analysis, and electronic devices, subject to the university, college, and Graduate School requirements.

Minor in Engineering

(For baccalaureate engineering students only)

1. A minimum program for a minor outside the major department consists of at least 18 credits of formal courses in the minor department, 12 credits of which are upper-division courses approved by the chairmen of both the minor and major departments.

2. The 12 credits of upper-division courses in the minor department, alluded to in requirement 1, must be in addition to the credits in upper-division required courses in that department as specified by the curriculum of the major department.

Pre-Major Admission

Effective with the Fall 1982 semester, new undergraduate applicants to the College of Engineering will be admitted to pre-major status rather than to a specific major. The college and departments will develop curricula and criteria for the department pre-major student which must be satisfied before a department will approve a student's acceptance into a specific major.

Mathematics and Science Entrance Requirements

In addition to the university requirements (see Admission section of this catalog) for admission to the baccalaureate programs, the College of Engineering specifically recommends 3 units of mathematics (1½ algebra, 1 geometry, and ½ trigonometry) plus 1 unit of science. The unit of science may be in either life or physical science. It is strongly recommended that 2 high school units of science be completed prior to admission—1 each in life science and physical science. In addition, it is helpful if prospective students can take additional mathematics courses while in high school. For admission to the associate degree programs, the college recommends at least one year of high school algebra and science.

Transfer Students

A student from outside the University of Nevada Reno, who wishes to transfer to the College of Engineering and be accepted must follow general university policy for admission to advanced standing. Each such applicant is considered for admission based on their qualifications and the availability of space in the specific program for which application is being made.

Baccalaureate Degree Requirements

In any field of specialization, the degree requirements consist of the general university requirements, the engineering core, and the departmental requirements. This amounts to 130 to 134 academic semester credits.

Engineering students may register for a maximum of 9 credits pass-fail (S/U) in any courses, except those courses specifically required by their curriculum program or which are classified as technical or science electives.

The 130 to 134 semester credits are as follows:

	<i>Credits</i>
<i>General University Requirements</i>	6
ENGL 101, 102	6
U.S. and Nevada Constitutions (credit for these is included in the humanistic-social electives in the engineering core listed below.)	
<i>Engineering Core Requirements</i>	55-61
MATH 215, 216, 310, and/or 140 and/or 251 and/or 320 and/or	
M E 300	17
PHYS 201, 202, 203, 204, 205, 206	8-12
CHEM	4-8
M E 241, 342, 371	9
Humanistic-social courses	15-18
<i>Departmental Requirements</i>	63-72

130-134

The freshman year is basically similar for all departments, thus transferring from one department to another in engineering during the freshman year can be done with minimal loss of credit or time. The specific departmental course requirements and suggested curricula to complete the requirements for the bachelor of science degree in the specific departments are presented on the following pages. The elective courses are selected by the student with the approval of the adviser and in general should be selected to broaden the student's education.

In addition to the general university requirement of a C average for graduation, the engineering student must also maintain a C average in all engineering courses offered by the departments of the college; all required 100 and 200 courses taken at UNR in the disciplines of mathematics, physics, and chemistry; plus all upper division UNR courses in these disciplines to be counted in computation of the C average for engineering courses. Candidates for baccalaureate degrees from the College of Engineering may not use two-year technology courses in the determination of the average grade of C required in engineering courses.

Field Trips: Any of the courses taught in the college may require field trips as an integral part of the educational experience. Field trips may be scheduled by the college's student organizations and they may be organized generally from within the college instructional structure in response to educational goals and needs.

Engineering Students on Academic Probation

Engineering and technology students with academic records below the published minimum standards, in conformity with university policy,

are placed on probation. A student on probation may not register for courses in the Engineering College except to re-enroll in those courses which the student has previously taken and received a grade less than C.

CIVIL ENGINEERING (C E)

Faculty: Bird, Breese, DeAngelis, Douglas (Ch.), Fordham, French, Fricke, Gallagher, Krenkel, Nielsen, Orcutt, Saiidi, Shewan, Tung

Undergraduate Curriculum

The objective of the program of study in civil engineering is to give students an educational background from which they can enter the practice of the profession of engineering. Civil engineering includes the planning, analysis, design, and construction of physical systems involving structures, mapping, water resources, transportation, and water disposal. The curriculum is designed to give an introduction to these disciplines.

Attention is directed to the existence of two cooperative training programs available for civil engineering students. These programs are offered jointly with the Civil Engineering Department and the following sponsoring agencies: the Nevada Department of Transportation and the Associated General Contractors of Nevada. Both programs offer financial assistance to the student through summer employment with the cooperating organizations. For further information write to the director of Civil Engineering Cooperative Training Programs.

The Nevada Chapter of the Associated General Contractors supports a fractional chaired professorship in the department. This support broadens the area of construction engineering.

The curriculum for the bachelor of science in civil engineering degree is as follows:

<i>University Requirements</i>	<i>Credits</i>
ENGL 101, 102	6
<i>Basic Sciences</i>	
MATH 215, 216, 310	12
CHEM 101	4
PHYS 201, 202, 204, 205	8
M E 300; C E 389	4
Science electives ¹	6
	34
<i>Humanities and Social Sciences</i>	
P SC 103	3
Electives ¹	13
	16

¹Lists of acceptable science electives and humanistic-social science electives are available in the office of the chairman of the department. Technical electives are to be selected from nonrequired civil engineering 400-level course offerings.

Communications

ENGR 201	3
<i>Engineering Sciences, Analysis, and Design</i>	
M E 241, 342, 371	9
E E 212	3
CET 101	1
C E 140, 241, 243, 246, 388, 473, 491	16
C E 364, 367, 368, 390, 489	12
C E 369, 372, 374, 492	8
C E 366	3
C E 381, 484, 485	10
Technical electives	9
	71
Total credits for B.S. in civil engineering degree	130

Students enrolled in civil engineering cooperative programs are required to take a 1-credit seminar course (C E 150, 250, 350, 450) at the appropriate level each summer they are enrolled in the program. These credits are in addition to the total required for other students.

Graduate Programs

Continuing education beyond the bachelor's degree is a necessity for those persons engaging in the practice of the profession of civil engineering. The master's degree programs are recommended for those who wish to engage in this profession.

The department offers programs leading to the master of science (M.S.) degree in civil engineering and participates in the interdisciplinary Ph.D. program in the College of Engineering. Detailed curricula in the general civil engineering field or with specialization in structures, soil mechanics and foundations, transportation, or water resources are determined in conference between the student and the adviser. Requirements for graduate degrees are stated in the Graduate School section. Both Plan A and Plan B are available for M.S. programs. Specific departmental requirements for the M.S. program may be obtained from the Civil Engineering Department.

The department is also a major contributor to the interdisciplinary graduate program in hydrology which leads to the M.S. and Ph.D. degrees in that field.

The department also participates in the interdisciplinary master of science degree with a major in land use planning policy in cooperation with several other departments. For further information refer to the Interdisciplinary and Special Programs section of this catalog.

Additional information on graduate programs may be obtained by writing to the chairman of the department.

ELECTRICAL ENGINEERING

(E E)

Faculty: Fronek, Johnson (Ch.), Kleppe, Kosso, Manhart, Singh

Undergraduate Curriculum

The program in electrical engineering is designed to provide a broad scientific background coupled with training in original and logical thought so the graduate can continue intellectual advancement and make significant contributions to the field of electrical engineering. The fundamental nature of the required courses provides the basis for concentration in depth in communications, computer, control, electronics, and power engineering.

The departmental requirements for the bachelor of science in electrical engineering degree are included in the following curriculum. This curriculum meets all graduation course requirements.

The professional EIT examination, administered by a state board of engineering registration, must be taken by all electrical engineering students before graduation during the senior year of study.

Freshman Year First Semester

	<i>Credits</i>
ENGL 101—Composition I	3
MATH 215—Calculus I	4
CHEM 101—General Chemistry	4
E E 131—Computer Techniques I	2
Humanistic-social elective ¹	3
	16

Second Semester

	<i>Credits</i>
ENGL 102—Composition II	3
PHYS 201—Engineering Physics I	3
PHYS 204—Engineering Physics Lab. I	1
MATH 216—Calculus II	4
E E 132—Computer Techniques II	2
Humanistic-social elective ¹	3
	16

Sophomore Year First Semester

	<i>Credits</i>
PHYS 202—Engineering Physics II	3
MATH 310—Calculus III	4
M E 241—Analytic Mechanics for Engineers I	3
E E 231—Computerized Matrix Algebra I	1
ENGR 201—Engineering Communications	3
Humanistic-social elective	3
	17

Second Semester

	<i>Credits</i>
E E 202—Materials in Electrical Engineering	3
E E 212—Introduction to Electrical Engineering	4

¹HIST 111 recommended, to fulfill Constitution requirements.

PHYS 203—Engineering Physics III	3
PHYS 206—Engineering Physics Lab. III	1
M E 300—Introduction to Engineering Mathematics	2
M E 342—Analytic Mechanics for Engineers II	3
	16

Junior Year First Semester

	<i>Credits</i>
MATH 251—Probability and Statistics	3
E E 301—Principles of Measurement	2
E E 311—Introduction to Network Analysis	3
E E 333—Computer Logic and Architecture	3
E E 350—Electrical Systems	3
E E 372—Introduction to Electronics	3
	17

Second Semester

	<i>Credits</i>
E E 302—Electronics/Machinery Laboratory	2
E E 355—Electric and Magnetic Fields	3
E E 382—Electrical Communication	3
E E 386—Feedback Control Systems	3
M E 371—Thermodynamics I	3
Humanistic-social elective	3
	17

Senior Year First Semester

	<i>Credits</i>
E E 401—Electrical Projects Laboratory	2
EC 101, 102, or 109—(Economics course)	3
Humanistic-social elective	3
Technical electives	9
	17

Second Semester

	<i>Credits</i>
E E 462—Engineering Design/Analysis	4
Science or technical elective	3
Technical electives	9
	16

Total credits for B.S. in electrical engineering degree 132

Areas of Concentration

Students must select one area of concentration (two courses) and at least one course for each of the other areas of concentration (18 credits).

Communication: E E 455, 483

Computer: E E 431, 435

Control: E E 485, 486

Electronics: E E 473, 424 or 481

Power: E E 451, 461

Engineering Science

The program in engineering science, administered by the Electrical Engineering Department, leads to the degree of bachelor of science in engineering science. The program is designed for the student who wants a broad background in the engineering sciences as well as concentration in computers, physics, or chemistry; or who wants to enter the field of nuclear engineering; or who would like to study other areas in addition to

engineering; or who does not want to select a major at this point in his academic career. The curriculum allows the student 23 credits for technical electives. These credits permit the student to take introductory courses in several different technical fields of learning or to take a sequence of related courses.

Specific required courses depend on the area of interest. The student should see his adviser to determine the course of study. The B.S. degree in engineering science requires 130 credits.

Graduate Curriculum

The practice of the profession of electrical engineering requires broad ability in both scientific thinking and the art of working with other people. As education for those who wish to engage in this profession with competence, four years of undergraduate study and at least one year of graduate study are strongly recommended. The undergraduate and graduate curricula at the university are planned to offer as much as possible of the breadth of education needed for leadership in the profession, as well as knowledge of the physical sciences and the basic professional techniques. There is no prescribed curriculum for the M.S. degree or the interdisciplinary Ph.D. degree in engineering; the student's program is individually selected in consultation with the adviser to meet the general requirements of the Graduate School as stated in that section.

Both Plan A (thesis) and Plan B (nonthesis) are available for M.S. programs. Plan A is normal, but Plan B is available at the student's request if the faculty feels the student has already had experience after receiving the B.S. degree equivalent to that of a thesis and that the student will benefit more from additional course work than from completing a thesis. If Plan B is permitted, the student must successfully complete a 2-credit professional paper based on previously completed research or engineering experience.

The department also participates in an interdisciplinary program leading to a master of science degree with a major in computer and information science. For further information, refer to the interdisciplinary section of this catalog or contact the department chairman.

MECHANICAL ENGINEERING (M E)

Faculty: Anderson (Ch.), Dandini (consultant to ERDC), Fashbaugh, Gilstrap, Manning, McKee, Rymets, Van Tassel, Wiel

The mechanical engineering curriculum is broadly based to prepare its graduates for the wide variety of careers open to mechanical engineers. As the name implies, mechanical engineers are basically creators of mechanical systems and machines, but their careers range from air conditioning to aerospace, from basic research through design. The student may take a general program, with a wide choice of both technical and humanistic electives, or may choose an area of concentration such as aerospace, applied mechanics, bioengineering, design engineering, thermal sciences, and general mechanical engineering.

General Requirements

<i>University Requirements:</i>	<i>Credits</i>
ENGL 101, 102 (or 102 plus 3 humanistic-social or technical elective credits)	6
U.S. and Nevada Constitutions (included in humanistic-social sciences below)	
<i>Basic Sciences:</i>	
MATH 140, 215, 216, 310; CHEM 101, 102; PHYS 201, 202, 204, 205; M E 300 plus 3 credits basic science elective	36
<i>Humanistic-Social Sciences:</i>	
HIST 111 (or equivalent); 15 elective credits	18
<i>Communications:</i>	
ENGR 201	3
<i>Engineering Sciences:</i>	
M E 241, 342, 371; C E 367, 372; 10 approved credits electrical engineering including E E 212; 7 elective credits	32
<i>Analysis and Design:</i>	
M E 120, 121, 122, 130, 131, 132, 250, 391, 451, 492, 493 (or 464 lab.); 494; 3 elective credits	22
<i>Area of Concentration and Technical Elective Credits:</i>	
17 credits	17
	134

Areas of Concentration

Each student may select an area of concentration shown below; however, the specific content of each area may be designed in consultation with the adviser and with the mechanical engineering faculty approval. The credits listed under each area of concentration include 7 elective credits of engineering science and 3 elective credits of analysis and design listed as electives in the section entitled General Requirements above.

<i>Aerospace:</i>	<i>Credits</i>
M E 372, 444, 461, 464, 480, 481, or 482; 8 technical elective credits, 3 analysis and design elective credits	27
<i>Applied Mechanics:</i>	
M E 343, 403, 445, 453; 13 technical elective credits; 3 engineering science elective credit	27
<i>Bioengineering:</i>	
BIOL 101, 206, 366, 385, 386; 8 engineering science and technical elective credits	27
<i>Design:</i>	
M E 343, 430, 452, 461, 464; 10 technical elective credits; METE 350, 3 analysis and design elective credits	27
<i>Management Sciences:</i>	
MGRS 323, 352; 9 managerial science elective credits; 7 engineering science elective credits; 3 analysis and design elective credits; 2 technical elective credits	27

(The 15 humanistic-social electives must be economics courses.)

Thermal Sciences:
 M E 372, 403, 461, 464, 471, 480; 11 technical elective credits 27

General Mechanical Engineering:
 M E 343, 372, 452, 461, 464, 471, 480; METE 350; 6 technical elective credits 27

Lists of acceptable basic science electives, humanistic-social science electives, and technical electives are available in the office of the chairman of the department.

Students who have taken an advanced course may not receive credit toward an engineering degree for prerequisite courses taken at a later date.

Students enrolled in mechanical engineering cooperative programs may take a 1-credit course (M E 198, 298, 398, 498) at the appropriate level each academic period they are enrolled in the program. These credits are in addition to the total required for other mechanical engineering students.

Graduate Curriculum

The department currently offers the master of science degree in mechanical engineering and participates in the interdisciplinary Ph.D. program in the College of Engineering.

The program of courses and research for both the master's and doctoral degrees is tailored to the background, the needs, and the interests of the individual student.

Candidates for the M.S. degree may satisfy the thesis requirement by original research or design. A candidate with acceptable professional engineering experience may substitute course work for the thesis upon approval of the department faculty.

Some of the areas of research currently in progress are laser beam measurements of vibrations, solar energy collection and systems, high-speed (Mach 3) oblique shock studies, and numerical analysis of heat transfer systems.

For details of the graduate programs, see the Graduate School section.

ENGINEERING TECHNOLOGIES (E T)

Faculty: Baker (Ch.), Cherne, Fuetsch, MacDonald, Reinhardt, Walker, White

The department offers two four-semester curricula leading to an associate of science in engineering design or electronics engineering technology degree. Admission requirements are listed under Admission Information.

The two curricula are designed primarily to provide the student with a broad general

engineering background and specific job skills for immediate technical employment. In addition, these programs can be combined with baccalaureate degree curricula offered by other colleges at UNR. In these "dual degree" programs the student can simultaneously earn an associate degree in engineering technology and a bachelor's degree in a complementary field, i.e., electronics engineering technology/managerial science. These dual degree programs are normally completed in the usual eight semesters required for a baccalaureate degree. Graduates are also eligible for continuing study in engineering technology and architecture at other colleges and universities.

Students who transfer from other programs may be permitted to substitute appropriate course work for a limited number of the courses listed below. Each substitution must be evaluated and approved by the department.

Graduation Requirements

Each student must complete a minimum of 65 credits (68 credits in electronics engineering technology) to graduate with an associate degree. This includes satisfying the university requirements in English and United States and Nevada Constitutions. The general baccalaureate requirement involving catalog fulfillment, resident credit, scholarship, and the application for graduation apply to the associate degree program.

In addition to the general university requirement of a C average for graduation, engineering technology students must maintain a C average in all engineering technology courses and all required mathematics and physics courses.

Electronics Engineering Technology

<i>First Year</i>		
<i>First Semester</i>		<i>Credits</i>
MATH 111—Technical Mathematics I	.....	5
EET 133—DC Circuits	.....	3
EET 134—DC Circuits Lab	.....	1
P SC 103—Prin. of Amer. Const. Govt.	.....	3
ENGL 101—Composition I	.....	3
Elective	.....	2
		17
<i>Second Semester</i>		
		<i>Credits</i>
MATH 121—Technical Mathematics II	.....	3
EET 143—AC Circuits	.....	3
EET 144—AC Circuits Lab	.....	1
EET 145—Solid State Amplifier Circuits	.....	3
EET 146—Solid State Amplifier Circuits Lab	.....	1
PHYS 103—Physics for Engr. Technology	.....	3
PHYS 153—General Physics Lab	.....	1
ENGL 102—Composition II	.....	3
		18

Third Semester

	<i>Credits</i>
EET 273—Communications Circuits	3
EET 274—Communications Circuits Lab	1
EET 275—Pulse Circuits	3
EET 276—Pulse Circuits Lab	1
EET 277—Digital Circuits	3
EET 278—Digital Circuits Lab	1
EET 287—Computer Programming Techniques	2
PHYS 104—Physics for Engr. Technology	3
PHYS 154—General Physics Lab	1
<hr/>	
	18

Fourth Semester

	<i>Credits</i>
EET 281—UHF and Microwave	3
EET 282—UHF and Microwave Lab	1
EET 283—Communication Systems	3
EET 284—Communication Systems Lab	1
EET 285—Industrial Electronics	3
EET 286—Industrial Electronics Lab	1
Elective	3
<hr/>	
	15

Total credits for A.S. in engineering technology 68

Engineering Design Technology**Architectural Design Option***First Semester*

	<i>Credits</i>
AET 101—Introduction to Architecture	3
AET 119—Architectural Drafting	3
MATH 111—Technical Mathematics I	5
ENGL 101—Composition I	3
Technical electives*	2
<hr/>	
	16

Second Semester

	<i>Credits</i>
AET 220—Construction and Working Drawings I	3
PHYS 103—Physics for Engineering Technology	3
PHYS 153—General Physics Lab	1
MATH 121—Technical Mathematics II	3

ENGL 102—Composition II	3
P SC 103—Principles of American Constitutional Government	3
<hr/>	
	16

Third Semester

	<i>Credits</i>
AET 214—Architectural Design I	3
AET 264—Mechanical and Electrical Equipment for Buildings	4
PHYS 104—Physics for Engineering Technology	3
PHYS 154—General Physics Lab	1
CET 224—Statics and Strength of Materials	4
Humanities, business or technical elective*	2
<hr/>	
	17

Fourth Semester

	<i>Credits</i>
AET 216—Architectural Design II	3
AET 280—Solar Energy Systems	3
CET 254—Technical Economics	3
EET 287—Computer Programming Techniques	2
Humanities, business or technical electives*	5
<hr/>	
	16

Total credits for A.S. in engineering design technology 65

Mechanical Design and Public Works Options

The mechanical design and public works options of the engineering design technology curriculum are temporarily suspended. Therefore, new admissions are not acceptable in these areas. Certain public works courses are offered as electives in the architectural program to permit students to emphasize the civil engineering aspects of architecture and construction.

*Lists of acceptable technical science, and humanistic-social science electives are available in the department chairman's office.



Sarah Hamilton Fleischmann School of Home Economics

Donna Beth Downer, *Dean*

Faculty: Essa, Hancock, Hardy, Horn, Kees, Margerum, Moore, Nissen, Otto, Read, Stevenson, Tripple

Home economics as a field of study encompasses several diverse subject matter areas united by a common focus of improving the quality of life for families. Through teaching, research, and public service, the School of Home Economics is actively engaged in applying scientific and humanistic principles to the problems of families in a period of rapid social change, helping individuals and families cope with change in ways which will enrich their lives.

Objectives

The curricular offerings are purposefully designed to provide: (1) professional preparation for a career in home economics, (2) professional renewal for practicing home economists, (3) preparation for responsible leadership and effective participation in family and community life, (4) enrichment of the professional preparation of students in other departments, and (5) graduate study in home economics at the master's degree level.

Degrees Offered

The School of Home Economics offers opportunities for study at three levels: associate of arts degree, bachelor of science degree, and master of science degree.

Since the educational program of the School of Home Economics emphasizes both breadth of knowledge and its application to the solution of human problems, its courses are highly suitable as a minor program of study or elective choices for students majoring in other departments on campus.

Student Participation

Students are given an opportunity and are expected to play an active role in the School of

Home Economics in decisions relative to their educational programs. They are expected to take the initiative in meeting at least once a semester with their advisers. Upon the completion of 48 credits, students must declare a major and submit a plan for an individualized major program. The plan utilizes a minimum of 30 credits to tailor a program consistent with desired educational objectives.

Community and Junior College Preparation

Students from community and junior colleges should complete suggested home economics core courses in the humanities, social sciences, and natural sciences. These courses are prerequisites for the required home economics courses and facilitate transition into the baccalaureate program at the university.

Requirements for the Associate Degree

The associate degree programs offered by the School of Home Economics are designed for those students who wish to prepare for technical-level positions in fashion trades and prekindergarten education.

A total of 64 semester credits is required for the associate degree. A supervised work experience is included in each program.

Associate of Arts in Fashion Trades

Fashion trades is a program designed to meet the needs of persons seeking post-secondary training for employment in fashion-related jobs. Students become knowledgeable about many aspects of the fashion business and develop skills necessary to succeed in fashion-related work. Practical experience is provided through cooperation with community retailers. The first year study enables the student to obtain a job in fashion selling. The second year develops the ability to work at the supervisory level. Career oppor-

Sarah Hamilton Fleischmann

School of Home Economics

Donna Beth Downer, *Dean*

Faculty: Essa, Hancock, Hardy, Horn, Kees, Margerum, Moore, Nissen, Otto, Read, Stevenson, Tripple

Home economics as a field of study encompasses several diverse subject matter areas united by a common focus of improving the quality of life for families. Through teaching, research, and public service, the School of Home Economics is actively engaged in applying scientific and humanistic principles to the problems of families in a period of rapid social change, helping individuals and families cope with change in ways which will enrich their lives.

Objectives

The curricular offerings are purposefully designed to provide: (1) professional preparation for a career in home economics, (2) professional renewal for practicing home economists, (3) preparation for responsible leadership and effective participation in family and community life, (4) enrichment of the professional preparation of students in other departments, and (5) graduate study in home economics at the master's degree level.

Degrees Offered

The School of Home Economics offers opportunities for study at three levels: associate of arts degree, bachelor of science degree, and master of science degree.

Since the educational program of the School of Home Economics emphasizes both breadth of knowledge and its application to the solution of human problems, its courses are highly suitable as a minor program of study or elective choices for students majoring in other departments on campus.

Student Participation

Students are given an opportunity and are expected to play an active role in the School of

Home Economics in decisions relative to their educational programs. They are expected to take the initiative in meeting at least once a semester with their advisers. Upon the completion of 48 credits, students must declare a major and submit a plan for an individualized major program. The plan utilizes a minimum of 30 credits to tailor a program consistent with desired educational objectives.

Community and Junior College Preparation

Students from community and junior colleges should complete suggested home economics core courses in the humanities, social sciences, and natural sciences. These courses are prerequisites for the required home economics courses and facilitate transition into the baccalaureate program at the university.

Requirements for the Associate Degree

The associate degree programs offered by the School of Home Economics are designed for those students who wish to prepare for technical-level positions in fashion trades and prekindergarten education.

A total of 64 semester credits is required for the associate degree. A supervised work experience is included in each program.

Associate of Arts in Fashion Trades

Fashion trades is a program designed to meet the needs of persons seeking post-secondary training for employment in fashion-related jobs. Students become knowledgeable about many aspects of the fashion business and develop skills necessary to succeed in fashion-related work. Practical experience is provided through cooperation with community retailers. The first year study enables the student to obtain a job in fashion selling. The second year develops the ability to work at the supervisory level. Career oppor-

tunities include salesperson, display assistant, sales demonstrator, department manager, fashion coordinator, personal shopper, and fashion show producer, among others.

Certificate Program

	<i>Credits</i>
H EC 151-Design	3
H EC 152-Display	3
H EC 210-Clothing Construction	3
H EC 211-Pattern Design	3
ENGL 101-Composition I	3
ACC 201-Intro. Accounting I	3
EC 101-Principles of Economics	3
PSY 101-General Psychology	3
SPTH 113-Fundamentals of Speech Communication	3
Electives	5
	32

Associate Degree Program

Requirements in addition to those listed for certificate program:

	<i>Credits</i>
H EC 270-Field Experience	3
H EC 271-Clothing	4
H EC 313-Clothing and the Consumer	3
H EC 315-Historic Costumes	3
H EC 316-Textiles or H EC 318-Creative Textiles	3
ENGL 102-Composition II	3
MGRS 310-Marketing Principles	3
U.S. and Nevada Constitutions	3
Electives	7
	32

Grand Total 64

If a course is not available, an appropriate recommended elective may be substituted with the approval of the academic adviser.

Associate of Arts in Prekindergarten Education

The associate of arts in prekindergarten education prepares students for work in preschool, day care, and other child-related jobs. The program revolves around specified competencies, which parallel those designated by the national Child Development Associate (CDA) Consortium. Students are encouraged to apply for CDA assessment at the end of their programs of study to be considered for this national preschool teacher certification.

Certificate Program

There are opportunities for employment of certificate graduates of the prekindergarten education programs as assistants in private and cooperative nursery schools, day care centers, Head Start programs, in children's homes and institutions, and in recreational facilities.

	<i>Credits</i>
H EC 131-Child Development: Prenatal to Six	4
H EC 132-Guidance Principles in Early Childhood	3

H EC 232-Preschool Programming	3
H EC 233-Practicum	7
ENGL 101-Composition I	3
ENGL 102-Composition II	3
PSY 101-General Psychology	3
Recommended electives	3
Electives	3

32

Associate Degree Program

The associate degree graduate may be employed as a teacher or curriculum consultant in private and cooperative nursery schools, day care centers, Head Start and Home Start programs, and in recreational facilities. Additional opportunities exist in the Peace Corps and VISTA, in United Nations agencies such as UNICEF, and in public schools as an assistant teacher.

Requirements in addition to those listed for certificate:

	<i>Credits</i>
H EC 172-Food and People	4
H EC 233-Practicum	5
H EC 270-Field Experience	3
H EC 274-Individual and the Family	4
SPTH 113-Fundamentals of Speech	3
U.S. and Nevada Constitutions	3
Recommended electives	6
Electives	4
	32

Grand Total 64

If a required course is not available, an appropriate course from the list of recommended electives is substituted with the approval of the academic adviser.

Requirements for the Baccalaureate Degree

The bachelor of science in home economics degree requires a minimum of 128 credits in required and elective courses. At least 50 credits must be earned in courses numbered 300 or above. A maximum of 30 required or elective credits on an S/U basis may be utilized. If a student wishes to transfer in more than 30 credits on an S/U basis, the case is considered on an individual basis.

Students follow a core program of 70 credits and, in addition, define a professional major program of at least 30 credits.

The core program combines 12 credits each of humanities, social sciences, and natural sciences-mathematics with 35 credits of home economics to give a balance of cultural, technical, and professional education. The core courses are selected to provide basic principles and concepts which serve as the foundation for synthesizing

knowledge applicable to improving the quality of family life for the individual, the family, and the community.

The program of study for the major is individually designed to provide additional professional education by combining specialized courses in home economics with those from related areas. The program is defined by the student and presented for approval during the second semester of the sophomore year to the members of a review committee. The student's academic adviser, a professional in the field, an upperclassperson, the dean, and the student are the members of the review committee. Upon approval by the review committee, the program plan is filed in the office of the dean. If at a later time it is deemed desirable to change the program plan, the student initiates the change in writing and secures the concurrence of the academic adviser and dean.

<i>Core Requirements</i> (71 credits)	<i>Credits</i>
Humanities	12
Courses in English, speech, and design (H EC 151) are required.	
Social Sciences	12
Courses in psychology, economics, and sociology are required, as well as a course or courses covering U.S. and Nevada Constitutions.	
Natural science and mathematics*	12
Must include inorganic and organic chemistry.	
Home economics	35
H EC 172-Food and People	4
H EC 271-Clothing	4
H EC 272-Careers in Home Economics	2
H EC 274-The Individual and the Family	4
H EC 275-Shelter and Environment	4
H EC 371-Family Economics and Management	4
H EC 374-Communications in Home Economics	3
H EC 470-Field Experience (or 457)	8
H EC 475-Professional Philosophies and Issues	2

Child Development and Family Life

The major in child development and family life may focus on one of three areas of study: infant, preschool, or adult development within the family system. Courses in each area provide a variety of practical experiences with theoretical background to prepare students for work with children and families through government and private agencies such as Head Start, child care and developmental centers, and welfare organizations. Career opportunities are also present in advertising or research in industries concerned with child- and family-oriented products. For the student whose main interest lies in teaching elementary school, an individual program may be designed to qualify the graduate for such a cer-

tificate. The major is also a stepping-stone to higher education programs.

In addition to the courses required of all home economics students, child development and family life majors must take the following:

Subject Area Core: H EC 274 (lab), 434, 436, 438 (3 credits), and at least 15 credits related to the selected area of focus (infant, preschool, or adult development within the family system).

Clothing and Textiles

Fashion Merchandising

A major in fashion merchandising prepares the student for a professional career as a fashion buyer, market researcher, fashion coordinator, retail management or fashion promotion. In addition, program options are offered to prepare students as clothing consultants and clothing historians.

Career opportunities exist with agencies and industries who need professionals with specialization in clothing and textiles. Various government, private and social agencies need clothing consultants to work with people who have special clothing requirements such as children, the elderly or the handicapped, or for recreational and occupational activities. Industries, such as pattern, notion and sewing machine companies, need persons skilled in clothing construction and communications.

The clothing historian option provides opportunities for students with backgrounds in historic costume and preservation techniques of textiles as curators of historic costume and textile collections in museums.

Subject Area Core: Majors take H EC 313, 315, 316, 412, plus 6 credits of related home economics courses and 12 credits from support areas of study.

Food and Nutrition

A major in food and nutrition may be oriented to several professional career options. Career selections might include general dietetics; management of food systems operations; food promotion programs in industry; careers in consumer services with businesses, industry or government; recipe development or food editorships in the mass media. Students may also combine the career option of Home Economics Education and Community Service with an emphasis in foods and/or nutrition.

Academic requirements for membership in the American Dietetic Association under General Dietetics Plan IV may be met by selecting courses as follows:

*Demonstrated competency in mathematics is required, either by an ACT score of 19 or above or by electing a mathematics or applied mathematics course deemed appropriate by the student and adviser.

Core or General Education Requirements:

Natural sciences and mathematics: BIOL 101, 262, 263 and 306; CHEM 101, 142; B CH 301 or 405-406; MATH 110.
 Social Sciences: SOC 101; EC 101 or 102; ANTH 205; or H EC 438.

Individualized Program:

Home Economics Courses: H EC 223, 225, 320, 321, 420, 423, 426.
 Other Courses Required: MGRS 301 or 323; CAPS 330.
 Optional Courses: SOC 327 or I S 250; PSY 210 or AG 270.

Academic requirements for careers in food production programs include core requirements, plus:

Natural science courses: BIOL 306 and 406.
 Social science courses: at least one course in cultural anthropology
 Home Economics courses: H EC 223, 225, 320, 321, 322, 325, 340, 422 (minimum 3 credits), 423
 Other required courses: A SC 203; PHYS 101; at least one course in journalism.

For those students combining home economics education and community services with an emphasis in foods and/or nutrition, the academic requirements include those listed under home economics education and community services plus H EC 340, and the selection of courses listed for a foods emphasis or nutrition emphasis as follows:

Home Economics courses (foods emphasis): H EC 223, 225, 320, 321, 322, 325, 423
 Home Economics courses (nutrition emphasis): H EC 223, 225, 421, 422 (minimum of 3 credits), 426

Home Economics in Business

The major combines home economics courses of major interest with courses in business, advertising, public relations, and consumer behavior to prepare for a career in food production, distribution or processing, equipment, clothing, home interior products, or consumer education.

Home Economics Education and Community Service

Students emphasizing education in home economics qualify for any number of positions where home economics subject matter is taught to youths and adults. Many are employed in schools and certified to teach in vocational programs, and kindergarten through adult education; and other work with children and families in extension, social agencies, and businesses.

The program includes EDFM 101 and CAPS 330 and 400, C I 409, H EC 347, 438 (3 credits), 449, 457, or 470, and passage of skill tests in clothing construction and in food preparation. Students wishing to be certified in home economics occupational areas must verify two years of occupational employment in a position related to a career cluster to be taught.

A total of 45 credits, including the home economics core course credits, must be taken in

five areas of home economics subject matter. Listed below are courses in areas in which competence must be gained.

- I. *Food and Nutrition:* H EC 223, 225, 321, 322, 325, 422 and 423.
 Pass an examination of food preparation.
- II. *Clothing and Textiles:* H EC 210, 211, 212, 315, 316, and 410.
 Pass an examination on clothing construction.
- III. *Housing and Home Furnishings:* H EC 251, 353, 355, and 453.
- IV. *Child Development and Family Life:* H EC 131, 231, 233, 294, 430, 431, and 436.
- V. *Consumer and Family Economics and Management:* H EC 341.

Shelter and Environment

The major in shelter and environment may focus on either interior design or housing.

The option in *Interior Design* combines courses in home economics with art, business, architectural engineering technology, landscape design, and renewable natural resources to prepare for a career in residential or commercial interior design, education, or retailing or wholesaling products related to the industry.

Subject Area Core: Majors take H EC 251, 353, and 355, plus 12 credits of related home economics courses and 9 credits from support areas of study.

Careers in *housing* require a knowledge of the social, political, economic, and aesthetic aspects of housing and the near environment. Career opportunities include working in government agencies and businesses which have an interest in city and regional planning, home financing, design, environmental impacts and/or social issues affecting lifestyles.

Suggested Minors for Non-Home Economics Majors

Home Economics—The number of credits to be taken is 18 to 24 depending upon the requirements of the college from which the student is receiving the baccalaureate degree. At least one course is to be taken from each group shown below. Remaining credits may be completed by choosing any home economics course(s) listed in the catalog.

<i>Group I:</i>	<i>Credits</i>
H EC 210-Clothing Construction	4
H EC 271-Clothing	4
<i>Group II:</i>	
H EC 121-Human Nutrition	3
H EC 172-Food and People	4
H EC 225-Principles of Food Preparation	3
<i>Group III:</i>	
H EC 275-Shelter and Environment	4
H EC 355-Home Furnishings	3
<i>Group IV:</i>	
H EC 131-Child Development:	
Prenatal to Six	3 or 4
H EC 231-Child Development:	
Six through Adolescence	3 or 4
H EC 274-The Individual and the Family	4 or 5
H EC 431-Middle and Later Life	2 or 3

Group V:

H EC 341-Personal Finance	3
H EC 371-Family Economics and Management	4

Home Economics Education—A teaching minor in home economics consists of 24 total credits, including H EC 347, Teaching Home Economics, 3 credits. Students must elect at least one course from each of the five groups listed above.

A minor in home economics enables an education major to teach home economics in a non-vocational program.

The Family—The number of credits to be taken is 18 to 24 depending upon the requirements of the college from which the student is receiving the baccalaureate degree. Courses may be selected from any of the following:

	<i>Credits</i>
H EC 121-Human Nutrition	3
H EC 131-Child Development:	
Prenatal to Six	3 or 4
H EC 231-Child Development: Six through Adoles-	
cence	3 or 4
H EC 233-Practicum with Children and Families	3 to 5
H EC 274-The Individual and the Family	5
H EC 430-Human Sexuality	3
H EC 431-Middle and Later Life	2 or 3
H EC 432-Preschool for Special Children and Their	
Families	3 or 4
H EC 434-Parent Education in Family Life	3
H EC 438-Children and Families in a Multiethnic	
Society	1 to 3
H EC 439-Theoretical Preschool Models	3
H EC 441-Advanced Child Development	3

Shelter and Environment—The number of credits to be taken is 18 to 24 depending upon the requirements of the college from which the student is receiving the baccalaureate degree. Courses may be selected from any of the following:

	<i>Credits</i>
H EC 151-Design	2 or 3
H EC 251-Delineation in Housing	3
H EC 275-Shelter and Environment	4
H EC 353-History of Furniture	3

H EC 355-Home Furnishings	3
H EC 453-Economic Aspects of the Housing	
Environment	3
H EC 454-Interior Design-Materials and Techniques	3
H EC 456-Interior Design Studio	3

Graduate Study

A master of science degree is offered with a major in home economics. Students may specialize to a limited extent through the area chosen for the thesis or professional paper. Course work must include H EC 790, Graduate Seminar, and H EC 791, Research Methods in Home Economics.

If the candidate selects the thesis plan, 24 credits in graduate course work and 6 credits of research for the thesis are required. The program must include a minimum of 15 credits in courses numbered 700 or above, excluding the thesis credits. A thesis may be undertaken in one of the areas in which faculty members have research experience and must be part of an approved research project. At present, these areas include child development/family life, clothing and textiles, human nutrition, family and consumption economics, housing, and home economics education.

If the candidate selects the nonthesis plan, 32 graduate credits are required, including a minimum of 15 credits in courses numbered 700 or above. As a part of the minimum requirements, a professional problem resulting in a professional paper must be completed. For admission to the nonthesis plan, a candidate must have a minimum of two years of professional experience in home economics or an allied field.



School of Medicine

Robert M. Daugherty, Jr., M.D., Ph.D., *Dean*

The School of Medicine helps foster the maintenance of good health and the prevention of disease by providing education and clinical training for health professionals throughout the state.

In 1978, the school expanded from a two-year basic sciences program to a fully accredited four-year program leading to the doctor of medicine degree. In 1979, postgraduate residency training programs were instituted in three primary care areas—pediatrics, family and community medicine and internal medicine—and in 1980, the school graduated its first class of physicians trained completely in Nevada.

In 1981, affiliated residency programs in surgery and obstetrics and gynecology were added to the graduate curriculum.

The curriculum emphasizes both the biomedical and behavioral sciences basic to medicine and provides for an early introduction to patients and clinical problems. Students are encouraged to think in a problem-solving context and to use independent learning techniques whenever possible. Close coordination of the biomedical and clinical sciences provides insight into the social and personal factors which influence disease and the role of the doctor-patient relationship as it affects diagnosis and treatment.

Other important programs include medical technology, and speech pathology and audiology. A common core curriculum is offered by an interdisciplinary faculty for these programs.

Baccalaureate Degree Programs

The School of Medicine offers a bachelor of science degree with majors in medical technology and speech pathology or audiology. The clinical training and practicum associated with these fields are fully integrated with the school's curricular structure, and students may earn their baccalaureate degrees by completing:

1. A total of 128 credits in required and elective courses. Of the 128 credits, a maximum of 8 credits of combined courses in recreation and physical education and military science (below 300-level) may apply.

2. A minimum of 40 credits in courses numbered 300 or above.

3. The university requirements for English and United States and Nevada Constitutions.

4. The general university requirements regarding minimum GPA and resident credit.

The number of credits taken on an S/U basis may not exceed 30. These courses may not be taken within the required areas.

In addition, a bachelor of science degree with a major in medical sciences is offered for medical students who enter after three years of university level study. The major may be completed during the two year basic sciences curriculum provided all university and school requirements are satisfied during that time.

Medical Technology

The medical technology curriculum is designed to provide the student with the knowledge and skills required to perform diagnostic procedures in the clinical laboratory. The course of study includes a selected base of subject matter to give the student a broad background in physical, chemical, and biological concepts fundamental to the field of laboratory medicine. Emphasis is placed on the role of the medical technologist in modern health care delivery.

Students who wish to pursue a career in medical technology are classified premajors upon admission to the university. University required courses for graduation, and all prerequisite courses for the major should be taken during the premajor period.

Premajor Curriculum

<i>University Required Courses</i>	<i>Credits</i>
ENGL 101—Composition I	3
ENGL 102—Composition II	3
P SC 103—Principles of American Constitutional Government or HIST 111—Survey of American Constitutional History	3

<i>Prerequisite Courses</i>	<i>Credits</i>
B CH 302—Introductory Biochemistry II	3
BIOL 101—General Biology	3
BIOL 262, 263—Human Anatomy and Physiology I, II	6
BIOL 303—Human Genetics	3
BIOL 306—Microbiology	4
CHEM 101, 102—General Chemistry	8
CHEM 243, 244—Organic Chemistry	6
CHEM 330—Analytical Chemistry	4
MATH 102 (if no high school Trig)—Plane Trigonometry	2
MATH 110—College Algebra	3
MEDT 111—Medical Terminology	1
PHYS 151, 152—General Physics	6

<i>Major Curriculum</i>	<i>Credits</i>
MEDT 301 Biometry (1 + 0 or 2 + 0)	1-2
MEDT 311 Hematology, Clinical Microscopy & Body Fluids (3 + 0)	3
MEDT 312 Hematology, Clinical Microscopy & Body Fluids Laboratory (0 + 6)	2
MEDT 321 Immunohematology (2 + 0)	2
MEDT 322 Immunohematology Laboratory (0 + 3)	1
MEDT 331 Clinical Microbiology I (3 + 0)	3
MEDT 332 Clinical Microbiology I Laboratory (0 + 6)	2
MEDT 333 Clinical Microbiology II (3 + 0)	3
MEDT 334 Clinical Microbiology II Laboratory (0 + 6)	2
MEDT 411 Advanced Hematology (1 + 0)	1
MEDT 412 Advanced Hematology Laboratory (0 + 3)	1
MEDT 421 Clinical Chemistry I (3 + 0)	3
MEDT 422 Clinical Chemistry I Laboratory (0 + 6)	2
MEDT 423 Clinical Chemistry II (3 + 0)	3
MEDT 424 Clinical Chemistry II Laboratory (0 + 3)	1
MEDT 431/631 Immunology (3 + 0)	3
MEDT 432/632 Serology Laboratory (0 + 3)	1
MEDT 441 Pathophysiology for Medical Technologists (1 + 3)	2
MEDT 451 Clinical Practicum (1 + 3/credit)	15

Students who achieve an overall GPA of 2.5 or higher, and who complete each prerequisite course with a grade of C or better, are eligible to apply for acceptance to the medical technology major. Applications are reviewed by the medical technology faculty and students are accepted on the basis of academic achievement and space available in the program.

Students who do not meet the above criteria for acceptance may appeal to the Medical Technology Advisory Council for provisional consideration. Transfer students are considered by means of interview and transcript evaluation to determine equivalence of prerequisite course content.

Once admitted to the major, students must maintain a GPA of 2.5 or higher and must earn a grade of C or better in each major course to satisfy minimum graduation requirements. Any exception to this policy requires the approval of the Medical Technology Advisory Council. Students who do not meet minimal objective articulated standards relating to didactic knowledge, psychomotor skills, and behavioral aptitude, as these relate to professional performance in the clinical laboratory at any time during the major, must petition and receive approval from the Medical Technology Advisory Council to remain in the program.

During the final six months in the program, the student enrolls in the clinical practicum and, upon the recommendation of the Medical Technology Placement Committee, is assigned to an affiliated hospital laboratory. Successful completion of this course includes satisfactory performance in all clinical laboratory disciplines and passing scores on all sections of the comprehensive examination given at the end of the practicum.

The program is fully accredited by the Council on Medical Education of the American Medical

Association with approval for 30 students per year. Students who satisfactorily complete the program and obtain a baccalaureate degree may be eligible to take the generalist certification examinations for medical technologists given by various certifying agencies.

For further information concerning the medical technology curriculum, contact the Program Director, Room 300, Mackay Science Building.

Speech Pathology and Audiology

The baccalaureate degree program with a major in speech pathology (including an option in audiology) is a *preprofessional* program. A master's degree is considered essential for *professional* competence. A minimum of 38 credits in speech pathology and audiology and 125 clock hours of supervised practicum with individuals who present a variety of communicative disorders is required. In addition, 20 credits in related areas such as anthropology, nursing, psychology, special education, linguistics, sociology, or semantics must be completed, and each student must demonstrate adequate ability to work with children having articulation and language disorders.

<i>Required Courses in SPA</i>	<i>Credits</i>
SPA 259-Phonetics	3
SPA 310-Speech and Language Development	3
SPA 356-Survey of Speech Pathology	3
SPA 357-Communication Science	3
SPA 359-Assessment of Communication Disorders	3
SPA 360-Methods of Clinical Management	3
SPA 361-Articulation Disorders	3
SPA 362-Introduction to Audiology	3
SPA 363-Practicum in Speech Pathology	4-8
or	
SPA 463-Internship in Speech Pathology and Audiology	6-8
SPA 466-Aural Rehabilitation	3
SPA 467-Language Disorders in Children	3
SPA 459-Seminar in Clinical Procedures	2

All majors are required to have their programs approved by a faculty adviser within the Speech Pathology and Audiology Program.

For additional information on the baccalaureate program in speech pathology, contact the Program Director, Room 108, Mackay Science Building.

Master of Science Degree Program

Speech Pathology and Audiology

General Requirements for Admission

The master's degree program is designed to provide a professional level of competency in speech pathology and audiology. Each applicant must meet the general admission requirements

for graduate standing as described in the Graduate School section. Each student is expected to complete a concentration of course work in speech pathology and audiology, subject to approval of the department, prior to admission to graduate standing.

Course work

A minimum of 33 credits must be completed at the graduate level. The thesis program, Option A, requires a minimum of 27 course credits plus 6 credits of thesis, and a comprehensive oral examination covering the thesis and background information.

The nonthesis program, Option B, requires a minimum of 33 course credits. A comprehensive oral and written examination covering communication science, the normal speech and hearing processes, pathologies, and clinical procedures is given to each student early in the last semester of course work. A student completing the program with a master's degree should plan to acquire the background and experience necessary to pass the American Speech Language and Hearing Association national examination to be recognized and certified as a competent speech pathologist or audiologist. Graduate students must complete a minimum of 150 clock hours of supervised clinical experience at the graduate level.

An approved program in speech pathology and audiology is developed by the graduate adviser, supervising committee, and the student, from the following courses:

	<i>Credits</i>
SPA 659-Seminar in Clinical Procedures	2
SPA 660-Aspects of Speech Pathology and Audiology	1
SPA 661-Advanced Speech Pathology	2
SPA 663-Internship in Speech Pathology and Audiology	6-8
SPA 664-Practicum in Audiological Testing	2
SPA 665-Medical Audiology	3
SPA 666-Rehabilitation for Hearing Handicapped	3
SPA 667-Language Disorders in Children	3
SPA 720-Introduction to Graduate Study	3
SPA 721-Craniofacial Disorders	3
SPA 751-Dysphasia	3
SPA 752-Stuttering	3
SPA 753-Communication Disorders in the Cerebral Palsied	3
SPA 754-Seminar in Physical Anomalies	2
SPA 757-Experimental Phonetics	3
SPA 759-Seminar in Clinical Procedures	2
SPA 762-Disorders of Voice	3
SPA 765-Advanced Audiology	3
SPA 767-Advanced Practicum	2
SPA 768-Seminar in Audiology	3
SPA 769-Seminar in Audiological Measurements	2
SPA 794-Workshops and Institutes	1-3
SPA 780-Independent Study	1-3
SPA 797-Thesis	1-6

All students must have their programs approved by a departmental graduate adviser.

For additional information on the graduate

program in speech pathology and audiology, consult the Program Director, Room 108, Mackay Science Building.

Graduate Programs in Biochemistry

Advanced degrees are offered at the master of science and the doctor of philosophy levels and may be pursued under the direction of the graduate faculties in the College of Agriculture, College of Arts and Science, or School of Medicine. Since requirements are determined by the Graduate School and not by the individual colleges, they are identical and are shown under Graduate Offerings from the College of Agriculture.

Four-year Medical School Program

General Information

The School of Medicine at the University of Nevada Reno was established in 1969 as a two-year basic sciences program and was authorized to convert to a four-year, M.D. degree-granting school in 1977 by the Nevada State Legislature. In 1980, the school graduated its first class of physicians trained completely in Nevada.

The school emphasizes the development of primary care physicians who will provide comprehensive and longitudinal health care, meeting the needs of the individual, the family and the community. The school is dedicated to selecting and training individuals who will provide health care with both competence and compassion.

Classes, laboratories and clinical activities take place in a combination of on-campus buildings and community health facilities. Through affiliation agreements with hospitals located throughout Nevada, students have access to clinical facilities totaling nearly 2,000 beds.

Curriculum

The first two years of this curriculum place emphasis on biomedical and behavioral sciences basic to medicine. Basic science disciplines are often integrated with each other and with clinical material toward a clear and meaningful understanding of the major organ systems of the body. The curriculum encourages the student to think in terms of problem solving and to utilize independent learning techniques whenever possible. Behavioral objectives provide students with guidelines for each learning experience. An integrated course in clinical and biomedical sciences follows the core curriculum. Preceptorships with physicians throughout Nevada offer students additional clinical experience.

The third and fourth years of the curriculum include clerkships and electives in family and community medicine, internal medicine, obstetrics and gynecology, pediatrics, psychiatry and surgery. The curriculum is oriented toward the education of primary care physicians. Clinical training occurs in a number and variety of community-based hospitals. Thus, the third and fourth year's education is divided among Reno, Las Vegas and rural Nevada. Postgraduate training at present consists of residency programs in family and community medicine, internal medicine, pediatrics, and affiliated hospitals programs in surgery and obstetrics and gynecology.

Requirements for Entrance

Since the medical school utilizes the centralized application service of the Association of American Medical Colleges (AAMC), students must submit their applications through the American Medical College Application Service (AMCAS). AMCAS applications may be obtained from the AAMC, 1776 Massachusetts Avenue, Northwest, Washington, D.C. 20036. On completion, the application must be returned directly to AMCAS. Deadline is November 1.

The new MCAT is required. This exam is offered only twice a year, once in the spring and once in the fall. Applications may be obtained by contacting Office of Counseling and Testing, Pre-Med Office or Office of Medical School Admissions. A minimum of three years of college work (90) semester credits is normally required. Under exceptional circumstances, 60 semester credits may be accepted. However, the student selection committee strongly recommends completion of a baccalaureate degree.

Requirements for application include:

	<i>Semester Credits</i>
Chemistry (including organic)	16
Biology	16
Physics	8
Behavioral Sciences*	9

In addition, a facility in English composition and expression is required. Generally, students are expected to satisfy the English composition requirements of their undergraduate institution. Students are encouraged to utilize courses in human growth and development, abnormal psychology, or medically oriented sociology in fulfillment of the behavioral science requirement. The following supplementary courses are recommended as useful to the study or practice of medicine but are not required for admission: calculus, biochemistry, genetics, and embryology.

Selection Factors

Candidates are evaluated on the basis of academic performance, performance on the new MCAT (which should be taken in spring prior to making application), the nature and depth of scholarly and extracurricular activities during college years, academic letters of evaluation, and the personal interview if requested by the Student Selection Committee. A high priority is given to residents of Nevada. Generally the remaining successful applicants have been residents of states participating in the WICHE program, particularly residents of states without medical schools. Applicants from states other than those involved in the WICHE program are discouraged from applying to the University of Nevada.

<i>First Year</i>		<i>Credits</i>
B CH 401 Human Biochemistry		9
ANAT 401 Human Anatomy		9
PCHY 401 Human Behavior I		3
PHSY 401 Medical Physiology I		6
PHSY 402 Medical Physiology II		5
ANAT 402 Human Neuroanatomy		4
MICR 401 Medical Microbiology		9
PCHY 460 Introduction to Clinical Medicine		3
FCM 470 Introduction to Clinical Medicine		2
		50

<i>Second Year</i>		<i>Credits</i>
PHAR 401 Medical Pharmacology I		7
PATH 401 General Human Pathology		4
PATH 402 Systemic Human Pathology		6
PHAR 402 Medical Pharmacology II		4
PATH 403 Laboratory Medicine		4
PCHY 402 Human Behavior II		4
FCM 473 Physical Diagnosis		2
FCM 476 Community Health		2
12 Week Integrated Module (currently being developed)		
		33

<i>Third Year</i>		<i>Credits</i>
MEDI 451 Clerkship		12
SURG 451 Clerkship		12
OBGY 451 Clerkship		8
PEDI 451 Clerkship		8
PCHY 451 Clerkship		8
FCM 451 Clerkship		8
		56

Students are required to pass Part I of the National Board of Medical Examiners examination before spring semester of the junior year.

Fourth Year

Building on the three previous years, the curriculum of the fourth year covers 32 required weeks and is made up of selective-elective clinical experiences, as arranged between the individual student, adviser, clinical adviser, and appropriate chairmen of the various clinical departments of the school. Included in the 32 weeks are four

*Three credits of the behavioral science requirement must be upper division.

weeks of a required rural preceptorship, which offer opportunities of most of the clinical areas in a rural setting, and 24 weeks of strictly clinical electives. The advisory system insures that students are guided to take account of both career choices and to secure additional experiences in areas needing any remediation.

Students must pass the Part II exam administered by the National Board of Medical Examiners in order to graduate with an M.D. degree.

Departments and Faculty

The School of Medicine has six basic science and six clinical science teaching departments. Interaction among the sciences provides a well-balanced approach to health care education.

Anatomy

Faculty: Highison, Schneider (Ch.), Stratton, Tibbirtts, Wakefield

Biochemistry

Faculty: Blomquist, Dreiling, Heisler, R. Lewis, Pardini (Ch.), Reitz, Welch, Winicov

Family and Community Medicine

Faculty: M. Baldwin, Bernheimer, Bonar, Bowen, Carmichael, Coughlin, Crow (Ch.), Delionback, Elam, J. Evans, Hilbish, Kotnik, Mammen, St. Jeor, Stouder, Thornton, Weiss, Wolfe

Clinical Faculty: G. Anderson, Antone-Knoll, H. Davis, A. Dimitroff, Dingacci, Gilman, Gummer, Hazeltine, Hendrick, Hess, D. Johnson, J. Johnson, Jonak, Karch, Khan, Knutson, C. Lewis, Moren, O'Shaughnessy, Peters, Pierczynski, Roche, Rock, Saunders, Shreck, Silver, W. Smith, Stoloff, Sykes, Wainscott, Wicker, B. Wilkin, J. Wilkin

Internal Medicine

Faculty: Bennett, Bernstein, Bigley, Busby, R. Daugherty, S. Daugherty, Desai, Ellerton, Graze, Groshong, Hall, Humphrey, Kaufman, Kiley, Kurtz, MacKintosh, Marlon, Mazzafetri (Ch.), Noble, Peacock, Peck, N. Pokroy, Quinn, Shankel, Speck, Stewart, Symonds, C. Walker, Whipple

Clinical Faculty: Adams, Adkisson, J. Atcheson, Baggett, Barnet, Belcourt, Bentley, Berndt, Boulware, Brady, Bross, D. Brown, Browning, Buckley, Calvanese, Cameron, Carmena, Chanderraj, P. Clark, R. Clark, Crist, Cryer,

Debellis, DiFiore, Diedrichsen, P. Dieringer, Edwards, Falk, Fazekus, Feld, Forsythe, Fuller, Gagliano, Ganchan, Gansert, Gardner, Grenn, Hamlin, D. Handke, Hardwick, Harris, Hogle, Hulugalle, Hunter, P. Jacobs, T. Jacobs, M. Johnson, Jones, Jorna, Joya, Kantor, Klein, Knutson, LaMancusa, Landow, LoCicero, McKinnon, Maher, Moore, Myles, Nagy, Newmark, Nunez, Obeid, Peterman, Postman, Prupas, Quagliana, Quereshi, Read, Reagan, D. Roberts, F. Roberts, Rothstein, Sage, Savran, Schiff, Shapiro, Song, Standlee, Stanzler, Strong, Treanor, Tucker, Turer, G. Walker, Weigel, Williamson, G. Wilson, Young, Zebrack, Zucker

Laboratory Medicine and Pathology

Faculty: Cunningham, Lindner, Manalo-Sears, R. Rojas, Schneider (Actg. Ch.)

Clinical Faculty: Anes, Barger, Butler, Callister, Decker, Diamond, Gauthier, T. Hall, Jensen, Laubscher, Malin, Malvin, Manilla, Mulkey, Potter, Riley, Ritzlin, W. Russell, Salvadorini, Schrader, Sewell, Slaughter, Sohn, Stouder, Tenney, Verdi, Wever, Wilkes

Medical Technology

Faculty: Kiehn, Maehara, Wakayama, Wise (Prog. Dir.)

Microbiology

Faculty: C. Hall, M. Hall, Hermerath, Kozel (Ch.), Lupan, St. Jeor

Obstetrics—Gynecology

Faculty: Bloodworth, Brenner (Ch.), J. Clark, Flanagan, Furman, L. Kelly, W. Robinson, J. Rojas, Sheld, Sherwood, Small, Stapleton, Tayengco, Wisted

Clinical Faculty: K. Allen, Ames, Anes, Avery, Belliveau, D. Bennett, Bodensteiner, Bossak, Bower, A.W. Carlson, Chamlian, Crandall, Feldman, Glick, Gurovsky, Huneycutt, Knutzen, Kurlinski, Martell, Mullis, Proctor, W. Ramos, Richert, Rueckl, Sher, R. Stewart, Stitt, Strimling, K. Turner, Van Buren, Voyevodka

Pediatrics

Faculty: Bonar, Diedrichsen, Dudding (Ch.), Frank, Fricke, Maestretti, Missall, Monibi, Pemberton, Peterson, Pickering, M. Pokroy, Rothstein, Scully, Shapiro, Tetzlaff, Torch, Walker, Zucker

Clinical Faculty: Berger, Carr, E. Cortez, W. Evans, Feldman, Kurlinski, Stoker

Pharmacology

Faculty: Bjur, Pardini (Actg. Ch.), Van Remoortere

Physiology

Faculty: Bach, C. Colton, J. Colton, Cooke, R. Daugherty, Mazzaferrri, Standish, Wade, Wood (Ch.)

Psychiatry and Behavioral Sciences

Faculty: Altrocchi, Antonuccio, D. Baldwin, M. Baldwin, Blurton, Chappel, Chatham, Danton, Dillon, Halvorsen, Lynn, May, Miller, Monagin, Pauly, Peterson, Sheehan, Small, A. Smith, Terry, Veach

Clinical Faculty: Andrew, Bajor, Bhoothalingom, Brandenburg, Cardillo, Carlin, Couvillion, Dudley, Foster, Gerow, Gould, Gutride, Hiller, Howle, Jankovich, Jensen, Luke, Magin, Mayville, Molde, Nims, O'Rourke, Orchow, Rasul, Rich, Richert, Richnak, Thornton, Ulm, Weiher, Young

Visiting Faculty: D. Smith

Speech Pathology and Audiology

Faculty: Fujiki, Gearhart, Lavorato, Levin, McFarlane (Ch.), McGuinness, Morros

Clinical Faculty: Brinton

Surgery

Faculty: Batdorf, Bomberger, Broadbent, Buerk, Dales, DePalma (Ch.), Edmiston, K. Lewis,

Mack, McGregor, Rosenauer, Rydell, Wilburn

Clinical Faculty: Anderson, Banich, Barnes, Black, Boyden, Brady, Brophy, Bruce, Bryant, Buchwald, H.T. Cafferata, Cammack, Cavell, Cecchi, D. Christensen, G.N. Christensen, Christian, Clark, Clift, Colgan, Collett, Coppola, Cunningham, Curry, Dawson, Dooley, Dow, Ellis, Feikes, Fisher, Fleming, Follmer, Gainey, Grace, Greenberg, Greenwald, Guisto, Halvorson, Hammargren, Harris, Hastings, Hetter, Hood, Iliescu, Isaac, Kaiser, Kavanagh, Keeler, Khan, Kien, Knoop, Kundson, Kollins, Kremp, Learey, Levy, Lewin, Lurie, Maclean, Mast, McClintock, McClish, McCuskey, Megquier, Merchant, Miercort, Miller, Moore, Morelli, Mousel, Nielsen, Nitz, Owen, Pearlman, Pratt, Prentice, Pretto, Prutzman, Reinkemeyer, Ritchie, Sande, Sargent, Schonder, Schultz, Selsnick, Serfustini, Shearing, Shonnard, Smith, Stevens, Stovall, Strand, Svare, Tappan, Teipner, Thompson, Vowles, Walker, West, Williams, Woodruff

Health Careers for American Indians Program

Faculty: D. Baldwin (Dir.), Gray, Jones, Rowley

Medical Library

Faculty: Francisco, Zenan (Dir.)

Office of Rural Health

Faculty: D. Baldwin (Asst. Dean), Rowley



Mackay School of Mines

James V. Taranik, *Dean*

Departments of Instruction: chemical and metallurgical engineering, geological sciences, and mining engineering.

Objectives

The Mackay School of Mines offers professional training in the various fields within the earth sciences, chemical engineering, and mineral technologies and prepares the student to compete successfully in related industrial fields. Although professional training is stressed, courses necessary to a well-rounded general education are built into the curricula.

Students who enter the school should possess a serious purpose, willingness to do consistently hard work, and demonstrated ability and interest in scientific subjects. If the above qualifications and aptitudes are lacking, it is not advisable for the student to undertake the study of any of the curricula offered in the school.

Auxiliary Organizations

The Mackay School of Mines provides diversity in fields of instruction, large numbers of part-time and permanent jobs, availability of modern and sophisticated equipment, and extensive study resources in the Mackay School of Mines Library. The Nevada Bureau of Mines and Geology, Nevada Mining Analytical Laboratory, and Seismological Laboratory are the research and public service divisions of the Mackay School of Mines and share facilities in the same building complex. Teaching staff and laboratory facilities are augmented through programs conducted in cooperation with the Water Resources Center and the U.S. Bureau of Mines, both of which have large research centers on or near the campus. Close contact is also maintained with other related state and federal agencies as well as over 60 geological, exploration, engineering, metallurgical, mining, and petroleum companies having offices in the Reno area.

Degrees

The student may graduate in any of the curricula offered by the school as listed at the time of

admission or graduation. The choice of electives must meet the approval of the department in which he or she is enrolled, and, in general, electives should be chosen to broaden the student's education in humanities and social studies or fields of study related to the major subject rather than to increase specialization in it. Undergraduate degrees are usually conferred within a field of concentration.

Required social studies or humanities electives must be selected from the prescribed list of courses available in the office of the dean.

Students desiring to pursue an academic minor follow the sequence of courses prescribed by the minor department and approved by the student's academic adviser.

A baccalaureate student enrolled in the school may earn and apply a maximum of 30 credits of S/U grades only in social studies, humanities, nontechnical electives, and a very few approved technical courses. These may be transferred in or taken at UNR and must be approved by the student's adviser.

The curricula leading to the bachelor of science degrees in geological engineering, metallurgical engineering, and mining engineering are accredited by the Engineer's Council for Professional Development, which is the agency accrediting engineering curricula throughout the United States.

The school offers study programs which enable students to earn the following degrees:

Bachelor of Science

- Chemical Engineering
- Earth Science
- Geology
- Geological Engineering
- Geophysics
- Metallurgical Engineering
- Mining Engineering

Master of Science

- Geology
- Geological Engineering
- Geophysics
- Hydrology and Hydrogeology
- Metallurgical Engineering
- Mining Engineering

Doctor of Philosophy

Geology and Related Earth Sciences
Geophysics
Hydrology and Hydrogeology

Professional Degrees

Professional degrees of geological engineer (Geol.E.), metallurgical engineer (Met.E.), and engineer of mines (E.M.) may be conferred upon graduates of the Mackay School of Mines who have held positions of professional responsibility in industry or teaching and who submit an acceptable thesis of an advanced nature. (See Graduate School section.)

CHEMICAL and METALLURGICAL ENGINEERING (CH E, METE)

Faculty: Akhtar, Hendrix, Jones, E. Miller (Ch.), W. Miller, Reddy, Smith

Adjunct Faculty: Kappes

Baccalaureate Degrees

Chemical Engineering

*Freshman Year
First Semester*

	<i>Credits</i>
CHEM 103-General Chemistry (or CHEM 101)	4
CH E 101-Industry Orientation Lectures	1
ENGL 101-Composition I	3
MATH 215-Calculus I	4
P SC 103-Principles of American Constitutional Government	3
	15

Second Semester

	<i>Credits</i>
CH E 102-Introduction to Metallurgical and Chemical Processing	2
CHEM 104-General Chemistry (or CHEM 102)	4
ENGL 102-Composition II	3
MATH 216-Calculus II	4
PHYS 201-Engineering Physics I	3
PHYS 204-Engineering Physics Lab I	1
	17

*Sophomore year
First Semester*

	<i>Credits</i>
CH E 232-Principles of Metallurgical and Chemical Engineering	3
CHEM 330-Analytical Chemistry	4
MATH 310-Calculus III	4
MINE 213-Computer Programming (or equivalent)	2
PHYS 202-Engineering Physics II	3
	16

Second Semester

	<i>Credits</i>
EC 101-Principles of Macroeconomics (or EC 102)	3
MATH 320-Differential Equations (or M E 300)	2

M E 241-Analytic Mechanics for Engineers	3
METE 350-Elements of Materials Science	3
PHYS 203-Engineering Physics III	3
Social studies or humanities	3
	17

*Junior Year
First Semester*

	<i>Credits</i>
CH E 301-Chemical or Metallurgical Industry Report	1
CH E 361-Thermodynamics	4
CH E 437-Unit Operations I	4
CHEM 353-Physical Chemistry	3
Social studies or humanities	3
Technical electives ¹	3
	18

Second Semester

	<i>Credits</i>
CH E 438-Unit Operations II	3
CH E 441-Unit Operations Laboratory I	1
CHEM 434-Instrumental Analysis	3
CHEM 354-Physical Chemistry	3
CHEM 355-Physical Chemistry Laboratory	2
C E 372-Strength of Materials	3
Social studies or humanities	3
	18

*Senior Year
First Semester*

	<i>Credits</i>
CH E 442-Unit Operations Laboratory II	2
CH E 471-Transport Operation	3
CHEM 243-Organic Chemistry	3
M E 342-Analytic Mechanics for Engineers	3
Technical electives ¹	4
Mathematics technical elective ²	3
	18

Second Semester

	<i>Credits</i>
CH E 440-Kinetics and Catalysis	3
CH E 451-Control of Process Systems	3
CH E 482-Chemical Engineering Design	3
CHEM 244-Organic Chemistry	3
Social studies or humanities	3
	15

Total credits required, 134. Military science courses numbered below 300 and recreation and physical education courses do not apply to this total.

Metallurgical Engineering

Opportunity for a limited amount of initial specialization in extractive or chemical metallurgy and mineral dressing is provided for by 16 credits of technical electives in the senior year. These are to be selected in consultation with the student's adviser and approved by the department chairman. A total of 30 credits is required in metallurgical engineering courses or related technical electives.

¹Technical electives may be selected in a field of special interest to the student; they must be approved by the adviser and the department chairman.

²The courses in the mathematics technical elective category are: CH E 483, MATH 330, M E 402, 403, and AG 270.

*Freshman Year
First Semester*

	<i>Credits</i>
CHEM 103-General Chemistry	4
ENGL 101-Composition I	3
MATH 215-Calculus I	4
METE 101-Industry Orientation Lectures	1
P SC 103-Principles of American Constitutional Government	3
	15

Second Semester

	<i>Credits</i>
CHEM 104-General Chemistry	4
ENGL 102-Composition II	3
MATH 216-Calculus II	4
METE 102-Introduction to Metallurgical and Chemical Processes	2
PHYS 201-Engineering Physics I	3
PHYS 204-Engineering Physics Lab I	1
	17

*Sophomore Year
First Semester*

	<i>Credits</i>
CHEM 330-Analytical Chemistry	4
MATH 310-Calculus III	4
METE 232-Principles of Metallurgical and Chemical Engineering	3
MINE 213-Computer Programming (or E E 131)	2
PHYS 202-Engineering Physics II	3
	16

Second Semester

	<i>Credits</i>
EC 102-Principles of Microeconomics	3
MATH 320-Differential Equations (or M E 300)	2
M E 241-Analytic Mechanics for Engineers	3
METE 350-Elements of Material Science	3
PHYS 203-Engineering Physics III	3
Social studies or humanities	3
	17

*Junior Year
First Semester*

	<i>Credits</i>
CH E 361-Thermodynamics	4
CHEM 353-Physical Chemistry	3
GEOL 211-Crystallography-Mineralogy	2
MATH 251-Probability and Statistics (or AG 270)	3
METE 451-Physical Metallurgy	3
Social studies or humanities	3
	18

Second Semester

	<i>Credits</i>
CH E 440-Kinetics and Catalysis	3
CHEM 354-Physical Chemistry	3
C E 372-Strength of Materials	3
MEIE 301-Chemical or Metallurgical Industry Seminar	1
METE 322-Mineral Dressing I	4
Social studies or humanities	3
	17

*Senior Year
First Semester*

	<i>Credits</i>
CH E 437-Unit Operations I (or CH E 471)	3-4
E E 375-Electrical Circuits and Machines	3
METE 311-Metallurgical Analysis	1

METE 332-Unit Processes of Chemical Metallurgy I	3
Technical electives ¹	7
	17-18

Second Semester

	<i>Credits</i>
CH E 451-Control of Process Systems	3
METE 431-Unit Processes of Chemical Metallurgy II	3
METE 482-Metallurgical Engineering Design	3
Social studies or humanities	3
Technical electives ¹	6
	18

Total credits required, 134. Military science courses numbered below 300 and recreation and physical education courses do not apply to this total.

Advanced Degrees

The department offers individual programs leading to the degree of master of science in metallurgy and in metallurgical engineering in the fields of extractive or chemical metallurgy and mineral dressing. The general university requirements for these advanced degrees are listed in the Graduate School section.

To be accepted as a graduate student, a bachelor's degree from an accredited college or university is required. For full graduate standing, at least 30 credits of undergraduate work in metallurgy, chemical engineering, and/or related science must have been completed. In addition, the student must qualify in at least one of the following requirements: (1) GPA of 2.5 in the four years of undergraduate work, (2) GPA of 3.0 for the last two years of undergraduate work, or (3) acceptable scores on the verbal and quantitative parts of the Graduate Record Examination aptitude test, with letters of recommendation from former instructors indicating capability for advanced course work and research.

Prospective students are advised to write directly to the chairman, Department of Chemical and Metallurgical Engineering, with an outline of major interests, experience and transcripts. Formal application is completed through the Office of Admissions and Records.

The department has several graduate fellowships, research assistantships, and teaching assistantships. Requests for assistance should be submitted prior to March 15, but all applications will be considered regardless of date of submission.

In order to assure well-balanced training and experience, all graduate students are required to participate in teaching and research.

¹Technical electives may be selected in a field of special interest to the student; they must be approved by the adviser and the department chairman.

GEOLOGICAL SCIENCES (GEOL)

Faculty: Campana, Case, Cochran, Erwin, Fenske, Firby, Hess, Hibbard, Hsu, Jacobson, L. Larson (Ch.), Lintz, Mifflin, Noble, Ryall, Slemmons, Watters

Adjunct Faculty: Melhorn

Baccalaureate Degrees

The curricula leading to the degree of bachelor of science include earth science, geology, geological engineering, and geophysics.

Earth Science

The earth science curriculum gives an overview of geography, geology, and related earth disciplines for individuals who do not propose to specialize in one of these fields. By choosing designated courses in education, the student can prepare for a career in secondary education using his earth science background. For students seeking teaching certification, the College of Education should be consulted for prescribed courses.

An emphasis on environment can be achieved by selection of appropriate electives, as suggested below.

Recommended Freshman Year First Semester

	<i>Credits</i>
ENGL 101-Composition I	3
Foreign language*	4
GEOL 101-Physical Geology	4
MATH 102-Plane Trigonometry	2
MATH 110-College Algebra	3
	16

Second Semester

	<i>Credits</i>
Foreign language*	4
GEOG 103-Physical Geography	4
GEOL 102-History of the Earth	4
MATH 265-Elements of Calculus	3
Elective	1
	16

Recommended Sophomore Year First Semester

	<i>Credits</i>
CHEM 101-General Chemistry	4
Foreign language*	2-3
GEOL 211-Mineralogy	2
PHYS 151-General Physics	3
PHYS 153-General Physics Laboratory	1
Elective	3
	15-16

Second Semester

	<i>Credits</i>
CHEM 102-General Chemistry	4
ENGL 102-Composition II	3

Foreign language*	2-3
PHYS 152-General Physics	3
PHYS 154-General Physics Laboratory	1
P SC 103-Principles of American Constitutional Government or HIST 111-Survey of American Constitutional History	3
	16-17

Recommended Junior Year First Semester

	<i>Credits</i>
GEOL 322-Climatology	3
GEOL 160-General Paleontology (or GEOL 461, 4 credits) ..	3-4
GEOL 332-Structural Geology	4
Electives	5
	15-16

Second Semester

	<i>Credits</i>
GEOL 331-Landforms (or GEOL 341)	3
GEOL 335-Conservation of Natural Resources	3
Statistics course	2-3
Electives	8
	16-17

Recommended Senior Year First Semester

	<i>Credits</i>
Electives	16

Second Semester

	<i>Credits</i>
Electives	16-17

Total credits required, 128.

Remaining electives (or total electives in the event teaching certification is not desired) should consist of at least 9 credits in social studies or humanities and 20 credits in technical subjects.

For students interested in environmental studies, the following courses are strongly recommended, with additional technical electives to be selected in consultation with the adviser: ENV 101; BIOL 103 (or 101); GEOG 292 or 335, and 431; CHE 204; PSW 441; MINE 454; and GEOL 480.

Geology

The curriculum leading to the degree of bachelor of science in geology is offered primarily for those students who wish to obtain a broad education in geology and related basic sciences. The proper choice of electives permits the student to emphasize certain phases of geology, such as "hard rock," "soft rock," or environmental studies. These electives must be approved by the adviser.

Freshmen Year First Semester

	<i>Credits</i>
CHEM 101-General Chemistry (or CHEM 103)	4
ENGL 101-Composition I	3
Foreign language*	4
GEOL 101-Physical Geology	4
	15

Second Semester

	<i>Credits</i>
CHEM 102-General Chemistry (or CHEM 104)	4
ENGL 102-Composition II	3

*Foreign language requirement is the same as the College of Arts and Science.

Foreign language*	4
GEOL 102-History of the Earth	4
<hr/>	
	15

*Sophomore Year
First Semester*

	<i>Credits</i>
Foreign language*	2-3
GEOL 211-Crystallography-Mineralogy	2
GEOL 213-Lithology	1
GEOL 215-Elementary Petrology	1
MATH 215-Calculus I	4
PHYS 151-General Physics	3
PHYS 153-General Physics Laboratory	1
Computer course	2-3
<hr/>	
	16-18

Second Semester

	<i>Credits</i>
Foreign language*	2-3
GEOL 212-Ore Minerals	2
Geology elective	2-3
MATH 216-Calculus II	4
PHYS 152-General Physics	3
PHYS 154-General Physics Laboratory	1
<hr/>	
	14-16

*Junior Year
First Semester*

	<i>Credits</i>
GEOL 332-Structural Geology	4
GEOL 341-Geomorphology	3
P SC 103-Principles of American Constitutional Government or HIST 111-Survey of American Constitutional History	3
Social studies or humanities	5
<hr/>	
	15

Second Semester

	<i>Credits</i>
EC 101-Principles of Macroeconomics I (or EC 102)	3
GEOL 450-Field Methods	1
GEOL 469-Stratigraphy and Sedimentation	3
Statistics course	2-3
Social studies or humanities	3
Electives	3
<hr/>	
	15-16

Summer Camp

GEOL 451-Summer Field Geology-(6 credits)

Senior Year

	<i>Credits</i>
GEOL 425-Optical Mineralogy	4
GEOL 461-Invertebrate Paleontology	4
Electives	9
<hr/>	
	17

Second Semester

	<i>Credits</i>
Economic Geology (GEOL 471, 482, or 484)	3-4
Geology elective	3-4
Electives	9
<hr/>	
	15-17

Total credits required, 128. Military science courses numbered below 300 and recreation and physical education courses do not apply to this total.

Geological Engineering

The curriculum leading to the degree of bachelor of science in geological engineering is designed to develop professional abilities in both engineering and the geological sciences. The program provides instruction in both geology and engineering before specialization in the senior year. A geotechnical option in the civil, mining petroleum, and consulting engineering fields, or a resources and environment option, allied to the mineral industries, and environmental planning, may be selected. Technical electives approved by the adviser provide flexibility within either option.

Seniors are required to take the engineers-in-training examination.

*Freshman Year
First Semester*

	<i>Credits</i>
CHEM 101-General Chemistry	4
ENGL 101-Composition I	3
GEOL 101-Physical Geology	4
MATH 215-Calculus I	4
<hr/>	
	15

Second Semester

	<i>Credits</i>
CHEM 102-General Chemistry	4
GEOL 102-History of the Earth	4
MATH 216-Calculus II	4
PHYS 201-Engineering Physics I	3
PHYS 204-Engineering Physics Laboratory I	1
<hr/>	
	16

*Sophomore Year
First Semester*

	<i>Credits</i>
C E 388-Introduction to Engineering Economics	1
C E 389-Probability and Statistics for Civil Engineers	2
EC 101-Principles of Macroeconomics (or EC 102)	3
GEOL 211-Crystallography-Mineralogy	2
GEOL 213-Lithology	1
GEOL 215-Elementary Petrology	1
MATH 310-Calculus III	4
PHYS 202-Engineering Physics II	3
PHYS 205-Engineering Physics Laboratory II	1
<hr/>	
	18

Second Semester

	<i>Credits</i>
ENGL 102-Composition II	3
GEOL 212-Ore Minerals	3
M E 241-Analytic Mechanics for Engineers	3
M E 300-Introduction to Engineering Mathematics	2
P SC 103-Principles of American Constitutional Government	3
Social studies or humanities	3
<hr/>	
	16

*Junior Year
First Semester*

	<i>Credits</i>
C E 372-Strength of Materials	3
GEOL 332-Structural Geology	4
GEOL 483-Geological Engineering I	4

*Foreign language requirement is the same as the College of Arts and Science.

M E 371-Thermodynamics I (or equivalent)	3
MINE 213-Computer Programming	2
<hr/>	
	16
<i>Second Semester</i>	
	<i>Credits</i>
C E 241-Engineering Measurements	3
C E 367-Elementary Fluid Mechanics	3
C E 492-Soil Mechanics	3
GEOL 341-Geomorphology	3
GEOL 469-Stratigraphy and Sedimentation	3
Technical electives*	3

18

Summer Camp
GEOL 451-Summer Field Geology-(6 credits)

Senior Year
(Geotechnical Option)
First Semester

	<i>Credits</i>
ENGR 201-Engineering Communications	3
GEOL 479-Earthquake Engineering	3
GEOL 484-Groundwater Hydrology	3
Social studies or humanities	6

15

Second Semester

	<i>Credits</i>
GEOL 485-Geological Engineering II	4
GEOL 492-Geophysical Exploration	3
Social studies or humanities	3
Technical electives	8

18

Senior Year
(Resources & Environment Option)
First Semester

	<i>Credits</i>
GEOL 425-Optical Mineralogy	4
GEOL 480-Environmental Geology	3
Social studies or humanities	6
Technical Electives*	4

17

Second Semester

	<i>Credits</i>
ENGR 201-Engineering Communications	3
GEOL 471-Ore Deposits	3
GEOL 485-Geological Engineering II	4
GEOL 492-Geophysical Exploration	3
Social studies or humanities	3

16

Total credits required, 138. Military science courses numbered below 300 and recreation and physical education courses do not apply to this total.

Geophysics

The curriculum leading to the degree of bachelor of science in geophysics is offered because of a strong interest among student, industry, and research organizations for trained personnel in such fields as theoretical geophysics, exploration geophysics, and seismology. Basic skills in physics and mathematics, as well as

geology and geophysics, are required for this major. Optional courses are offered for students planning to continue beyond the B.S. degree.

Freshman Year
First Semester

	<i>Credits</i>
CHEM 101-General Chemistry (or CHEM 103)	4
ENGL 101-Composition I	3
GEOL 101-Physical Geology	4
MATH 215-Calculus I	4

15

Second Semester

	<i>Credits</i>
CHEM 102-General Chemistry (or CHEM 104)	4
GEOL 102-History of the Earth	4
MATH 216-Calculus II	4
PHYS 201-Engineering Physics I	3
PHYS 204-Engineering Physics Laboratory I	1

16

Sophomore Year
First Semester

	<i>Credits</i>
ENGL 102-Composition II	3
GEOL 211-Mineralogy	2
GEOL 213-Lithology	1
MATH 310-Calculus III	4
MINE 213-Computer Programming	2
PHYS 202-Engineering Physics II	3
PHYS 205-Engineering Physics Laboratory II	1

16

Second Semester

	<i>Credits</i>
EC 102-Principles of Microeconomics (or MATH 251)	3
GEOL 212-Ore Minerals	2
GEOL 290-Elementary Geophysics and Geodynamics	3
MATH 320-Differential Equations	2
PHYS 203-Engineering Physics III	3
PHYS 206-Engineering Physics Laboratory III	1
P SC 103-Principles of American Constitutional Government	3

17

Junior Year
First Semester

	<i>Credits</i>
GEOL 332-Structural Geology	4
PHYS 351-Mechanics	3
PHYS 355-Physical Electronics	3
Social studies or humanities	3
Technical electives**	3

16

Second Semester

	<i>Credits</i>
GEOL 450-Field Methods	1
GEOL 492-Geophysical Exploration	3
M E 403-Partial Differential Equations in Engineering (or MATH 311)	3

*Technical electives common to both options: C E 493, GEOL 446, 493, MINE 241, 246, 301, 448.

Additional technical electives for Geotechnical Option: GEOL 471, 480.

Additional technical electives for Resources and Environment Option: GEOL 479, 48, 484.

**Technical electives may be selected in a field of special interest to the student; they must be approved by the adviser and the department chairman.

PHYS 352-Mechanics	3
PHYS 356-Electrical Measurements	3
Social studies or humanities	3
	16

Summer Camp

GEOL 451-Summer Field Geology-(3 or 6 credits)

*Senior Year
First Semester*

	<i>Credits</i>
Geology elective (469, 471, 482)	3-4
GEOL 455-Physics of the Earth	3
GEOL 493-Elementary Seismology	3
PHYS 473-Electricity and Magnetism	3
Social studies or humanities	3
	15-16

Second Semester

	<i>Credits</i>
Geology electives (469, 471 or 482)	3-4
GEOL 456-Physics of the Earth	3
GEOL 494-Geophysics and Potential Theory	3
Social studies or humanities	3
Technical electives*	4
	16-17

Total credits required, 130. Military science courses numbered below 300 and recreation and physical education courses do not apply to this total.

Advanced Degrees

The department offers master of science and doctor of philosophy degrees in geology and related earth sciences, geophysics, and hydrology and master of science in geological engineering. The general university requirements for all advanced degrees are listed in the Graduate School section. Additional specific requirements are outlined in the four programs described below.

Foreign Language Requirements

There are no language requirements for the master's degree, but students are urged to begin preparation in languages if work beyond the master's is anticipated.

The basic language requirements for the Ph.D. degree are given in the Graduate School section. In addition, the department requires that the student demonstrate proficiency in translating the technical literature in the field in the language selected.

In some instances, the student's adviser may require a demonstration of ability to read and comprehend the technical literature in a second foreign language.

General Admission Procedures

To be accepted as a graduate student, a bachelor's degree from an accredited college or university is required. For full graduate standing, at least 30 credits of undergraduate work in geology and/or related fields must be completed.

For admission into the master's program, the student must qualify in at least one of the following requirements: (1) GPA of 2.5 in the four years of undergraduate work, (2) GPA of 3.0 for the last two years of undergraduate work, or (3) adequate scores on the verbal, quantitative, and advanced parts of the Graduate Record Examination with letters of recommendation from former instructors indicating capability for advanced course work and research.

The Ph.D. program requires an overall GPA of 3.0 or higher. Provisional admission is permitted with GPA's below 3.0 in exceptional cases. For general requirements, the student is referred to the Graduate School section.

Detailed descriptions of the graduate programs, staff interests, and research facilities are available upon request from the chairman of the Department of Geological Sciences. Prospective students are encouraged to write directly to the chairman, and submit an outline of major interests, experience, and transcripts. Formal application is completed through the Office of Admissions.

The department has a variety of graduate fellowships, research assistantships, and teaching assistantships. Although most requests for assistance should be submitted prior to March 15, many assistantships are awarded at irregular intervals throughout the year and all applications are considered regardless of date of submission.

To assure well-balanced training and experience, all graduate students are required to participate in teaching and research.

Master of Science and Doctor of Philosophy Degrees in Geology; Master of Science Degree in Geological Engineering

The student may work with either a major or major-minor program in geology or geological engineering, whichever is more appropriate to the individual's goals and basic training. In addition to advanced degrees listed below, specialization can include one or more of such fields as active tectonism, earth science, engineering geology, exploration geophysics, economic geology, geochemistry, hydrogeology, mineral explora-

*Technical electives may be selected in a field of special interest to the student; they must be approved by the adviser and the department chairman.

tion, mineralogy, ore deposits, paleontology, petrography and petrology of igneous and metamorphic rocks, sedimentation, seismology, stratigraphy, volcanology, etc. The location of the university campus at the edge of the Basin and Range and Sierra Nevada geological provinces gives it a unique advantage for field or regional studies. The exceptionally complete chemical, geophysical, hydrologic, petrographic, atomic absorption, paleomagnetic, DTA, X-ray, SEM and other facilities make it possible to undertake laboratory studies in geochemistry, geophysics, hydrogeology, mineralogy, mineralization, petrography, and petrochemistry.

Master of Science and Doctor of Philosophy Degrees in Geophysics

Facilities for research in this area include an array of both permanent and portable seismographic stations, refraction and reflection seismic field equipment, and instruments for gravity, magnetic, resistivity, and self-potential studies. Student support is available under a number of research assistantships. Graduate study in this field has centered on both theoretical and practical work in seismology, gravity, and other geophysical fields, taking advantage of the unique character of the Basin and Range and Sierra Nevada regions.

Master of Science and Doctor of Philosophy Degrees in Hydrology

The degrees of master of science and doctor of philosophy may be earned in hydrology in an interdisciplinary program centered in the Geology Department. Advanced degrees in hydrogeology are offered in geology. Entering students should have a bachelor of science degree in agricultural engineering, biology, botany, chemistry, civil engineering, forestry, geography, geology, geological engineering, geophysics, mathematics, renewable natural resources, physics, soil science, zoology, or a related field.

Depending upon the individual's specific goals, an interdisciplinary committee is appointed for each student to establish the appropriate program, which normally includes among the basic courses: hydrogeology, hydrometeorology, engineering hydrology, renewable natural resources, water resources projects, and advanced hydrology.

MINING ENGINEERING (MINE)

Faculty: Kim, Mousset-Jones, Scheid, Taylor (Ch.)

Baccalaureate Degrees

The department offers courses in mine design, mining technology, computer applications to operations control and management, environmental concerns, industrial safety and health, and mineral economics. The curriculum is arranged to provide a broad basic background for a modern mining engineer, as preparation either for industrial employment immediately after graduation or for further advanced study. The department maintains close liaison with state and federal bureaus of mines and with the mineral industry. Field excursions are arranged during the academic year, and students are required to take up paid employment in the minerals industry during at least one summer vacation. Some cooperative work-study programs are arranged for this purpose.

The Professional EIT examination administered by a State Board of Engineering Registration must be taken by all mining engineering students before graduation during the senior year of study.

<i>Freshman Year</i>		
<i>First Semester</i>		
CHEM 101-General Chemistry (or CHEM 103)	4	<i>Credits</i>
ENGL 101-Composition I	3	
GEOL 101-Physical Geology	4	
MATH 215-Calculus I	4	
MINE 101-Industry Orientation Lectures	1	

16

<i>Second Semester</i>		
CHEM 102-General Chemistry (or CHEM 104)	4	<i>Credits</i>
ENGL 102-Composition II	3	
MATH 216-Calculus II	4	
MINE 102-Mineral Map Making	2	
PHYS 201-Engineering Physics I	3	
PHYS 204-Engineering Physics Laboratory I	1	

17

Summer
MINE A-Mineral Industry Employment-(no credit)
(report required)

<i>Sophomore Year</i>		
<i>First Semester</i>		
AG 270-Introduction to Statistics	3	<i>Credits</i>
GEOL 211-Crystallography-Mineralogy	2	
GEOL 213-Lithology	1	
MATH 310-Calculus III	4	
M E 241-Analytic Mechanics for Engineers	3	
MINE 210-Mining Methods	3	
MINE 213-Computer Programming	2	

18

Second Semester

	<i>Credits</i>
C E 241-Engineering Measurements	3
M E 300-Introduction to Engineering Mathematics	2
M E 342-Analytic Mechanics for Engineers II	3
PHYS 202-Engineering Physics II	3
PHYS 205-Engineering Physics Lab II	1
P SC 103-Principles of American Constitutional Government	3
Social studies or humanities	3
	18

Summer

MINE 343-Applied Mine Surveying-(2 credits)

*Junior Year
First Semester*

	<i>Credits</i>
C E 367-Fluid Mechanics	3
E E 212-Introduction to Electrical Engineering	3
E E 292-Electrical Projects Lab	1
GEOL 332-Structural Geology	4
M E 371-Thermodynamics I	3
MINE 361-Operations Research Methods	3
	17

Second Semester

	<i>Credits</i>
EC 102-Principles of Microeconomics	3
METE 322-Mineral Processing I	4
MINE 310-Materials Handling	3
MINE 344-Mine Environmental Control	3
MINE 488-Rock Mechanics I	3
	16

Senior field trip required for graduation.

*Senior Year
First Semester*

	<i>Credits</i>
GEOL 471-Ore Deposits	3
MINE 411-Mine Economics	2
MINE 413-Mineral Industry Estimation	2
MINE 425-Mine Power and Drainage	3
MINE 449-Rock Mechanics II	3
MINE 472-World Mineral Economics	3
Technical elective ¹	2
	18

Second Semester

	<i>Credits</i>
MINE 400-Mining Communication	1
MINE 418-Mine Feasibility	2
MINE 445-Drilling and Boring	3
Social studies or humanities	6
Technical electives ¹	3
	15

¹The following is a list of acceptable technical electives to be selected by the student in consultation with the adviser: MINE 301, 324, 351, 446, 454; GEOL 476, 483, 484, 485, 489; C E 364, 368, 369, 372, 374, 381, 483, 484, 485, 492; M E 402, 403; METE 332, 421; MATH 330; AG 470; CHEM 330, 353

Total credits required, 137. Military science courses numbered below 300 and recreation and physical education courses do not apply to this total.

Advanced Degrees

The department offers individual programs leading to the degree of master of science in mining engineering. The student can elect to specialize in fields such as computer application, analysis and design, rock mechanics, environment, management, or mineral economics. The general university requirements for these advanced degrees are listed in the Graduate School section.

To be accepted as a graduate student, a bachelor's degree from an accredited college or university is required. For full graduate standing, at least 30 credits of undergraduate work in mining engineering or related sciences must have been completed. In addition, the student must qualify in at least one of the following requirements: (1) GPA of 2.5 in the four years of undergraduate work, (2) GPA of 3.0 for the last two years of undergraduate work, or (3) acceptable scores on the verbal and quantitative parts of the Graduate Record Examination aptitude test, with letters of recommendation from former instructors indicating capability for advanced course work and research.

Prospective students are advised to write directly to the chairman, Department of Mining Engineering, with an outline of major interests, experience, and transcripts. Formal application is completed through the Office of Admissions and Records.

The department has several graduate fellowships, research assistantships, and teaching assistantships. Requests for assistance should be submitted prior to March 15, but all applications will be considered regardless of date of submission.

A written comprehensive examination is required of all mining engineering graduate students. A passing grade is required for the exam and only two attempts are allowed. Failure to pass after two attempts results in suspension from the graduate program.



Orvis School of Nursing

Marion M. Schrum, *Dean*

Faculty: Anderson, Burgess, Chu, Dolen, Ervin, Evans, Fries, Harmon, Howard, McCormick, McFadden, Schorr, Stablein, Svetich

The Orvis School of Nursing offers a bachelor of science in nursing degree and a master of science degree with a major in nursing.

The Baccalaureate Degree Program

The Orvis School of Nursing curriculum provides learning opportunities for students that enable them to develop and demonstrate the ability to: use the knowledge derived from the humanities and behavioral, physical, and natural sciences in order to assess, plan, implement, and evaluate the health care of clients—individuals, families, and groups; strive for productive health care delivery which is congruent with contemporary cultural, social, and scientific values; provide nursing care for clients in primary, secondary and tertiary health care settings; collaborate, coordinate, and consult with colleagues on the interdisciplinary health teams in the delivery of health care; accept individual responsibility and accountability for nursing interventions and their results; and strive for continuing personal growth and identity.

The baccalaureate program is designed to provide the high school graduate, as well as the graduate of a hospital diploma program or an associate degree program in nursing, the opportunity to obtain a baccalaureate degree in nursing.

This is the basic preparation for professional nursing practice and for advancing towards positions of leadership in nursing. Upon completion of the program the graduate is qualified for positions in public health nursing, school nursing, hospital and other health agencies, commissioned status in the military nursing services, as well as admission to graduate education. This program is approved by the Nevada State Board of Nursing and accredited by the National League of Nursing.

Curriculum Requirements

- I. Total number of credits required for graduation 128
 Upper-division credits—64-68 required
 Lower-division credits—60-64 required

II. Lower-division requirements for prenursing majors.

<i>Natural Sciences</i>	<i>Credits</i>
Inorganic and Organic Chemistry: CHEM 101, 142	8
Anatomy and Physiology: BIOL 262, 263	6
Microbiology: BIOL 306	4
Nutrition: H EC 223	3
Elective	3
	24

Behavioral Science

SOC 101	3
PSY 101	3
Growth and Development: H EC 274	4
Cultural Ethnicity course*	3
Elective	3
	16

Communication Skills

ENGL 101, 102	6
SHR 234—Clinical Interviewing Skills	3
	9

Humanities

HIST 111, or P SC 103 if U.S. Constitution requirement met, may take HIST 217-Nevada History, or P SC 100-Nevada Constitution, through correspondence (1 credit course)	1-3
Electives	7-13
	60-64

III. Upper-division requirements for nursing majors.

A. Nursing science, self-learning skills laboratories, and clinical practice: NURS 301, 302, 314, 315, 324, 325, 326, 401, 402, 414, 415, 416, 424, 425	53
B. Basic research methodology and statistics: EDFM 413, or PSY 210	3-4
Nursing Research: NURS 444	3
C. Natural Science to include Pharmacology: B CH 305	3
D. Electives	2-7
	60-69

IV. Progression Policies.

- A. Progression to the junior nursing sequence requires:
1. Formal application due Friday of spring registration week in January.
 2. 2.75 cumulative grade-point average (GPA) (2.75 grand total GPA if transfer student) on completion of all lower-division course requirements.**
 3. Transfer students may elect to have their most recent 60 credits prior to entering the prenursing major computed in their cumulative GPA's.
 4. Completion of all lower-division course requirements by the end of spring semester of sophomore year in the prenursing major.

*Select from a variety of identified courses.

**Applies to students matriculating for the first time in the University of Nevada Reno, beginning Fall 1982.

5. Junior standing at UNR by the end of spring semester of sophomore year in prenursing major (60-89 credits).
6. Students who complete the requirements during the summer session may petition the OSN Admissions and Progression Committee for admission at the beginning of the fall semester and will be considered on a space available basis. This process is instituted with the selection of those students meeting requirements identified in items 1 through 5.

Note: Fulfillment of the above criteria does not imply automatic progression to the nursing major. Limitations of clinical facilities require that selection of students for progression to the nursing major must occur. Students are selected on the basis of academic achievement and therefore are ranked according to the cumulative GPA. From the rank-ordered list of students and their cumulative GPA's, the predetermined number of student positions is filled. This procedure is used each year.

B. Progression within the nursing sequence:

1. Maintenance of a 2.0 cumulative GPA and achieving a minimum grade of C or satisfactory in each nursing course.
2. Regardless of the combined grade in either a theory or practice course, each student must achieve a minimum of a C grade in each specialty area.
3. Students who withdraw passing or receive less than a C grade in a nursing course must inform the Admissions and Progression Committee of their intent to repeat the same course at the same level the next time it is offered.
4. *Re-entry to the upper division* major in nursing at any level after withdrawing or receiving less than a C grade in a nursing course is extended to one time only.
5. Any student who withdraws and/or transfers from the upper division of the nursing major must apply directly to Orvis School of Nursing for consideration of readmission and placement into the upper division in nursing. Eligibility depends upon space available and meeting current OSN progression requirements to the junior year.
6. Any student who withdraws from NURS 314, NURS 325, NURS 415, NURS 424 must also withdraw from NURS 315, NURS 326, NURS 416, NURS 425 respectively.

C. Students, after consultation with their advisers, may petition for course substitutions or other considerations relevant to OSN curriculum requirements. All petitions are to be submitted to the chairman of the Admissions and Progressions Committee. Designated courses taken more than ten years ago must be petitioned and are evaluated especially on relevancy of content.

D. Satisfactory/Unsatisfactory Grading:

1. A baccalaureate student may earn a maximum of 30 semester credits in courses graded on an S/U basis.
2. Students majoring in nursing may not take any required courses in their major on an S/U basis except NURS 302, 401, and 402.
3. Any transfer student who has taken a course in nursing on an S/U basis must have the course evaluated for placement within the curriculum.

E. Special Examination:

1. Consideration is given to credit by special examination for individual students in accordance with the university policies.
2. Registered nurse students may earn up to 26 credits on the basis of achieving a standard score of 50 or above on each of four ACT/PEP examinations in nursing.

F. Independent Study:

1. Opportunity is provided for individual students to pursue ideas of particular interests and needs through independent study courses.

SPECIAL NOTE: Students must provide their own tape recorders, bandage scissors, watches with second hands, stethoscopes, laboratory coats, uniforms, caps, name pins, liability insurance, transportation to clinical laboratories, and required textbooks.

Students must also provide documentation that they have had physical examinations and chest X-rays within six months prior to enrollment in both the junior and senior years of the program.

A rubella titer is required prior to matriculation in the junior year of the program.

Master of Science Program

The purpose of the master's program in nursing is to prepare nurses to function as adult nurse clinicians in primary and tertiary care. The program further provides opportunity to select teaching or administration as an alternative functional area. All students are expected to develop competence in using the research process.

Primary care is oriented toward the active promotion and maintenance of health prevention of disease and management of individuals with common and recurrent health problems. Utilizing the nursing process, health promotion activities are provided on a family basis with emphasis on health teaching and guidance in the use of health resources and referral to other levels of the health care system.

Tertiary care is oriented toward the care of individuals or families with complex or complicated alterations of health needs. Individuals enter this component of the system by referral from primary or secondary levels of the health care delivery system.

Implementation of the nursing process is directed toward the promotion and maintenance of the maximum health status and prevention of a further progression of illness. In the event the illness state is irreversible, the nurse implements a nursing process that supports the patient and the family through the terminal illness and death.

The program requires a minimum of 34 semester credits with an option for thesis or professional paper.

The academic requirements to be considered for admission are:

1. Graduate Record Examination (GRE) Scores: Verbal and Quantitative.
2. A undergraduate overall GPA of 2.5 or higher or a GPA of 3.0 or higher on the last half of the undergraduate program.
3. Completion of a bachelor of science degree with an upper-division major in nursing from an NLN Accredited School of Nursing, to include the following specific coursework:
 - a. Statistics, 3-4 credits
 - b. Growth and Development (must cover life span), 5 credits
 - c. Basic research, 3 credits
 - d. Physical-Psycho-Social Assessment, 2 credits
4. Photocopy of current registration to practice nursing in the United States. Evidence of registration in Nevada is required prior to actual registration in the program for those selected.

Applicants must apply for admission through the university Office of Admissions and Records.

Curriculum Requirements

	CREDITS		CREDITS		COURSE NO. (Nursing)	COURSE TITLE
	Plan A		Plan B			
	Clinician	Other Roles	Clinician	Other Roles		
<i>Fall Semester</i>	3	3	3	3	700	Health Care Delivery System
	5	5	5	5	710	Advanced Nursing Practice I
	3	3	3	3	720	Nursing Research
	3	3	3	3	705	Adv. Psycho-Physiologic Nursing
	14	14	14	14		
<i>Spring Semester</i>	-	3	-	3	701	Role of the Nurse Administrator
	-	(3)	-	(3)	703	or Teaching of Nursing
	5	5	5	5	711	Advanced Nursing Practice II
	3	-	3	3		Clinical Cognate*
	3	-	-	-	797	Thesis
	-	-	3	-		Elective
	11	11	11	11		
<i>Fall Semester</i>	-	3	-	3	702	Practicum-Nursing Leadership
	-	(3)	-	(3)	704	or Practicum-Teaching of Nursing
	3	-	3	-	798	or Internship
	-	-	2	2	796	Professional Paper
	3	3	-	-	797	Thesis
	3	-	4	-		Clinical Cognate*
	-	3	-	4		Elective
	9	9	9	9		
<i>Program Totals:</i>	34	34	34	34		

Summary of Credit Allocations

PLAN A		PLAN B		Allocation Category
Clinician	Other Role	Clinician	Other Role	
9	9	5	5	Research
16	13	16	13	Advanced Nursing Practice
-	6	-	6	Administration or Teaching Role
6	-	6	3	Clinical Cognate*
-	3	4	4	Electives
3	3	3	3	Health Care Systems
34	34	34	34	

*Clinical cognates will be recommended courses offered in physiology, biochemistry, home economics, medical sciences, psychology, sociology for which agreement to accept nursing students has been obtained.



Graduate School

John E. Nellor, *Dean*

History

Graduate programming has been offered at the University of Nevada Reno since 1887, and the first advanced degree was awarded in 1903. The administration of the graduate program developed from an initial faculty graduate committee to a director of Graduate Studies in 1953, and to the establishment of a Graduate School, headed by a dean, in 1955. In 1965, the graduate faculty was established with an elected Graduate Council responsible for the development and implementation of policies and programs in advanced studies. The Graduate Council is administratively responsible to the president of the university. In 1978, graduate faculty bylaws were approved defining the procedures for election of members of the graduate faculty and the Graduate Council and the responsibilities and functions of the Graduate Council in promoting quality graduate education and research programming.

Activities in scholarship and research by students and faculty members of the Graduate School reinforce the land-grant mission of the university in education, research, and public service for citizens of the state of Nevada, the nation, and society in general. To fulfill these objectives, the Graduate School best serves society by providing for the education of students in the scholarly methods of intellectual inquiry and critical analysis, by training them in the disciplinary and interdisciplinary skills necessary for problem-solving, and fostering in all students a dedication to creative thought and the search for knowledge.

Advanced Degrees and Majors

Supported by a variety of research centers and institutes, research services and library holdings, the university offers graduate study leading to the advanced degrees of master of arts, master of arts for the teaching of English, master of business administration, master of education, master of music, master of public administration, master of science, doctor of education, and doctor of philosophy. In addition, certain professional

degrees are granted in the Mackay School of Mines.

Master's degrees are offered in accounting; agricultural and resource economics; animal science; anthropology; atmospheric physics; biochemistry; biology; botany; chemistry; civil engineering; computer and information science; counseling and guidance personnel services; economics; educational administration and higher education; educational foundations and media; electrical engineering; elementary education; English; finance; foreign languages (French, German, Spanish); geochemistry; geological engineering; geology; geophysics; history; home economics; hydrology and hydrogeology; journalism; land use planning; management; marketing; mathematics; mechanical engineering; metallurgical engineering; mining engineering; music; nursing; integrated pest management; philosophy; physical education; physics; plant, soil, and water science; political science; psychology; public administration and policy; renewable natural resources; secondary education; sociology; special education; speech communication; speech pathology and audiology; theatre; and zoology.

The doctor of education program is offered in counseling and guidance personnel services, curriculum and instruction, educational administration and higher education, and educational foundations and media.

The doctor of philosophy degree is offered in biochemistry, biology, chemistry, engineering, English, geochemistry, geology and related earth sciences, geophysics, history, hydrology and hydrogeology, physics, political science, psychology, social psychology, and sociology.

Admission to Graduate School

Application Information

An applicant for admission to graduate-level study must file an application with the Office of Admissions and Records. Applications for graduate standing are subject to approval by the chairman of the major department, the dean of the college which offers the major, and the dean of the Graduate School.

Applications for admission are accepted at any time; however, the admission application and all credentials must be received in the Office of Admissions at least three weeks before registration day of any session to insure processing by registration day.

GRE Examinations

Scores on the Graduate Records Examination (the aptitude tests and the advanced test) or on the Graduate Management Admission Test must be submitted to the Office of Admissions and Records by all students prior to application for admission to graduate standing.

International Students

Applications from international students are evaluated on an individual basis.

The minimum TOEFL score required for admission to advanced degree programs is 500. Departments may require TOEFL scores in excess of the minimum requirements.

An international student must have a TOEFL score of 550 or higher to be approved for a teaching assistantship.

International applicants must satisfy the medical examination and financial responsibility requirements prior to admission.

UNR Faculty

A faculty member of the University of Nevada Reno who wishes to pursue an advanced degree at UNR should, before making application, read with care the *Policies and Procedures for Faculty Seeking Admission to Advanced Degree Programs at the University of Nevada Reno*, available in the Graduate School office. If the intended program is feasible in view of the general policy, the faculty member may then proceed to make formal application.

For additional information on admissions procedures see the Graduate Standing section that follows.

Graduate Standing

Students may be admitted to graduate standing in the Graduate School upon completion of a baccalaureate degree or an advanced degree if they meet the requirements specified. Departments or colleges may have entrance requirements in excess of the minimal requirements of the Graduate School. Prior to submission of an application for admission to graduate studies, students should contact the department of an-

anticipated study to obtain these requirements in writing.

Each department, with the approval of the academic deans, reserves the right to determine which students are accepted for graduate study, even though the applicant may satisfy the Graduate School requirements. The attainment of graduate standing is necessary before a student can pursue an approved program of study for an advanced degree. Admission to graduate standing permits the student to request the formation of an advisory-examining committee, to proceed with development and approval of a program of study, and to design a research program for thesis or dissertation studies.

Admission to graduate standing is the first of a series of progression requirements toward an advanced degree and does not constitute ADMISSION TO CANDIDACY for a higher degree.

Program of Study

Students admitted to graduate standing must have their initial course work approved by the faculty adviser identified on the Admission Evaluation Form. The advisory-examining committee must be established and an approved program of study submitted to the Graduate School no later than the completion of 12 graduate credits at the master's level and 24 graduate credits at the doctoral level.

Comprehensive Examinations

Ordinarily, comprehensive examinations are given by the department after completion of the required course work in the master's B plan and by the advisory-examining committee after completion of 75 percent of the course work in doctoral programs.

Departments may or may not require a separate comprehensive examination on the A plan. If one is not required, the final oral examination should contain a comprehensive examination component as well as defense of the thesis. For all advanced degree candidates, the department concerned must be satisfied that the student adequately comprehends the subject matter requirements of the area before advancement to candidacy.

Comprehensive examinations are assigned a graduate course number for zero credit on an S/U basis. Students must register for the comprehensive examination course at the beginning of the semester in which it is to be taken. A grade of Unsatisfactory U, or Incomplete I must be improved to a grade of Satisfactory S during the next semester or the student is dropped from graduate standing.

Candidacy

Advancement to candidacy implies that students have successfully completed departmental course requirements, university residence, and GRE requirements. Students usually file for candidacy shortly after completion of the comprehensive examination on the master's B plan, or not later than eight months prior to graduation on doctoral programs.

Final Oral Examination

Departments have explicit requirements on the number of final oral examinations that may be taken. Where two final oral examinations are allowed, failure of the first examination results in the advisory-examining committee recommending that the student be placed on probation. Where only one final oral examination is allowed, a failure on this examination results in the advisory-examining committee recommending that the student be dropped from graduate standing.

Master's Programs

The student who wishes to be considered for admission to work toward a master's degree must meet the following minimal academic requirements.

1. An undergraduate overall GPA of 2.5 or higher on a scale of 4.0, or an average of 3.0 based on the last half of the undergraduate program. International applicants are required to have a "B" average or higher.
2. Completion of such undergraduate work as the department concerned may require, subject to the approval of the dean of the college and the dean of the Graduate School. The minimum prerequisite for admission to graduate standing is 18 credits in the undergraduate major or at least 18 credits of undergraduate work in courses acceptable to the department; however, departments reserve the right to specify additional requirements. A student must make up any deficiencies in undergraduate requirements. These can often be removed while pursuing an approved program of graduate study.

Applicants to the master's program who do not meet the above grade-point requirements or have completed their work at nonaccredited institutions may be reconsidered if they present satisfactory scores, as determined by the colleges, the department concerned, and the Graduate School on the Graduate Record Examination (the aptitude tests and the advanced test where required) or on the Graduate Management Admission Test (GMAT).

Doctoral Programs

Upon recommendation from the major department and academic dean, college graduates may be admitted to work toward a Ph.D. or Ed.D. degree in the Graduate School if they meet the following minimal requirements:

1. An overall GPA of 3.0 or higher on all undergraduate and graduate work.
2. Satisfactory completion of necessary prerequisites for work in a chosen major field.
3. A student with an overall grade-point average less than 3.0 may apply for admission to a doctoral program with provisional standing. Students approved for provisional standing must complete two consecutive semesters of full-time graduate study in a program approved by the department and the Graduate School. A student may not remain on provisional standing for more than two semesters. Successful completion of the two semesters, with a grade of B or better in each course comprising the 18 credits, qualifies the student to apply for graduate standing. Courses completed while on provisional status may be applied toward an advanced degree with approval of the advisory-examining committee.

Graduate Special

The graduate special classification is for students who wish to take graduate courses but do not plan to pursue a program leading to an advanced degree, or for students who do not meet the requirements for admission to graduate standing. Students may qualify for graduate special status by the filing of official transcripts with the Office of Admissions and Records showing that the applicant has a baccalaureate degree from a regionally accredited four-year college or university. Admission to graduate special status does not constitute admission to graduate standing in the Graduate School. With graduate special classification a student may enroll for undergraduate or graduate credit and may satisfy the teacher certification requirements; however, complete transcripts should be available since admission to the graduate special classification does not imply that a student may take every course chosen. Departmental approval must be secured for each course desired and each student must be able to demonstrate that the prerequisites are satisfied for each course in which enrollment is sought.

A Nevada resident applicant who is denied admission to graduate standing to a master's program due to an inadequate undergraduate GPA

or unsatisfactory GRE test scores, may be admitted and enroll in the graduate special classification with an opportunity to qualify for admission through an approved trial semester program. Trial semester candidates may not exceed 10 percent of the total graduate enrollment in any one department. To qualify for graduate standing, trial semester students are required to complete successfully one semester or summer session of full-time study in a minimum of 9 graduate credits in courses previously approved by the departmental chairman, dean of the college, and the graduate council, with a grade of B or better in each course comprising the 9 credits. An applicant is allowed only one attempt to qualify by this procedure and all approvals must be obtained *before* registration. The GRE must be taken prior to, or concurrently with, the trial semester.

A student with graduate special classification may apply for regular graduate standing by meeting the minimal requirements of the Graduate School or by satisfactory completion of the trial semester. International students are not eligible for admission to the graduate special classification.

Only 9 credits completed as a graduate special, excepting those taken during the semester the student applies and is admitted to graduate standing, may be applied to an advanced degree. Since the trial semester is a graduate special classification, only 9 credits of the trial semester, and only those 9 credits, may be applied toward an advanced degree.

Registration

Each student who plans to register for graduate courses must be admitted to graduate study at the university *prior* to registration, except certain university seniors as authorized by policy.

Fees

Graduate students are required to pay the application fee, the per credit registration and capital improvement fees, specialized instruction expenses and tuition (for out-of-state students). In addition, there are fees for the Health Service, the Graduate Student Association, the Student Union operating costs and the recreation building use. The summer session fees are as specified in the Fees and Expenses section. Grants-in-aid to cover the per credit and capital improvement fees

plus out-of-state tuition can be awarded to graduate assistants, trainees and fellows, provided such conditions are specified in their contracts.

Graduate Student Association

Graduate student participation in university affairs is encouraged and can be achieved through the UNR Graduate Student Association (GSA). The approval of a new GSA constitution in 1978 provides apportioned graduate student representation from each academic unit offering advanced degree programming. The GSA has voting representation on the Graduate Council, cooperates with the Associated Students of the University of Nevada (ASUN), and the GSA president attends University of Nevada System (UNS) Board of Regents meetings. While social activities are provided by the GSA, the major emphasis is placed on improving academic and service programs relating to the specific needs of graduate students. The GSA publishes the Graduate Student Handbook, sponsors invited speakers on a wide variety of topics, and promotes graduate student participation in campus and community affairs as well as regional and national scholarly meetings.

Undergraduate Students and Graduate Courses

An undergraduate at the University of Nevada who needs 14 credits or fewer to complete the requirements for the bachelor's degree may enroll in 500 or 600 level courses for graduate credit, provided that such credit is requested by the student and approved by the instructor and graduate dean at the time of enrollment and provided that the student is scholastically eligible for admission to graduate standing. The student must complete all requirements for the undergraduate degree in the same semester in which registration for the graduate courses occurs; otherwise, the courses revert to undergraduate credit. Undergraduates taking graduate credit may carry a combined load not to exceed the normal credit load in the department in which the student received the baccalaureate degree.

Graduate Study and Financial Aids

Applicants should write the department or college in which they are interested for information about academic programs or about financial aids, fellowships, and graduate assistantships.

Academic Requirements

Advanced degrees are conferred by the university upon recommendation by the graduate faculty which requires the completion of a prescribed program of study. The approved program of study of each student presents the specific plan of courses, research and related activities of the student. Each kind of advanced degree program has regulations and requirements presented in the description of the degree. The following requirements apply to all graduate programs at the university.

Students must register for an appropriate course load at least one semester or summer session each year, or obtain an *approved leave* from the department. Unless these approved leaves are part of the student's Graduate School records, extensions of the six- and eight-year requirements are not approved by the graduate dean.

Graduate Courses

Courses numbered 500 and above are for graduate credit (see Numbering System) and are open to only those who have been officially admitted to graduate study. Certain 500-level courses are not applicable toward satisfying major requirements as noted in the Course Offerings section. No course is acceptable for graduate credit for which the student has received undergraduate credit.

Academic Standards

Graduate students must assume an attitude toward scholarship that transcends merely passing courses, and they must also assume full responsibility for complying with the Graduate School's academic standards and must be aware of the consequences of substandard performance. Departments and graduate faculty are responsible for monitoring and documenting graduate student compliance with academic standards. Penalties for failure to meet standards include the following:

1. Graduate students placed on probation are not eligible for appointments as teaching or research fellows.

2. A student who remains on probation for two consecutive semesters is dropped from graduate standing.

Recommendations by departments or advisory-examining committees to place students on probation or to drop them from graduate standing must be submitted to the Graduate School. If approved, the Graduate School notifies the student

of the action and, if appropriate, the Office of Admissions and Records that the student is dropped from graduate standing. Students dropped from graduate standing for reasons other than grade point deficiencies may register as graduate specials.

Students dropped from graduate standing because of grade-point deficiencies can only enroll as undergraduate students. These students may take undergraduate coursework for which prerequisites have been satisfied, or with the approval of the department and the graduate dean, take graduate coursework for which prerequisites have been satisfied. A student may reapply for graduate standing by achieving a minimum grade-point average of 3.0 in at least nine credits.

Grades and Credit

Each graduate course must be completed with a grade of C or above for the credit to be acceptable toward an advanced degree. Each candidate must earn a B average or above on all graduate courses taken, including any transfer credit. In addition, a B average or above must be obtained in all graduate credit attempted at the University of Nevada Reno. Expiration of the time period for master's degrees does not eliminate course grades from the average, and grades of D or F are included.

Academic Performance

1. UNR overall graduate credit GPA of 3.0 or better Good Standing
2. UNR overall graduate credit GPA balance of one to six grade points below 3.0 . . . Probation
3. UNR overall graduate credit GPA balance of seven or more grade points below 3.0 Dropped from Graduate Standing

Limitations on Transfer and Other Special Courses

1. **S/U Grades:** A maximum of 3 graduate credits for a master's degree (or 9 graduate credits for a doctorate degree) of S/U grading, including transfer credits, is acceptable.
2. **Thesis Credits:** Final credit for thesis or dissertation is not officially recorded until the candidate has been approved by the faculty for the graduate degree.
3. **Graduate Special Courses:** A maximum of 9 credits for which the student registers while classified as a graduate special student may be used in satisfying requirements for any advanced degree.
4. **Off-Campus Courses:** A maximum of 9 credits

earned in off-campus courses may be applied toward any advanced degree.

5. **Workshop Courses:** A maximum of 6 credits of workshop or institute type, whether in residence or not, may be included in the total for the degree.

6. **Extension Courses:** Graduate credit earned through extension courses is not accepted for transfer credit.

7. **Correspondence Study:** Graduate credit is not allowed for correspondence study completed at the university or elsewhere.

Residence Credit

Residence credit on the Reno campus is defined as credit earned by a student who is physically present on the Reno campus for the entire duration of the scheduled instruction or training period, except in those specific cases (e.g., in agriculture, geology, or biology) where the field becomes, in fact, a campus laboratory and is the only place where adequate instruction and training can take place.

Limitations on Student Credit Loads

A full-time graduate student may not register for more than 16 graduate credits in any semester, nor for more than 6 graduate credits in any six-week summer session. Registration for graduate assistants is limited to 12 graduate credits per semester.

If the graduate student's registration includes courses taken for undergraduate credit, the student's credit load is calculated on the basis of 3 undergraduate credits being equivalent to 2 graduate credits.

Registration in 9 graduate credits or more in a semester is considered as full-time. For half-time graduate assistants, or others assigned equivalent duties, a minimum of 6 graduate credits constitutes full-time study.

Advisory and Examining Committee

An approved application for graduate standing identifies a temporary adviser. As soon as practical, the student selects a permanent adviser. The permanent adviser and the student arrange for appointment of the advisory-examining committee, who, with the adviser and department chairman, supervise the student's courses of study and examinations.

For candidates for the master's degrees, the advisory-examining committee should be appointed at least by the end of the semester in

which the twelfth graduate credit is completed. It consists of at least three members of the faculty, two representing the area of specialization and one the university-at-large. If a major-minor program is elected, there must be one representing the major, one representing the minor, and one representing the university-at-large.

For Ph.D. candidates, the advisory-examining committee should be appointed as soon as a field of specialization is chosen, or completion of 24 graduate credits, and a member of the faculty is selected under whom the research is to be done who will serve as chairman of the committee and as a permanent adviser. The committee consists of the adviser as chairman, two or more members from the major department or area, one or more from departments in related fields, and at least one member of the graduate faculty representing the university-at-large.

Formal approval of a student's advisory-examining committee is made by the graduate dean who will assure that no conflict of interest exists and that the participation of the graduate faculty in graduate programming is maximized.

The university-at-large members of committees are to represent the Graduate School, assure compliance to Graduate School regulations and procedures and report to the Graduate School any variations or irregularities of prescribed standards.

All committee members will be involved in the approval of the student's program and thesis/dissertation topics, and in the design and conduct of all examinations. Changes in the program may be made only with the approval of the entire committee and the graduate dean. When necessary, substitute members of the committee may be appointed by the graduate dean.

Application for an Advanced Degree

During the first ten days of either the final semester or the beginning of Summer Session, each candidate is required to submit an application for an advanced degree to the Graduate School. This application includes the expected date of the final examination, date of graduation, and the approval of the adviser, academic dean and the graduate dean. Applications filed after this date are charged a late fee. Applications for an advanced degree are not accepted after November 1, March 1, or July 1 in the respective final period in which graduation is sought.

If, for any reason, the applicant does not complete the degree requirements by the specified deadlines, another application must be filed at the appropriate time.

Thesis and Dissertation Regulations

Each student must have an outline (prospectus) of the thesis/dissertation approved by the advisory-examining committee. Subsequent to this approval, students are expected to proceed in completing the thesis/dissertation in a manner satisfactory to the committee.

The candidate should develop the thesis or dissertation while in residence, as close and constant supervision by the director in charge is required. When considerable progress has been made while the candidate is in residence in collecting data and outlining the thesis or dissertation, the candidate may be permitted to complete it away from the campus under such arrangements as the director of the thesis may specify and the graduate dean approve.

Registration for Thesis or Dissertation: A master's candidate must complete a minimum of 6 credits of thesis and a Ph.D. candidate, a minimum of 24 credits of dissertation. Each master's and doctoral candidate must register in at least one credit of thesis or dissertation when working on the thesis or dissertation in residence. The department directing this work will determine in each case what constitutes *working on the thesis or dissertation*. The number of thesis credits taken in any one semester should be determined in consultation with the director of the thesis.

Thesis and dissertation courses are not graded. At the close of each semester of registration for credit in thesis or dissertation courses, a dash is indicated in place of a letter grade on the student's permanent record. These courses are not counted in GPA computations. The completed thesis or dissertation is either accepted or rejected at the time of the final oral examination for the degree.

Dates for Submission of Thesis or Dissertation: A draft of the thesis or dissertation must be submitted to members of the examining committee not later than eight weeks before the final examination to allow time for corrections and suggestions to be incorporated before final typing. The completed, unbound thesis must be submitted to members of the examining committee at least one week before the date of the final examination, which must be held at least three weeks before the close of the semester or term. The final date for submission of the thesis or dissertation in final form is two weeks before the close of the semester or term. **NO EXTENSION OF THIS TIME IS PERMITTED.** Final approval of theses and dissertations is by the graduate dean.

Format: The thesis or dissertation is to be prepared according to specific directions available at the Graduate Office. Capitalization, abbreviations, quotations, footnotes, bibliography, and other conventions should conform with good usage as set forth in standard manuals on research writing; practices must be consistent throughout the thesis.

Copies for Deposit: When the thesis has been approved by the advisory examining committee, two acceptable copies, signed by the chairman of the major department and the thesis director, must be submitted unbound to the Graduate Office.

Publication and Abstract: The library staff will arrange for microfilming each thesis and dissertation by University Microfilms, Ann Arbor, Michigan. Publication on microfilm does not preclude other forms of publication. The candidate for the Ph.D. must also submit an abstract, not exceeding 350 words in length, and the candidate for the master's degree must submit an abstract, not exceeding 150 words in length, which have been approved by the examining committee. These abstracts are published in full in *Dissertation Abstracts* or *Master's Abstracts*, journals with international circulation. The cost for copyright registration, if desired, and for the bound copy, except for the one paid for by the library, must be paid by the candidate.

Master's Degrees

The university offers the degrees of master of arts, master of arts for the teaching of English, master of business administration, master of education, master of music, master of public administration, and master of science. Some departments offer only a Plan A, in which a 6-credit thesis is required, and other departments offer in addition to Plan A a Plan B with no thesis required.

Residence and Credit Requirements

1. **Credits:** A candidate for the M.A., M.S. or M.B.A. degree (Plan A) is required to complete a minimum of 24 credits of graduate course work and to complete 6 credits of research for the thesis. Plan B requires a minimum of 32 credits of graduate course work.

2. **700 Courses:** A minimum of 18 credits, including thesis credits, in courses numbered 700 or above is required for master's degrees, Plan A. A minimum of 15 credits in courses numbered 700

or above is required in Plan B, including a maximum of 3 credits for professional paper.

3. **Residence:** A minimum of 21 credits for the master's degree must be earned in residence under Plan A. A minimum of 23 credits is required under Plan B.

4. **Limits on Transfer and Graduate Special Credits:** A maximum of 9 credits from either non-resident or graduate special, or 9 credits of a combination of the two may be applied toward the master's degree. Also, refer to "Limitations on Transfer and Other Special Courses."

5. **S/U Grades:** A maximum of 3 credits of S/U grades, including transfer credits, is acceptable.

6. **Professional Paper:** A maximum of 3 credits may be used towards an advanced degree under Plan B.

7. **Time Limit:** All requirements for the master's degree must be satisfied within the period of six calendar years immediately preceding the granting of the degree.

8. **Second Master's Degree:** A maximum of 9 graduate credits earned in a master's degree program may later be applied toward a second master's degree.

Course Requirements

For the M.A., M.A.T.E., M.B.A., M.M., M.P.A., or M.S. degree, the following types of programs may be arranged:

Major-Minor Programs: In Plan A at least 12 of the 24 graduate credits must be in a major field of study, with at least 6 credits in a minor field. The minor may be in a different department, or it may be in a second division of the major department if it consists of two or more separate divisions. The minor department has the responsibility of approving the candidate's minor program. Any credits not required for the major or minor may be elected in any department by the student with the approval of the advisory committee. Normally they are chosen to support the candidate's thesis. In Plan B at least 15 of the 32 graduate credits must be in a major field of study, with at least 8 credits in a minor field.

Major Programs: A minor is not required. In Plan A at least 18 of the 24 graduate credits must be in the major field of study and in Plan B 23 of the 32 graduate credits must be in the major field of study.

Area Programs: An advisory committee with the approval of the dean of the Graduate School

may designate an area program which embraces the subject matter of several departments.

Education Programs: For the master of arts or master of science in secondary education, the Plan A program must include a minor field of study of at least 8 credits in a subject-matter department in a college outside the College of Education, while in Plan B 10 credits are required.

Foreign Language Requirement: The major department may require a reading knowledge of a foreign language.

Procedures Towards Master's Degree

Program of Study: The graduate student's adviser, the department head, and the advisory examining committee determine the program of studies for each master's degree, including the thesis and the courses acceptable toward the graduate degree program. All transfer credit must be evaluated and approved through the Office of Admissions and Records prior to approval of the program of study. Soon after its appointment the advisory committee meets with the student, who, after consultation with the major professor or thesis director, presents the proposed program of study. The program of study documents by name and number all the courses to be presented in fulfilling requirements for the graduate degree and a short description of the research to be undertaken. The committee then approves the program as presented or recommends additions or substitutions which, in its judgment, will strengthen the program. Final approval is by the graduate dean. Subsequent changes may be made at any time but only with the approval of the committee and the Graduate School. Sufficient copies of the approved program are required to supply the student, committee members, department head, and the graduate office.

A student should not enroll in any course for graduate credit without first securing the approval of the chairman of the major department and the dean of the college that such courses are acceptable toward a major or a minor.

It should be emphasized that, although formal requirements are expressed in a specified number of credits, the student should not think of graduate work as primarily the completion of a number of required courses. These courses are intended to give the student a comprehensive understanding of a whole area of study.

Admission to Candidacy: Advancement to candidacy implies that students have successfully

completed department course requirements, university residency, and GRE requirements. Students usually file for candidacy shortly after completion of the comprehensive examination on the master's B Plan. Forms are available in the Graduate Office which require approval of the adviser, chairman of the major department, and the dean of the Graduate School. Admission to candidacy requires the following:

1. The student must have a B average in all graduate work taken prior to admission to candidacy.

2. The student must have gained formal approval of the advisory committee for the program of study, including the approach to the thesis.

3. Submission of scores for the Graduate Record Examination.

Any department may, at its discretion, impose additional requirements for admission to candidacy.

Thesis: Candidates for the M.A., M.S., and M.B.A. (Plan A) degrees must register for at least 6 credits of thesis work and must submit an approved thesis in order to qualify for the degree. As the thesis is considered the most distinctive characteristic of the graduate degree, great importance is assigned to it in determining the eligibility of the candidate for the degree. The thesis should demonstrate the ability of the student to select and delimit a specific problem or topic, to assemble the pertinent and necessary data, to do original research, to make a contribution to knowledge, to organize ideas and data acceptably, and to prepare a written report in clear and effective English.

For specific information on preparation and submission of the thesis, guidelines and specific information are available in the Graduate Office.

Comprehensive Examination: In the Plan B program a candidate must pass a written comprehensive examination in the field(s) of specialization to qualify for the degree. The chairmen of the departments concerned are responsible for administration and evaluation of the examination. All committee members are permitted to review the examination. Results of the examination are forwarded to the dean of the Graduate School for official records at least two weeks prior to the final oral examination.

Final Examination: A final oral examination is conducted by the advisory and examining committee not later than three weeks before the close of the semester or term. The examination must be

scheduled to suit the availability and convenience of all members of the committee, with the date subject to the approval of the dean of the Graduate School. The candidate should arrange the examination well in advance; normally an examination is held during regular university sessions. The date, time and place of final examinations are published by the Graduate School.

Approval of Thesis and Examination: A unanimous favorable decision of the examining committee on the thesis and the examination is required in Plan A. Final approval of the thesis is reported by the director upon successful completion of the final examination. A unanimously favorable decision of the examining committee on the oral examination is required in Plan B.

Master of Education (M.Ed.) Degree

A candidate for the M.Ed. degree must meet all requirements of the master of arts or master of science degree except for the following:

1. The candidate should have completed a minimum of two years of satisfactory teaching or administrative experience, or equivalent.

2. The candidate must complete a minimum of 32 credits of acceptable graduate course work, but need not present a thesis. For details of the program consult the College of Education.

3. A minimum of 8 credits is required in the area of specialization in the College of Education and must be approved by the chairman of the department of specialization.

4. A minimum of 8 credits is required in elective or cognate courses related to the degree specialization. Such courses may be taken from any graduate division where courses are available on the university campus and must be approved by the student's area of specialization chairman.

5. A written comprehensive examination to be completed at least two weeks before the final oral examination, is required in the area of specialization in education for all candidates and in the cognate field of subject-matter teachers majoring in secondary education. The chairmen of the departments concerned are responsible for administration and evaluation of the examination. All committee members are permitted to review the examination. Results of the examination are forwarded to the dean of the College of Education and the dean of the Graduate School for official records at least two weeks prior to the oral examination.

Doctor of Philosophy (Ph.D.) Degree

The doctor of philosophy (Ph.D.) degree is conferred only for work of distinction in which the student displays decided contributions of original scholarship, and only in recognition of marked ability and achievement. The basic requirements are twofold: 1. A student must exhibit unmistakable evidence of penetrating mastery of a rather broad major field. Such evidence is ordinarily provided by passing a general examination, after which the student may request admission to candidacy. 2. A student must prove ability to design and complete a significant program of original research by preparing a dissertation embodying creative scholarship and by passing a rigorous final examination. The dissertation must add to the sum of existing knowledge and evidence considerable literary skills.

Residence and Credit Requirements

Time Limitation: All requirements for the doctoral program excluding prerequisite graduate coursework or prerequisite master's degrees must be completed within a period of eight calendar years. The prerequisites required are explicitly defined by the departments concerned, and approved by the graduate council.

Residence: A minimum of six semesters of graduate study beyond the bachelor's degree is required. At least two successive semesters, excluding summer sessions, must be spent in full-time residence on campus at the University of Nevada Reno.

Credits: A minimum of 72 graduate credits is required of which at least 48 must be in course work.

A maximum of 24 credits in course work with grades of B or better from a master's degree program or previous postbaccalaureate graduate studies program may be allowed toward the Ph.D. degree, with the approval of the major department, the graduate dean, and the Office of Admissions.

700 Courses: A minimum of 12 credits beyond requirements for the master's degree is required in courses numbered 700 or above, exclusive of dissertation credits or a minimum of 30 credits at the 700 level; exclusive of dissertation credits if the candidate has not previously been conferred a master's degree.

Course Requirements

The following types of Ph.D. programs may be arranged.

Major-Minor Programs: At least two-thirds of the work, including thesis research, must be taken in the major field. The minor field is determined by the major department.

Major Programs: Major programs are allowed in which a minor is not required but in some cases may be taken in a second field within the major department.

Area Programs: An advisory committee consisting of members of several departments with the approval of the dean of the Graduate School may designate an area program which embraces the related subject matter of several departments.

Procedures Towards Ph.D. Degree

Qualifying Examinations: To determine the student's progress and ability, each department gives a qualifying examination (written, oral, or both) to each student planning to earn the doctoral degree. The examination will be given not later than the end of the student's first year of graduate study. Following this examination, the student will be informed of any additional requirements by the adviser or advisory committee.

Program of Study: As soon as practical after its appointment, the advisory examining committee should meet to approve the student's program of study and the prospectus for the dissertation, following the same procedures as those outlined for master's degree candidates (see above).

Final acceptance of a student's program is determined when the student files application for admission to candidacy. Application for admission to candidacy must be filed not less than eight calendar months before award of the degree, and may not be filed until after completion of the comprehensive examination. The student's advisory committee may accept or reject any course or other work the committee deems appropriate to the student's program.

Foreign Language Requirement: A knowledge of one foreign language (not English) is required. The language requirement must be satisfied by the student while in residence at UNR by successful performance and examination, comparable to the Educational Testing Service examination which was previously available, to be administered by the Department of Foreign

Languages and Literature at UNR. The test is offered in French, German, Russian and Spanish. Students should contact the Department of Foreign Languages and Literature for information regarding the testing dates and the fee charged. This competency must be demonstrated prior to admission to candidacy. Students who do not meet departmental requirements for satisfactory progression on foreign language requirements may be required to take a reduced course, teaching, or research load or be recommended for probationary status.

Comprehensive Examination: Before admission to candidacy for the Ph.D. degree, the student must pass a comprehensive examination in the major and related fields. This examination should be taken as soon as possible after completion of the language and course requirements, but no later than eight calendar months before the date of graduation. It may be taken after a minimum of 75 percent of the student's required course work beyond the bachelor's degree is completed. This examination must be oral and written, and test the student's mastery of a broad field of knowledge, not merely the formal course work which has been completed.

The oral examination is conducted and evaluated by the student's advisory and examining committee.

If more than one negative committee vote is cast, the examination is failed. In case of failure, the examination may be retaken, provided the examining board feels that additional study is justified and the student continues such studies for an additional period as determined by the committee.

Candidacy: Advancement to candidacy assures that students have successfully completed departmental course requirements, university residency, and GRE requirements. Application for candidacy occurs subsequent to passing the comprehensive examination and foreign language requirement but no later than eight calendar months before the date of graduation.

Final Examination: After the dissertation has been accepted by the advisory committee, but at least three weeks before the date on which the degree is to be conferred, a final examination on the dissertation and related topics is conducted by the student's advisory and examining committee. This examination is wholly or partly oral, the oral part being open to anyone interested.

If more than one negative committee vote is cast, the examination is failed.

The Dissertation: Candidates for the Ph.D. degree must register for at least 24 credits of dissertation work and must submit a dissertation satisfactory to the examining committee. The dissertation must represent original and independent investigation which is a contribution to knowledge. It should reflect not only a master of research techniques, but also the ability to select an important problem for the investigation, study it competently, and express the findings in an acceptable manner.

Doctor of Education (Ed.D.) Degree

The College of Education offers a doctoral degree in education designed primarily as a professional degree for practitioners. The program provides an opportunity for personalized specialization in one of the approved departments or divisions in the College of Education, with an emphasis on improving leadership and breadth of knowledge for those individuals who are now employed in the various areas of education.

Academic Requirements

Each applicant must satisfy the regular graduate admission requirements listed for doctoral programs and the following special requirements:

The applicant must:

1. Have completed at least two full years of successful professional experience in a field appropriately related to the chosen major.
2. Have an earned master's degree from a regionally accredited institution in an area appropriately related to the chosen major.
3. Provide the names and addresses of at least five individuals who are knowledgeable about the personal and professional qualifications of the applicant. The College of Education Committee for Graduate Programs contacts the references for an evaluation of the applicant's competencies.
4. Be recommended by the graduate faculty of the department in which the major is sought and approved by the College of Education Committee for Graduate Programs.

Degree Requirements

The regular doctorate graduate regulations apply with these modifications:

Resident Credit: At least two full-time summer or regular semesters must be completed with a minimum of 12 graduate credits for each summer

or regular semester. A maximum of 3 credits of dissertation, independent study or workshop credits may be applied per residency term. The resident credit requirement must be satisfied *after* admission to the doctoral program.

Program: A minimum of 90 semester credits beyond the baccalaureate degree, including 12 credits of dissertation, must be completed. In addition to 30 graduate credits from the master's degree, a maximum of 16 relevant graduate credits beyond the master's degree awarded by an accredited postmaster's or certification program (UNR or elsewhere), to which the applicant was admitted, may be applied to the approved Ed.D. program of studies for the candidate. There are specific course requirements and qualifying, comprehensive, and final examinations.

Dissertation: The dissertation must involve scholarly and practical consideration of a professional problem designed to contribute to the improvement of educational practices or to the body of educational theory. The topic may (1) evolve from practical educational experiences, (2) be based upon directed field experiences, (3) be a scholarly study of an educational problem involving theoretical implications, or (4) be a new interpolation or synthesis of existing research sources.

Foreign Language: None is required.

Miscellaneous: The details of the examining committee, adviser, appropriate calendar, and development of an individually structured program are made available after an applicant is admitted.

Fees: A consolidated fee of \$75 per credit is applicable for the final 44 credits in the Doctor of Education program. All other credits are assessed at the regular fee in effect at the time of registration.

Professional Engineering Degrees

The professional engineering degrees, Geological Engineer (Geol.E.), Metallurgical Engineer (Met.E.), and Engineer of Mines (E.M.), may be conferred upon graduates of the Mackay School of Mines or upon graduates of other institutions who have obtained the master of science degree in engineering from the university. Applicants must have been engaged in successful engineering work in positions of responsibility for a period of at least five years in the case of holders of the B.S. degree or four years for holders of the M.S. degree, and must submit theses showing ability to conduct advanced engineering work. These are not considered when they are merely investigations in literature, compilations of routine laboratory tests, or presentations of the work of others.

Professional engineering degrees may also be conferred upon graduates of the Mackay School of Mines and upon graduates of other engineering colleges of equal standing, who, after graduation, have been engaged for a period of at least one year in successful engineering work in a position of responsibility and who subsequently complete successfully one year of graduate work in engineering, including thesis, at the university.

Formal application for graduation with a professional engineering degree must be filed with the registrar not later than the beginning of the second semester of the year in which the degree is sought, and must be approved by the faculty of the Mackay School of Mines and by the graduate dean. The application must be accompanied by detailed and satisfactory evidence as to the extent and character of the applicant's professional work. The thesis must have the general form prescribed for the master's thesis or must be a reprint of an article appearing in a reputable professional journal. The thesis or publication in final form must be approved by a committee appointed by the graduate dean and must be presented to the faculty of the Mackay School of Mines and to the graduate dean at least eight weeks before the date set for conferring the degree.



Course Information

Numbering System

The assigned letter or number following the departmental designation indicates the appropriate level of instruction for each course:

A, B, C, etc. are special noncredit courses.

1-99 are associate degree and nonbaccalaureate level courses.*

100-199 are freshman courses.

200-299 are sophomore courses.

300-399 are junior courses.

400-499 are senior courses.

500-599 are 300-level courses approved for graduate credit.

600-699 are 400-level courses approved for graduate credit.

700-799 are graduate courses.

Symbols

An interpretation of the symbols which appear in the course listings follows:

a, b, c, etc. indicate successive terms of the same course which may be repeated for credit.

(3 + 0), (1 + 6), etc. show the number of 50-minute class periods of lecture (or recitation or discussion) plus the total number of periods of laboratory (or workshop or studio) per week. The number of class periods is not necessarily the same as the number of times the class meets. Thus (3 + 0) means the course meets for three periods of lecture per week and does not have any laboratory periods. Likewise, (1 + 6) means the course meets for one period of lecture and six periods of laboratory per week; the laboratory may meet twice a week for three periods each or three times a week for two periods each. For more specific information about a particular course, the student should consult the schedule of classes.

1, 2, etc. credits which appear after the parenthesis indicate the number of credits the course carries each semester.

S/U (in italics) means the course is graded Satisfactory or Unsatisfactory only.

Abbreviations

A SC—Animal Science
 ACC—Accounting
 AET—Architectural Engineering Technology
 AG—Agriculture, General
 AIM—Agricultural and Industrial Mechanics

ANAT—Anatomy
 ANTH—Anthropology
 AREC—Agricultural and Resource Economics
 ART—Art
 B A—Business Administration
 B CH—Biochemistry
 B V—Beliefs and Values
 BASQ—Basque
 BIOL—Biology
 C E—Civil Engineering
 C I—Curriculum and Instruction
 C J—Criminal Justice
 CAPS—Counseling and Guidance Personnel Services
 CET—Civil Engineering Technology
 CH E—Chemical Engineering
 CHEM—Chemistry
 E E—Electrical Engineering
 EAHE—Educational Administration and Higher Education
 EC—Economics
 EDFM—Educational Foundations and Media
 EET—Electronics Engineering Technology
 ENGL—English
 ENGR—Engineering
 ENV—Environment
 FCM—Family and Community Medicine
 FLL—Foreign Languages and Literatures
 FR—French
 GEOG—Geography
 GEOL—Geology
 GER—German
 H EC—Home Economics
 H P—Historic Preservation
 HIST—History
 HON—Honors Study
 I S—Information Systems
 IM—Internal Medicine
 IPM—Integrated Pest Management
 ITAL—Italian
 JOUR—Journalism
 L SC—Library Science
 M E—Mechanical Engineering
 M T—Mathematics (Technical)
 MATH—Mathematics
 MET—Mechanical Engineering Technology
 MEDT—Medical Technology
 METE—Metallurgical Engineering
 MICR—Microbiology
 MIL—Military Science
 MINE—Mining Engineering
 MUS—Music
 NURS—Nursing
 O A—Office Administration
 OBGY—Obstetrics and Gynecology
 P SC—Political Science
 PATH—Pathology
 PCHY—Psychiatry and Behavioral Sciences
 PEDI—Pediatrics
 PHAR—Pharmacology
 PHIL—Philosophy
 PHSY—Physiology
 PHYS—Physics
 PSY—Psychology
 PSW—Plant, Soil, and Water Science
 R ST—Religious Studies
 RPED—Recreation and Physical Education
 RNR—Renewable Natural Resources
 RUSS—Russian
 SHR—Social and Health Resources
 SOC—Sociology
 SPA—Speech Pathology and Audiology
 SPAN—Spanish
 SPTH—Speech and Theatre
 SURG—Surgery
 V M—Veterinary Medicine
 W S—Women's Studies

*Associate degree and nonbaccalaureate courses numbered 1-99 are not applicable toward baccalaureate or advanced degrees.

Course Offerings

Prerequisites

The prerequisites listed for each course must be satisfied prior to registration, or the advanced approval of the department offering the course must be obtained, for enrollment to be valid.

Inactive Courses

Certain courses are approved for offering as the need arises but due to their infrequent scheduling are listed as being inactive. Individuals desiring specific information about any inactive course should contact the chairman of the department.

Changes

All courses are subject to change without advance public notice. In addition, the university reserves the right to cancel or limit enrollment in any scheduled class.

ACCOUNTING (ACC)

Graduate courses numbered 500 to 599 are not applicable toward an advanced degree in accounting.

201 INTRODUCTORY ACCOUNTING I

(3 + 0) 3 credits

Purpose and nature of accounting, measuring business income, accounting principles, assets, and equity accounting for external financial reporting. Prerequisite: sophomore standing.

202 INTRODUCTORY ACCOUNTING II

(3 + 0) 3 credits

Forms of business organization; cost concepts and decision making; break-even analysis, fixed and variable costs, budgeting for internal reporting. Prerequisite: ACC 201.

261 HOTEL AND CASINO ACCOUNTING

(2 + 0) 2 credits

Accounting principles and practices and the related uniform system of accounts of the American Hotel and Motel Association and application of cost accounting methods and principles to hotel and food establishments. Prerequisite: ACC 201.

UPPER DIVISION COURSES: See section on *Upper Division Courses* in the College of Business Administration section.

303 INTERMEDIATE ACCOUNTING I

(3 + 0) 3 credits

Theory and practice of accounting for cash, receivables, prepaid and accrued items, plant and equipment, intangible assets. Prerequisite: ACC 201, 202.

304 INTERMEDIATE ACCOUNTING II

(3 + 0) 3 credits

Shareholder's equity, dilutive securities, and investments; issues related to income determination, preparation and analysis of financial statements. Prerequisite: ACC 303.

307, 507 GOVERNMENTAL ACCOUNTING

(3 + 0) 3 credits

Fund and budget accounts of local governmental units, revenues, appropriations, disbursements, assessments. University, hospital, and other fund applications. Prerequisite: ACC 201.

309 MANAGEMENT ACCOUNTING I

(3 + 0) 3 credits

Cost analysis applied to decision-making. Materials, labor and overhead, relevant cost, joint and by-products, job order and process costing. Budgeting and standard costs. Prerequisite: ACC 201, 202.

310 MANAGEMENT ACCOUNTING II

(3 + 0) 3 credits

Continuation of cost accounting concepts; nonmanufacturing costs, relevant costs, inventory valuation, joint and by-products, and capital budgeting. Prerequisite: ACC 309.

313, 513 FEDERAL TAX ACCOUNTING I

(3 + 0) 3 credits

Income, expenses, exclusions, deductions, and credits. Emphasis on individual returns. Prerequisite: ACC 201.

314, 514 FEDERAL TAX ACCOUNTING II

(3 + 0) 3 credits

Partnerships, corporations, estates, trusts, social security, and administration. Prerequisite: ACC 313.

395-396 INTERNSHIP IN ACCOUNTING

1 to 3 credits each *S/U only*

Cooperative education wherein students apply knowledge to real situations in program developed by company official and faculty adviser to optimize learning experiences. Term paper required. First semester seniors only.

405, 605 ADVANCED ACCOUNTING

(3 + 0) 3 credits

Partnerships, joint ventures, installment sales, consignments, receiverships, estates, trusts, home office and branch, consolidated statements, actuarial science. Prerequisite: ACC 304.

411, 611 AUDITING (3 + 0) 3 credits

Audits and their uses; verifying balance sheet and profit and loss accounts, audit reports, and certificates; duties and responsibilities of the auditor. Prerequisite or corequisite: ACC 304, 309, 310.

412, 612 AUDITING II (3 + 0) 3 credits

Special auditing problems related to procedures in auditing plant and equipment, liabilities, and capital accounts. Preparation of auditing programs, internal control questionnaires, and financial reporting given considerable emphasis. Prerequisite: ACC 411.

420, 620 INTERNATIONAL ACCOUNTING

(3 + 0) 3 credits

Role of accounting in a multinational context. Financial reporting, managerial and social aspects of international accounting are considered with an emphasis on conceptual matters. Prerequisite: ACC 202, senior standing.

470, 670 ADVANCED TAX PROBLEMS AND PLANNING (3 + 0) 3 credits

Federal, state, and local taxation in relation to long-range

planning of business and personal affairs. Prerequisite: ACC 313 or equivalent.

490, 690 INDEPENDENT STUDY 1 to 3 credits
Independent study in selected topics. Maximum of 6 credits.

491, 691 CPA PROBLEMS I (3 + 0) 3 credits
Comprehensive study of certified public accountants' problems in the practice area preparatory for the CPA examination. Prerequisite or corequisite: ACC 405.

493, 693 ACCOUNTING THEORY (3 + 0) 3 credits
Review of accounting literature and contemporary accounting problems. Emphasis is placed on the development of basic accounting concepts. Prerequisite: ACC 304.

701 ACCOUNTING FOR MANAGERIAL ANALYSIS
(3 + 0) 3 credits
Use of accounting by management in its planning and controlling functions. Budgets, standard costs, analysis of cost variations, profit planning, and operations research. Controllership as a function in the business enterprise.

715 ACCOUNTING CONCEPTS AND ANALYSIS
(3 + 0) 3 credits
Basic accounting ideas, statement preparation, utilization, and interpretation; partnership, corporation, and manufacturing accounts; funds flow and ratio analysis. (Satisfies requirement for MBA first-year core.)

790 SEMINAR (3 + 0) 3 credits
Contemporary accounting literature and problems.

791 SPECIAL TOPICS 1 to 3 credits
Advanced study in selected topics. Maximum of 6 credits.

797 THESIS 1 to 6 credits

Inactive Courses

354, 554 INDUSTRIAL ACCOUNTING (3 + 0) 3 credits
492, 692 CPA PROBLEMS II (3 + 0) 3 credits
494, 694 SEMINAR IN ACCOUNTING (3 + 0) 3 credits
732 THEORY OF FINANCIAL ACCOUNTING
(3 + 0) 3 credits

AGRICULTURAL AND INDUSTRIAL MECHANICS (AIM)

All students taking laboratory courses are required to furnish their own safety glasses to meet O.S.H.A. requirements.

General

100 BASIC MECHANICS (3 + 0) 3 credits
Historical and philosophical involvement of agricultural machines and the use of power as they relate to the development of modern agricultural technology. Principles of operation, selection, and care of agricultural and industrial equipment along with their relationship to our ecology.

110 BASIC WOODWORKING (2 + 3) 3 credits
Care and safe use of woodworking hand and power tools. Special projects to develop understanding and proficiency in the use of woodworking machines and processes.

111 FUNDAMENTALS OF NONMETALLIC FABRICATION (2 + 3) 3 credits
Use and application of plastics, fiberglass, translucent materials, and bonding agents used in building construction.

115 SMALL EQUIPMENT MAINTENANCE
(2 + 3) 3 credits
Familiarization with care, operation, and maintenance of mechanical and electrical equipment used in rural and urban activities. Student must furnish engine.

121 FUNDAMENTALS OF METAL WORK

(2 + 3) 3 credits
Care and use of metal-working hand and power tools. Special projects in bench work, sheet metal, and plumbing.

122 POWER TRAINS (2 + 3) 3 credits
Introduction to power units and transmission mechanisms.

124 HYDRAULIC SYSTEMS (2 + 3) 3 credits
Principles and practices of the operation and maintenance of hydraulic systems employed in agricultural equipment.

142 IRRIGATION EQUIPMENT AND STRUCTURES
(2 + 3) 3 credits
Design, layout, and construction of irrigation systems and structures encompassing modern irrigation methods.

153 FUNDAMENTALS OF GASOLINE ENGINES
(2 + 3) 3 credits
Design and function of water cooled gasoline engine, its parts, their operation and preventative maintenance. The understanding of what, how, and why in the proper operation and care of the engine. Student not required to furnish engine.

180 SHOP MANAGEMENT (3 + 0) 3 credits
Organization and operation of service areas for agricultural and industrial equipment, including inventory control and shop safety.

212 WELDING (2 + 3) 3 credits
Study and practice of AC and DC welding, acetylene welding, cutting, and brazing. Identification of metals and special welding rods.

253 GAS ENGINES AND TRACTORS
(2 + 3) 3 credits
Principles and operation, care and repair of farm gas engines and tractors with emphasis on efficiency of operation and use of special testing equipment. Student must furnish gas engine and pay for parts used in overhauling. The expense varies from engine to engine. Prerequisite: AIM 153.

256 RURAL ELECTRIFICATION (2 + 3) 3 credits
Planning and wiring the farmstead, electric motors, electrical equipment, and appliances. Materials, code regulation, electrical measurements, and rates applicable to various farm uses.

274 AUTOMATIC TRANSMISSIONS (2 + 3) 3 credits
Servicing, repairing, and overhauling automatic transmissions. Prerequisite: AIM 124. (Offered in even numbered years.)

280 INDEPENDENT STUDY 1 to 3 credits
Intensive study of a special problem in (a) agricultural education (b) industrial mechanics.

311 DESIGN AND CONSTRUCTION OF FURNITURE AND CABINETS (2 + 3) 3 credits
Design includes characteristics of media and adaptability of the design to mass manufacturing. Construction techniques emphasize machinery modification, jig construction, and sequence planning and controls necessary for industrial production. Prerequisite: AIM 110.

316, 416 INTERNSHIP IN AGRICULTURAL AND INDUSTRIAL MECHANICS
(1 to 3 + 0) 1 to 3 credits *S/U only*
Coordinated work-study programs in industry or government under the direction of a faculty adviser. Written progress reports are prepared periodically and at the conclusion of the internship.

321 ADVANCED METAL WORK (2 + 3) 3 credits
Designed to provide advanced training in the use of specialized techniques and equipment used in metal fabrication. Prerequisite: AIM 121 and 212.

332 FARM MACHINERY (2 + 3) 3 credits
Basic principles of machines; adjustment, maintenance, and

repair of farm machinery for efficient field operation. Field trips optional.

333 MACHINE DESIGN AND CONSTRUCTION

(2 + 3) 3 credits

Functional design and principles in the creation of equipment to incorporate fundamental drawing and the use of available materials in the construction of machines. Prerequisite: AIM 212.

341 FARM STRUCTURES (2 + 3) 3 credits

Building materials, their use and location, concrete forms, brick and block work, finishing and painting.

352 GAS ENGINE TUNE-UP AND DIAGNOSIS

(2 + 3) 3 credits

Specialized training in the area of gasoline engine tune-up and diagnosis of engine malfunction. Intensive work with service and repair of individual gasoline engine systems is included in the course. Prerequisite: AIM 253.

357 DIESEL POWER (2 + 3) 3 credits

Overhauling and repairing diesel farm tractors and engines; field servicing and repairing auxiliary power plants. Prerequisite: AIM 253.

381 MACHINE TOOL OPERATION (2 + 3) 3 credits

Use of metal working tools and machines as applied to agricultural and other heavy equipment. Prerequisite: AIM 121 and MATH 110 or equivalent.

412 ADVANCED WELDING (2 + 3) 3 credits

New techniques and equipment in working metals. Inert gas welding, hard surfacing; welding tests and design of welding structures. The theories of welding and metallurgy stressed as well as the proper weldment materials used with specialized metals and alloys. Prerequisite: AIM 212.

417 PUMPS (2 + 3) 3 credits

Operation and testing of centrifugal, deep well, turbines, and other types of pumps to determine efficiency, installation, and protective devices.

480 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in (a) agricultural education, and (b) industrial mechanics.

485, 685 SPECIAL TOPICS IN AGRICULTURAL AND INDUSTRIAL MECHANICS

(1 to 3 + 0) 1 to 3 credits

Presentation and review of recent research, innovations, and developments in agricultural and industrial mechanics. Areas may include new machines and equipment, as well as innovations or improvements of present equipment to improve its production or ecological efficiency. Maximum of 6 credits.

793 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in (a) agricultural education and (b) industrial mechanics. Prerequisite: graduate standing. Maximum of 6 credits.

Agricultural Education

144 INTRODUCTION TO AGRICULTURAL AND INDUSTRIAL EDUCATION (2 + 0) 2 credits

Operation, history, and philosophy of the vocational agricultural and industrial mechanics programs.

230 ORIENTATION TO VOCATIONAL EDUCATION (3 + 0) 3 credits

Introduction to vocational education: organization and management of vocational classes, laboratories, shops, work experience, etc., youth groups, and advisory committees.

240 MANPOWER NEEDS AND JOB ANALYSIS

(3 + 0) 3 credits

Review and analysis of job market needs, developing and con-

ducting local surveys, analysis of jobs and trades to determine training needed, determining performance objectives for skills to be taught, and developing criteria for evaluation.

342 YOUTH PROGRAMS (1 to 3 + 0) 1 to 3 credits

Plan, conduct, and evaluate the F.F.A. state contests and convention. Maximum of 6 credits.

444 METHODS AND MATERIALS OF TEACHING AGRICULTURAL AND INDUSTRIAL MECHANICS (2 + 0) 2 credits

Organization and administration of industrial and farm mechanics program, including objectives, course content, lesson planning, and teaching methods.

446, 646 PROGRAM DEVELOPMENT IN AGRICULTURAL AND INDUSTRIAL EDUCATION

(2 + 0) 2 credits

Youth groups, leadership training, supervised farming and cooperative work experience programs, advisory councils, and community surveys for program development.

447 METHODS IN TEACHING VOCATIONAL AGRICULTURE (3 + 0) 3 credits

Course construction for all day, young farmer, and adult farmer classes; preparation of teaching plans, reports, organization, and evaluation of a vocational agriculture department. (Same as C I 447.)

455, 655 WORKSHOP IN VOCATIONAL EDUCATION (1 + 0 per credit) 1 to 6 credits

(See C I 484, 684 for description.)

457 SUPERVISED TEACHING IN THE SECONDARY SCHOOL

(0 + 2 per credit) 1 to 8 credits

Major and/or minor teaching field. Provides opportunities in junior or senior high school. Prerequisite: Foundations for Secondary Teaching I, II, III completed or in progress, or equivalent. Arrangements are made by teacher-trainer in agricultural education.

460, 660 ADULT EDUCATION

(1 + 0 per credit) 1 to 6 credits

Programs authorized under the vocational education program; additional credit for field work in promoting, organizing and observing, and teaching adult classes. (a) Promotion practices, (b) organization, (c) instructional observation, (d) programmed instruction, (e) curriculum, (f) administration.

481, 681 SPECIAL PROBLEMS IN CURRICULUM AND INSTRUCTION

(1 + 0 per credit) 1 to 6 credits

(See C I 481, 681 for description.)

482, 682 FIELD STUDIES IN CURRICULUM AND INSTRUCTION (1 + 0 per credit) 2 or 3 credits

(See C I 482, 682 for description.)

728 PROBLEMS IN TEACHING

(1 + 0 per credit) 1 to 6 credits

Research projects required of each student in the field of special interest: (a) social studies, (b) English, (c) science, (d) mathematics, (e) business education, (f) foreign language, (g) industrial education, (h) bilingual-bicultural education, (j) agricultural-industrial mechanics. Maximum of 6 credits. Prerequisite: EDFM 700 (Same as C I 728.)

750 WORKSHOP IN AGRICULTURAL AND INDUSTRIAL MECHANICS

(1 + 0 per credit) 1 to 6 credits

Intensive study of a technical phase of (a) agricultural education, (b) industrial mechanics. Maximum of 6 credits.

763 INTERNSHIP IN CURRICULUM AND INSTRUCTION (0 + 2 per credit) 3 to 6 credits

(See C I 750 for description.)

784 SEMINAR IN INDUSTRIAL EDUCATION

(3 + 0) 3 credits
(See C 1 784 for description.)

Inactive Course

400 SEMINAR (1 + 0) 1 credit

AGRICULTURAL AND RESOURCE ECONOMICS (AREC)

100 AGRICULTURE AND RESOURCES IN THE ECONOMY (3 + 0) 3 credits

Economic principles related to agricultural and natural resources. Topics: price determination, emphasizing demand; price searching and taking; sources of and prescriptions for fluctuating economy.

202 AGRICULTURAL AND RESOURCE ECONOMICS (3 + 0) 3 credits

Production principles affecting the allocation of scarce agricultural and renewable resources by individual firms and implications for aggregate supply and resulting price determination.

211 FARM AND RANCH BUSINESS ANALYSIS (2 + 2) 3 credits

Farm records, accounts, and budgets and their use in planning and analyzing farm and ranch business operations.

280 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in agricultural and resource economics.

310 AGRICULTURAL PRODUCTION ECONOMICS (3 + 0) 3 credits

Application of techniques and principles of economics to the problems of agricultural production with the emphasis on allocating resources on the ranch, farm, and agriculture in general. Prerequisite: course in micro-economics.

315 AGRICULTURAL FINANCE (3 + 0) 3 credits

Fundamental principles of credit and finance applied to agriculture. Credit requirements, existing agencies, utilization, strength and weakness, and proposals for reform. Prerequisite: AREC 202 or EC 101.

316, 416 INTERNSHIP 1 to 3 credits S/U only

Coordinated work-study programs in industry or government under the direction of a faculty adviser. Written progress reports are prepared periodically and at the conclusion of the internship.

332 AGRICULTURAL ECONOMICS POLICY (3 + 0) 3 credits

Study of agricultural economic policy in the United States. Review of past and present policies and evaluation of these policies. Prerequisite: AREC 202 or EC 101.

364, 564 ECONOMICS OF OUTDOOR RECREATION (2 + 2) 3 credits

Application of economic principles to outdoor recreation problems and policies. Prerequisite: AREC 202 or EC 101.

368 ENVIRONMENTAL ECONOMICS (3 + 0) 3 credits

Economic concepts applied to solutions relating to man's environmental problems. Economic growth, pollution, controls, externalities, and social options will be included. Emphasis on trade-off between pollution and production included. Prerequisite: AREC 202 or equivalent.

386 AGRIBUSINESS FIELD TRIP 1 to 2 credits S/U only

Tours of agribusiness enterprises in Nevada or California. A one-week field trip during spring or interim break to observe the management and marketing practices used in successful

operations of different agribusiness structures. May be repeated once; paper required for 2 credits. Prerequisite: AREC 202 or EC 101.

400 UNDERGRADUATE SEMINAR (1 + 0) 1 credit

Research work and reports on topics of interest in agricultural and resource economics. Prerequisite: senior standing.

411, 611 FARM AND RANCH MANAGEMENT (2 + 3) 3 credits.

Principles and problems involved in the organization and management of farms and ranches. Prerequisite: AREC 202 or 211 or EC 101.

421, 621 MARKETING AND PRICES FOR FOOD AND FIBER PRODUCTS (3 + 0) 3 credits

Principles of economic theory and quantitative methods applied to the marketing and price movements of food and fiber products. Prerequisite: AREC 202 or EC 101.

460, 660 ECONOMICS OF COMMUNITY RESOURCE DEVELOPMENT (3 + 0) 3 credits

Basic community resource development principles, practices, and applied procedures. Classification of physical, economic, and social resources, and their relationship to development. Prerequisite: EC 101 or SOC 101 (Same as GEOG 440)

466, 666 ECONOMICS OF LAND AND WATER USE (3 + 0) 3 credits

Emphasizes interrelations of economic principles, legal and institutional factors, and other basic concepts affecting use and value of land and water resources. Attention given to the special problems of land and water use in the West. Prerequisite: AREC 202 or EC 101.

472, 672 REGIONAL ECONOMIC ANALYSIS (3 + 0) 3 credits

(See EC 472 for description.)

480 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in agricultural and resource economics.

485, 685 SPECIAL TOPICS (1 to 3 + 0) 1 to 3 credits

Presentation and review of recent research, innovations, and developments in agricultural and resource economics. Includes the areas of marketing, production, economics, regional development, resource development, and recreation economics. Maximum of 6 credits.

700 GRADUATE SEMINAR (1 to 3 + 0) 1 to 3 credits

Research work and reports on topics of interest in agricultural and resource economics.

710 ADVANCED AGRICULTURAL PRODUCTION ECONOMICS (3 + 0) 3 credits

Production principles applied to allocation of land, labor, capital, and management in agriculture. Prerequisite: AREC 411. (Offered in odd numbered years.)

720 THEORY OF MARKETS (3 + 0) 3 credits

Theory and description of competitive market relationships prevailing in our economy today. Emphasis is placed on farm and industry in imperfect competition. Prerequisite: AREC 321 or equivalent.

730 ADVANCED AGRICULTURAL ECONOMIC POLICY (3 + 0) 3 credits

Analysis of welfare economic theory related to internal and external problems of agriculture and agricultural policy. Prerequisite: AREC 332; EC 321 or 322.

740 RESEARCH METHODOLOGY (3 + 0) 3 credits

Scientific method applied to research in agricultural economics. Survey of various schools of thought concerning use of economic theory and methods of measurement in research. Prerequisite or corequisite: EC 321 or 322. (Same as EC 740.)

750 QUANTITATIVE METHODS IN AGRICULTURAL RESOURCE ECONOMICS (3 + 0) 3 credits

Application of quantitative methods such as mathematical programming, Markov Processes and simulation to problems in agriculture, natural resources, and rural development. The computer is used to solve problems encountered by resource managers and administrators.

760 ECONOMICS OF RENEWABLE NATURAL RESOURCES (3 + 0) 3 credits

Advanced application of economic principles to renewable natural resource development, use, conservation, and policy issues. Prerequisite: AREC 362 or 466.

793 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in agricultural and resource economics. Prerequisite: graduate standing. May be repeated to a maximum of 6 credits.

795 COMPREHENSIVE EXAMINATION

0 credit *S/U only*

796 PROFESSIONAL PAPER 1 to 3 credits *S/U only*

Required of all graduate students who wish to complete the master of science degree under Plan B.

797 THESIS 1 to 6 credits**798 INTERNSHIP 1 to 3 credits *S/U only***

Coordinated work-study programs in industry or government under the direction of a faculty adviser. Written progress reports are prepared periodically and at the conclusion of the internship.

AGRICULTURE — GENERAL (AG)*Associate Degree Course****20 AGRICULTURAL CAREERS AND INTRODUCTION TO THE****WORK-STUDY PROGRAM (2 + 0) 2 credits**

Exploring the areas of jobs in agriculture and preparing students for on-the-job work experience by the use of aptitude tests, resumes, letters of application, and oral interviews.

*Baccalaureate and Advanced Degree Courses***150 AGRICULTURAL MATHEMATICS**

(2 + 3) 3 credits

Mathematics used for solving practical problems in agriculture, business, and mechanics. Prerequisite: 2 units of high school mathematics or satisfactory score in qualifying examinations.

216, 316, 416 INTERNSHIP

(1 to 3 + 0) 1 to 3 credits *S/U only*

Coordinated work-study programs in industry or government under the direction of a faculty adviser. Written progress reports are prepared periodically and at the conclusion of the internship.

270 INTRODUCTION TO STATISTICS

(2 + 3) 3 credits

Introduction to the principles of statistics and application to the fields of agriculture and life sciences.

280 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in general agriculture.

300 FOOD AND AGRICULTURAL DEVELOPMENT

(2 + 0) 2 credits

The major demographic, economic, chemical and natural resource parameters impinging on the food supply and strategies for development. Prerequisites: CHEM 101 or BIOL 101 and 6 credits in AG 100-level courses.

360 EXTENSION PROGRAMS IN AGRICULTURE AND HOME ECONOMICS (2 + 0) 2 credits

Principles and practice in methods used for cooperative extension work. History, organization, and philosophy of the extension service. Prerequisite: junior standing in agriculture or home economics.

370 COMPUTER PROGRAMMING 1 credit

Techniques of computer programming for analysis of problems in agricultural and related sciences. To be offered as a one-week course during the January interim period or the special sessions. Prerequisite: at least one course in statistics.

409, 609 UNITED STATES AGRICULTURAL**HISTORY (3 + 0) 3 credits**

(See HIST 409 for description.) Prerequisite: junior, senior, or graduate agriculture students.

461, 661 THE AMERICAN WEST: RESOURCES AND ECONOMY (3 + 0) 3 credits

(See GEOG 461 for description.)

470 INTERMEDIATE STATISTICAL METHODS

(3 + 0) 3 credits

Statistical topics including analysis of variance, simple and multiple regression, and analysis of enumeration statistics. Emphasizes selection and application of statistical methods to realistic problems. Computers used to assist in the statistical analyses. Prerequisite: one course in statistics.

480 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in general agriculture.

485 SPECIAL TOPICS (1 to 3 + 0) 1 to 3 credits

Presentation and review of research, innovations, and developments in agriculture, food resources, technical systems, and international relationships.

700 STATISTICAL METHODS (2 + 2) 3 credits

Techniques of statistical inference and their application. Prerequisite: AG 270.

705 ADVANCED STATISTICAL ANALYSIS

(2 + 2) 3 credits

Advanced analysis of variance and covariance, multiple and curvilinear regression, nonparametric statistics, and sampling finite populations. Emphasis is given to computer applications. Prerequisite: AG 700 or equivalent.

710 EXPERIMENTAL DESIGN (1 + 2) 2 credits

Advanced techniques of statistical inference. Design and analysis of experiments in agriculture and related fields and the use of computer programming in statistical analysis. Prerequisite: AG 700 or equivalent.

760 EXTENSION PROGRAM ANALYSIS

(2 + 0) 2 credits

Analysis and development of cooperative extension programs in agriculture, home economics, and rural areas development. Prerequisite: graduate standing in agriculture or home economics.

793 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in general agriculture. Prerequisite: graduate standing. Maximum of 6 credits.

ANATOMY (ANAT)**401 HUMAN ANATOMY (6 + 9) 9 credits**

Designed for medical students. Presents concepts of em-

* Not applicable to baccalaureate and advanced degree programs.

bryology, histology and gross anatomy. Laboratories employ use of microscopic slides, models and cadaver dissection.

402 HUMAN NEUROANATOMY (3 + 3) 4 credits
Structure of the human nervous system with emphasis on central conduction pathways, especially those of clinical significance. Corequisite: PHYS 401.

416, 616 SEMINAR IN ANATOMY
(1 + 0 per credit) 1 to 3 credits
Library research and presentation in seminar fashion of a selected topic in any subdiscipline of anatomy.

417, 617 SELECTED TOPICS IN ANATOMY
(0 + 3 per credit) 1 to 3 credits
Comprehensive study of dissection of a selected area or system of the human body.

418, 618 READINGS IN ANATOMY
(1 + 0 per credit) 1 to 3 credits
Readings on selected topics in anatomy; involves library research and discussions with the anatomy staff; may include preparation and submission of a paper.

419, 619 RESEARCH IN ANATOMY
(0 + 3 per credit) 1 to 3 credits
Individual or independent work on a special problem under the supervision of a member of the anatomy staff with whom the student's interests are closely related.

490 INDEPENDENT STUDY 1 to 3 credits
725 MEDICAL HUMAN ANATOMY (4 + 12) 8 credits
Schedule in anatomy comparable to that offered in medical school, involving human dissection, histology, embryology, and basic neuroanatomy. For students of medicine and graduate students in life sciences.

726 HEAD AND NECK ANATOMY I (2 + 3) 3 credits
Emphasis on clinical correlation and related aspects of oral biology. Prerequisite: a degree in medicine or dentistry.

727 HEAD AND NECK ANATOMY II
(2 + 3) 3 credits
Continuation of ANAT 726. Detailed anatomy and dissection of the deeper head areas with emphasis on the oral cavity. The neurological implication of lesions of cranial nerves. Prerequisite: ANAT 726.

728 ADVANCED HUMAN NEUROANATOMY AND NEUROPHYSIOLOGY (2 + 3) 3 credits
Functional anatomy of fiber tracts and nuclear centers of the central nervous system, clinical neurology in terms of lesions of the central and peripheral nervous system; recent findings of neurophysiology in conjunction with neuroanatomy. Prerequisite: a degree in medicine or dentistry.

ANIMAL SCIENCE (A SC)

100 ELEMENTS OF LIVESTOCK PRODUCTION
(3 + 0) 3 credits
Fundamental concepts in care, management, and economics of food producing animals. Includes contributions of the Nevada and U.S. animal industries in providing food on an international basis.

162 BASIC EQUITATION (1 + 0) 1 credit
Elementary horse nutrition, health and management, including a study of the horse's anatomy and conformation as related to riding.

163 HORSEMANSHIP (0 + 3) 1 credit S/U only
Basic principles of English and western equitation. (Same as RPED 163.)

203 MEAT TECHNOLOGY (2 + 3) 3 credits
Status and functions of the meat industry. Slaughtering of farm animals, wholesale and retail cuts of meat, carcass grading.

206 HORSE HUSBANDRY (2 + 3) 3 credits
Care and management of horses including breeding, disease, nutrition, and selection. Prerequisite: A SC 100 or BIOL 201.

208 COMPETITIVE EQUITATION (1 + 3) 2 credits
Techniques in contemporary styles and skills of English and western equitation and rodeo events. Prerequisite: A SC 163. May be repeated to a maximum of 4 credits.

209 HORSE PRODUCTION (2 + 3) 3 credits
Equine reproduction and selection of breeding stock. Applied nutrition, feeding and business aspects of the horse industry.

211 FEED AND FEEDING (2 + 3) 3 credits
Basic principles of feeding farm animals; feeding standards; composition and nutritive value of feeds; compilation and preparation of rations. Prerequisite: A SC 100, CHEM 101.

212 BEEF CATTLE PRODUCTION (1 + 3) 2 credits
Principles of beef production including: breeding, physiology, nutrition, management, and marketing.

213 SHEEP PRODUCTION (1 + 3) 2 credits
Principles of sheep production including breeds and selection, nutrition, physiology, management, and marketing.

214 DAIRY CATTLE PRODUCTION (1 + 3) 2 credits
Principles of dairy production including management, nutrition, physiology, milk and by-products.

215 SWINE AND POULTRY PRODUCTION
(1 + 3) 2 credits
Principles of both swine and poultry production with emphasis on selection, breeding, physiology, nutrition, management and marketing.

280 INDEPENDENT STUDY 1 to 3 credits
Intensive study of a special problem in animal science.

301 LIVESTOCK SELECTION (1 + 3) 2 credits
Principles and practices of livestock evaluation. Prerequisite: A SC 100.

302 COMPETITIVE LIVESTOCK SELECTION
(1 + 3) 2 credits
The application of principles and practices of livestock evaluation. Prerequisite: A SC 301. May be repeated up to 4 credits.

316, 416 INTERNSHIP
(1 to 3 + 0) 1 to 3 credits S/U only
Coordinated work-study programs in industry or government under the direction of a faculty adviser. Written progress reports are prepared periodically and at the conclusion of the internship.

400 UNDERGRADUATE SEMINAR (1 + 0) 1 credit
Research work and reports on topics of interest in animal science. Prerequisite: senior standing.

404, 604 WATER METABOLISM (3 + 0) 3 credits
Functions of water as related to various homeostatic mechanisms in animals such as body temperature regulation, absorption and excretion. Prerequisite: A SC 407 or BIOL 263 or 460. (Offered in even numbered years.)

405, 605 ANIMAL GENETICS (3 + 3) 4 credits
Mechanisms of heredity, variation, methods of selection, systems of mating, with special reference to livestock. Prerequisite: BIOL 101 and 201 or equivalent.

406, 606 ANIMAL NUTRITION (3 + 0) 3 credits
Principles of nutrition including maintenance, growth, reproduction, and lactation; functions of protein, fat, carbohydrates, minerals, vitamins, and water. Prerequisite: A SC 211, B CH 301 or equivalent.

407, 607 PHYSIOLOGY OF THE DOMESTIC ANIMAL

(4 + 3) 5 credits

Physiology of the neuromuscular, central nervous, circulatory, respiratory, digestive, endocrine, reproductive, and excretory systems with special reference to domestic animals. Prerequisite: BIOL 366 or V M 413.

409, 609 PHYSIOLOGY OF REPRODUCTION AND LACTATION (4 + 0) 4 credits

Reproductive and mammary organs and their functions, neural and endocrine interrelationships and responses to environmental influences. Prerequisite: CHEM 142, A SC 407 or BIOL 263 or equivalent.

411, 611 TECHNIQUES IN LIVESTOCK REPRODUCTION (1 + 3) 2 credits

Evaluation and application of various techniques to control and determine reproductive functions in livestock. Prerequisite: A SC 409.

414, 614 ENDOCRINOLOGY (3 + 0) 3 credits

Structure and function of endocrine glands and how their secretions regulate biochemical reactions, integrate tissue and organ systems and control behavior. Prerequisite: A SC 407 or BIOL 385 or 386. Crosslisted with BIOL 414/614.

480 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in animal science.

485, 685 SPECIAL TOPICS (1 to 3 + 0) 1 to 3 credits.

Presentation and review of recent research, innovations, and development in various animal science areas including animal breeding, animal health, animal management, meats, nutrition, and physiology. Maximum of 6 credits.

700 GRADUATE SEMINAR (1 + 0) 1 credit

Research work and reports on topics of interest in animal science.

707 ARID LAND ANIMAL NUTRITION (2 + 0) 2 credits

Composition, selection, digestibility, and utilization of nutritionally important range plants by domestic animals and wildlife. Prerequisite: A SC 406, RNR 341 or PSW 355. (Offered in odd numbered years.)

791 SPECIAL TOPICS 1 to 3 credits

Intensive study of a special problem in animal science. Prerequisite: graduate standing. Maximum of 6 credits.

792 SPECIAL PROBLEMS (2 + 0) 2 credits

Recent research in various areas in animal science including nutrition, physiology, breeding, meats, or animal health is discussed and evaluated. May be repeated for additional credit.

795 COMPREHENSIVE EXAMINATION 0 credit *S/U only***796 PROFESSIONAL PAPER** 1 to 3 credits *S/U only*

Required of all graduate students who wish to complete the Master of Science degree under Plan B.

797 THESIS 1 to 6 credits*Inactive Courses*

20 MEAT IDENTIFICATION (1 + 3) 2 credits

50 ANIMAL FEEDS (2 + 3) 3 credits

207 NONINFECTIOUS DISEASES AND PARASITES OF DOMESTIC ANIMALS (2 + 3) 3 credits

313, 513 FEEDS AND FEEDING LABORATORY (0 + 3) 1 credit

ANTHROPOLOGY (ANTH)**101 INTRODUCTION TO ANTHROPOLOGY**

(3 + 0) 3 credits

Survey of the field of anthropology, emphasizing the com-

parative study of human society and culture; includes the contributions of physical anthropology, archaeology, and linguistics.

102 INTRODUCTION TO HUMAN EVOLUTION AND PREHISTORY (3 + 0) 3 credits

The emergence of man and the development of prehistoric culture, examination of human evolution, fossil hominids, and the biological variability of modern man.

103 HUMAN EVOLUTION AND PREHISTORY LABORATORY (0 + 3) 1 credit

Optional course to accompany Anth. 102; directed laboratory projects in human evolution, geochronology, human biology, and comparative primatology.

201 PEOPLES AND CULTURES OF THE WORLD (3 + 0) 3 credits

Comparative world-wide survey of selected cultures. Prerequisite: ANTH 101.

202 INTRODUCTION TO ARCHAEOLOGY (3 + 0) 3 credits

Survey of world prehistory and discussion of methods used by archaeologists to explain past cultures.

205 ETHNIC GROUPS IN CONTEMPORARY SOCIETIES (3 + 0) 3 credits

Ethnic relations in the United States and other societies where cultural and "racial" pluralism illustrates problems and processes of social interaction. Prerequisite: introductory course in one of the social sciences. (Same as SOC 205.)

212 MALE AND FEMALE: ANTHROPOLOGICAL PERSPECTIVES (3 + 0) 3 credits

Examination of male and female roles and family organization in human societies from the perspective of human evolutionary theory and comparative ethnographic evidence. Prerequisite: ANTH 101.

215 ANTHROPOLOGICAL FILM (2 + 2) 3 credits

The historical development and contemporary significance of documentary films about non-western peoples and cultures.

305, 505 ANTHROPOLOGICAL LINGUISTICS (3 + 0) 3 credits

Distribution of languages of the world. Descriptive techniques and theoretical concepts in linguistics; their application to specific problems in anthropology. Prerequisite: ANTH 101.

309 MUSEOLOGY (3 + 0) 3 credits

History, philosophy of museums; their role in contemporary society; museum organization, management, program planning, funding, publications, guest speakers, supervised field trips to museums. (Same as ART 309, BIOL 309, HIST 309, H EC 309.)

311, 511 APPLIED LINGUISTICS (3 + 0) 3 credits
(See ENGL 311 for description.)**312, 512 COMPARATIVE SOCIAL ORGANIZATION** (3 + 0) 3 credits

Basic institutions of human society; examination of the variability of structure in social systems and culture. Prerequisite: ANTH 101.

316, 516 LANGUAGE AND CULTURE (3 + 0) 3 credits

Nature of language in light of anthropological research, the diversity of the world's languages, the relation of language to social organization and world view. Prerequisite: ANTH 101. (Same as ENGL 316.)

322, 522 ANTHROPOLOGY OF RELIGION (3 + 0) 3 credits

Nature and functions of religion in various societies, the development of theoretical concepts in the anthropological study of religious and magical phenomena. Prerequisite: ANTH 101.

- 330 MATERIAL CULTURE (3 + 0) 3 credits**
Comparative study of material culture and techniques of manufacture in societies of different scale and complexity; factors influencing technological development and change. Prerequisite: ANTH 101, 201.
- 335, 535 PHYSICAL ANTHROPOLOGY (3 + 0) 3 credits**
Variation, adaptation, and evolution of human populations. Relevant topics include processes of evolution, taxonomy and classification, human genetics, adaptation and acclimatization, mating systems and population dynamics and paleo-anthropology. Prerequisite: ANTH 102.
- 338, 538 FOLKLORE: COMPARISONS & INTERPRETATIONS (3 + 0) 3 credits**
Comparative study of myth, legend, folktale and other orally transmitted traditions and customs. Prerequisite: ANTH 101.
- 340, 540 ARCHAEOLOGICAL PERSPECTIVES ON AMERICAN CULTURE (3 + 0) 3 credits**
Patterns of material culture as keys to the culture history of Colonial America, the Western frontier, and contemporary America. Coverage of underwater archeology. Prerequisite: ANTH 101.
- 345, 545 AMERICAN INDIAN ART (3 + 0) 3 credits**
The nature, function and history of American Indian art; formal and esthetic approaches; traditional and contemporary perspectives. Prerequisite: ANTH 101.
- 352, 552 POLITICAL ANTHROPOLOGY (3 + 0) 3 credits**
Comparative study of the political organization of band, tribal, and state level societies. Analysis of the modernization of traditional regions and of peasant and primitive warfare, rebellion, and revolutions.
- 360, 560 INDIANS OF THE GREAT BASIN (3 + 0) 3 credits**
Intensive study of the indigenous cultures of the intermontane region of western North America; tribal distribution, problems in culture areas, social organization and change. Prerequisite: ANTH 101.
- 362, 562 INDIANS OF NORTH AMERICA (3 + 0) 3 credits**
Culture areas of North American and related areas of Meso-America. Comparative cultural institutions and material from representative groups; review of theoretical problems in North American ethnology. Prerequisite: ANTH 101.
- 365 PEOPLES AND CULTURES OF AFRICA (3 + 0) 3 credits**
African culture history; analysis of social systems and cultural distributions; emergence of modern nations. Prerequisite: ANTH 101, 201.
- 366, 566 OLD WEST BASQUE CULTURE (3 + 0) 3 credits**
(See BASQ 366 for description.)
- 367 PEOPLES AND CULTURES OF ASIA (3 + 0) 3 credits**
Analysis of representative cultures of Asia, their origins and development. Prerequisite: ANTH 101, 201.
- 368 PEOPLES AND CULTURES OF THE PACIFIC (3 + 0) 3 credits**
Prehistory, recent cultures, and problems of change among the peoples of Oceania. Prerequisite: ANTH 101, 201.
- 388, 588 PEOPLES AND CULTURES OF THE MIDDLE EAST (3 + 0) 3 credits**
Survey of the ethnic, religious, and linguistic groups of the Middle East with attention to historical development. Prerequisite: an introductory course in anthropology or geography. (Same as GEOG 388.)
- 392, 592 PROCESSES OF SOCIAL AND CULTURAL CHANGE (3 + 0) 3 credits**
Methods and theories of anthropology identified and analyzed. Evolution, diffusion, acculturation, integration, revitalization, modernization, and other social and cultural processes are examined. Prerequisite: ANTH 101.
- 400, 600 ARCHAEOLOGICAL FIELD METHODS 6 credits**
Summer field course in archaeological method. Instruction in archaeological field techniques through the survey and excavation of selected site. Prerequisite: special advance application.
- 401, 601 THEORY AND METHOD IN ARCHAEOLOGY (3 + 3) 4 credits**
Lecture and laboratory. Archaeological research design; data processing and classification; methods of analysis; interpretation. Prerequisite: ANTH 202.
- 402, 602 LABORATORY METHODS IN ARCHAEOLOGY (1 + 3) 2 credits**
Techniques for cleaning, repairing, and storing artifacts from archaeological collections. The management of archaeological laboratories and collections, including data retrieval systems. Prerequisite: ANTH 102, 202.
- 403, 603 COLLECTIONS RESEARCH IN ANTHROPOLOGY (1 + 3) 2 credits**
A practicum in anthropological theory and method. Ethnographic, archaeological, or similar collections are described, analyzed, and interpreted under close supervision. Prerequisite: ANTH 102, 202.
- 411, 611 LINGUISTICS (3 + 0) 3 credits**
(See ENGL 411 for description.)
- 414, 614 HISTORICAL LINGUISTICS (3 + 0) 3 credits**
(See ENGL 414 for description.)
- 415, 615 PHONEMICS AND COMPARATIVE PHONETICS (3 + 0) 3 credits**
(See ENGL 415 for description.)
- 416, 616 LINGUISTIC FIELD METHODS (2 + 3) 3 credits**
Lecture and laboratory. Procedures in eliciting, recording, and analyzing language. Students work with informants. Prerequisite: ANTH 305 or 411 or 415. (Same as ENGL 416, 616.)
- 420, 620 AMERICAN INDIAN LANGUAGES (3 + 0) 3 credits**
Classification of American Indian languages; history of research in this field, structural features of representative languages; survey of research problems. Prerequisite: ANTH 316.
- 423, 623 ARCHAEOLOGY OF NORTH AMERICA (3 + 0) 3 credits**
New world prehistory with emphasis on North America; early man, influences from Middle America, and cultural sequences of Western North America. Lecture and discussion of methodology and field problems. Prerequisite: ANTH 102.
- 425, 625 ARCHAEOLOGY OF MEXICO AND PERU (3 + 0) 3 credits**
Comparative studies of the development of civilization in North and South America prior to the Spanish conquest.
- 435, 635 PRIMATE BEHAVIOR (3 + 0) 3 credits**
Behavior and social organization of the nonhuman primates; comparisons with human populations, implications for human evolution. Prerequisite: ANTH 101 or 102.
- 440, 640 HISTORY OF ANTHROPOLOGY (3 + 0) 3 credits**
Historical approach to the development of anthropology as a discipline and its relationship to other fields. Required of majors in the senior year.
- 455, 655 INTRODUCTION TO BASQUE LINGUISTICS (3 + 0) 3 credits**
(See BASQ 455 for description.)

460, 660 SEMINAR IN CULTURAL ANTHROPOLOGY

(1 to 3+0) 1 to 3 credits.

Consideration of selected topics in ethnology, ethnolinguistics, or social anthropology. Topics vary from semester to semester. Maximum of 6 credits.

470, 670 ANTHROPOLOGY AND ECOLOGY

(3+0) 3 credits

Introduction to the processes of biological and cultural adaptation to selected environments. Relevant topics include hominid ecology, resource exploitation, patterns of subsistence, and the modes and rates of adaptation to changing environments.

475, 675 ANTHROPOLOGY AND EDUCATION

(3+0) 3 credits

(See EDFM 475 for description.)

480, 680 MUSEUM TRAINING FOR ANTHROPOLOGISTS (3+0) 3 credits

Apprentice curatorship in anthropology; processing and preservation of anthropological collections; design of exhibits; curatorial responsibilities; museum research; relationship to public, state, and federal agencies.

499, 699 SPECIAL PROBLEMS IN ANTHROPOLOGY

(1 to 6+0) 1 to 6 credits.

Research or reading to be carried out with the supervision of instructor. Maximum of 6 credits.

701 INDIVIDUAL READING 1 to 6 credits

Supervised reading with regular conferences between student and instructor. Maximum of 6 credits.

702 GRADUATE RESEARCH 1 to 6 credits

Research projects in anthropology carried out under supervision. Maximum of 6 credits.

703 GRADUATE SEMINAR IN CULTURAL ANTHROPOLOGY (3+0) 3 credits

Close examination of basic concepts and theories of social and cultural anthropology.

704 GRADUATE SEMINAR IN PHYSICAL ANTHROPOLOGY (3+0) 3 credits

Selected reading in, and discussion of, topics in human biological evolution.

705 GRADUATE SEMINAR IN ARCHAEOLOGY AND PREHISTORY (3+0) 3 credits

Selected reading in, and discussion of, topics in archaeological methods and theory.

706 SEMINAR IN ANTHROPOLOGICAL PROBLEMS (3+0) 3 credits

Detailed examination of selected issues in cultural anthropology, physical anthropology, anthropological linguistics, or archaeology. Maximum of 6 credits.

707 METHODS IN CULTURAL ANTHROPOLOGY (3+0) 3 credits

An examination of the methods used to collect and analyze data in social and cultural anthropology.

713 PROBLEMS IN LANGUAGE (3+0) 3 credits

(See ENGL 713 for description.)

737 TEACHING METHODS IN ANTHROPOLOGY (1+0) 1 credit

Course objectives and organization, lecture, presentation, examination procedures, and related problems in teaching the subject matter of anthropology.

750 REGIONAL STUDIES IN ANTHROPOLOGY

(3+0) 3 credits

Selected topics in anthropology focusing upon a particular region of the world. Maximum of 6 credits.

795 COMPREHENSIVE EXAMINATION

 0 credit *S/U only*
796 PROFESSIONAL PAPER 3 credits *S/U only*

Required of all graduate students who wish to complete the Master of Arts degree under Plan B.

797 THESIS 1 to 6 credits

Inactive Courses
240 ANTHROPOLOGY OF FABLED PEOPLES, PLACES AND EVENTS (3+0) 3 credits

310, 510 ARCHAEOLOGY OF THE OLD WORLD (3+0) 3 credits

342, 542 COMPARATIVE ART (3+0) 3 credits

350, 550 ECONOMIC ANTHROPOLOGY (3+0) 3 credits

355, 555 CONTEMPORARY LATIN AMERICAN SOCIETY (3+0) 3 credits

363, 563 INDIANS OF SOUTH AMERICA (3+0) 3 credits

369, 569 PEOPLES AND CULTURES OF EUROPE (3+0) 3 credits

370, 570 AFRO-AMERICAN PEOPLES AND CULTURES (3+0) 3 credits

410, 610 ETHNOGRAPHIC FIELD METHODS (2+4) 4 credits

430, 630 PROBLEMS IN PHYSICAL ANTHROPOLOGY (3+0) 3 credits

450, 650 PEASANT SOCIETY (3+0) 3 credits

465, 665 CULTURE AND PERSONALITY (3+0) 3 credits

ARCHITECTURAL ENGINEERING TECHNOLOGY (AET)

101 INTRODUCTION TO ARCHITECTURE (3+0) 3 credits

Architectural history, logic, development of the design process, use planning, and their relationship to the natural and built environments today.

119 ARCHITECTURAL DRAFTING (1+6) 3 credits

Basic techniques of architectural drafting, use of drafting room equipment. Emphasizes residential buildings and leads to completion of a full set of professional-level working drawings.

214 ARCHITECTURAL DESIGN (1+6) 3 credits

Advanced work in architectural design. Development of architectural logic, planning, and aesthetics with relation to structures. Prerequisite: AET 119.

216 ARCHITECTURAL DESIGN II (1+6) 3 credits

Continuation of AET 214. One designated field trip may be required during the semester. Prerequisite: AET 214.

220 CONSTRUCTION AND WORKING DRAWINGS I (1+6) 3 credits

Construction and detailed working drawings of elementary wood and steel structures. Application of building codes. Prerequisite: AET 119.

221 CONSTRUCTION AND WORKING DRAWINGS II (1+6) 3 credits

Continuation of AET 220 covering more advanced topics. Prerequisite: AET 220

225 ARCHITECTURAL DELINEATION (0+6) 2 credits

Three-dimensional representation of structures with various drawing media which enable the student to express his architectural ideas. Prerequisite AET 119. Maximum of 4 credits.

264 MECHANICAL AND ELECTRICAL EQUIPMENT FOR BUILDINGS (3+3) 4 credits

Basic design computations and drafting concepts used in selection and layout of mechanical and electrical systems for buildings.

266 STRUCTURAL DRAFTING-DESIGN (1 + 6) 3 credits
Basic structural design techniques in both steel and reinforced concrete. Implementation of lectures with actual drafting of design projects. Individual development of a design to its final plans is required.

280 SOLAR ENERGY SYSTEMS

(2 + 0 or 3) 2 or 3 credits

Application of active and passive solar energy designs, including system performance analyses, aesthetics, and economics. Laboratory exercises require complete building and system design. Prerequisite: Algebra.

ART (ART)

The Department of Art reserves the right to keep student drawings, paintings, and art work for the permanent collection of the university. Many courses require special expenses for materials and equipment in addition to regular registration fees. Consult with the department prior to registration.

100 VISUAL FOUNDATIONS (1 + 4) 3 credits

Explores visual forms and contemporary concepts through a variety of media, presentations, and discussions.

116 SURVEY OF THE ART OF

WESTERN CIVILIZATION I (2 + 0) 2 credits

Art of the western world from prehistoric times through the Gothic period.

117 SURVEY OF THE ART OF

WESTERN CIVILIZATION II (2 + 0) 2 credits

Art of the western world from the Renaissance to the present.

121 DRAWING (0 + 6) 3 credits each

Introduction to concepts of drawing based on visual observations.

135 PAINTING (0 + 6) 3 credits each

Introduction to concepts of painting including color, form, and composition.

140 INTRODUCTION TO THE VISUAL ARTS

1 to 3 credits.

Basic studio course for the nonart major, exploring visual forms through a variety of media. Scheduled sections deal with special areas. May be repeated for additional credit. May not be used to satisfy Department of Art major requirement.

150 BEGINNING PHOTOGRAPHY (1 + 4) 3 credits

Analytical and critical approach to the creative possibilities of photography including instruction in the basics of photographic techniques and materials.

163 SCULPTURE (0 + 6) 3 credits

Introduction to the concepts of three dimensional composition.

175 CERAMICS (1 + 4) 3 credits

Introduction to ceramics emphasizing characteristics of various clay bodies.

185 PRINTMAKING (0 + 6) 3 credits

Introduction to printmaking emphasizing basic techniques and processes.

212 THE PORTRAIT IN WESTERN ART (2 + 0) 2 credits

Portrait painting and portraiture in sculpture from the Egyptian period through modern time.

213 INTRODUCTION TO CONTEMPORARY

ART (2 + 0) 2 credits

The evolution of art in Europe and the USA since World War II. Special emphasis on the trends since the 1960's.

214 SURVEY OF AMERICAN ART (3 + 0) 3 credits

General survey of the art and architecture of America from the colonial period to the present.

221-222 DRAWING (0 + 6) 3 credits

Intermediate courses designed to develop expression and discipline in drawing with emphasis on materials. Prerequisite: ART 100, 121.

235, 236 PAINTING (0 + 6) 3 credits each

Intermediate course in painting, emphasizing various materials and methods. Prerequisite: ART 100, 135.

250-251 PHOTOGRAPHY (1 + 4) 3 credits each

Lecture study with emphasis on improving basic technical skills and exploration of alternative photographic processes. Prerequisite: ART 100, 150.

253 FILMMAKING (1 + 4) 3 credits each

Exploration of the techniques and creative possibilities of cinematography with individual and group production experience. Lecture/study of the work of the artist as filmmaker. Prerequisite: ART 250. May be repeated to a maximum of 6 credits.

256 CINEMA I/THE SILENT ERA (3 + 0) 3 credits

History of the film from beginning to introduction of sound, emphasizing the development of forms and techniques. Film showings, lectures, and discussions.

257 CINEMA II/THE SOUND ERA 1 to 3 credits

History of the film from the introduction of sound with specific emphasis on particular time blocks and possible social/psychological relevance and/or influence. Maximum of 6 credits.

263-264 SCULPTURE (0 + 6) 3 credits each

Intermediate emphasis on processes, concepts, and materials. Prerequisite: ART 100, 163.

275-276 CERAMICS (1 + 4) 3 credits each

Intermediate emphasis on history, materials, methods, and techniques with special attention to sculptural aspects. Lecture-laboratory method is employed with emphasis on research. Prerequisite: ART 100, 175.

285-286 PRINTMAKING (0 + 6) 3 credits each

Studio instruction concerned with professional printmaking processes: intaglio, relief, lithography, and serigraphy. Prerequisite: ART 100, 185.

309 MUSEOLOGY (3 + 0) 3 credits

(See ANTH 309 for description.)

314, 514 MEDIEVAL ART (3 + 0) 3 credits

Detailed study of the arts of the Middle Ages from 300 to 1400, including early medieval art, Carolingian, Ottonian, Romanesque and Gothic. Prerequisite: ART 116.

315, 515 RENAISSANCE ART (3 + 0) 3 credits

History of Western European Art in the Fifteenth and Sixteenth Centuries.

316, 516 BAROQUE ART (3 + 0) 3 credits

History of Western European Art from 1600-1750.

319 FIELD STUDY 1 to 3 credits

Student-faculty seminar including group travel to art centers within the United States and abroad for field study experience. Maximum of 6 credits.

321-322 ADVANCED DRAWING (0 + 6) 3 credits each

Continuation of Art 221-222 offered to develop maturity of expression in a broad range of media. Prerequisite: ART 222.

335-336 PAINTING (0 + 6) 3 credits each

Continuation of ART 235. Prerequisite: ART 121 and 235.

337-338 WATERCOLOR (0 + 6) 3 credits each

Intermediate course involving comprehensive problems in

painting with transparent and opaque watercolors. Prerequisite: ART 121 and 135.

342 ART EDUCATION: ELEMENTARY SCHOOLS
(2 + 2) 3 credits

Theoretical foundations of art education including a planned program of media investigation and experience in areas suitable for elementary and beginning middle school programming.

346 ART EDUCATION: SECONDARY SCHOOLS
(0 + 6) 3 credits

Philosophical foundations and methods of curriculum planning and implementation for secondary art programming. A planned program of media investigation, classroom observation, and prestudent teaching experience. Prerequisite: senior standing and completion of art department major requirements. (Same as C I 346.)

349 ELEMENTARY ART EDUCATION/SPECIAL WORKSHOP 1 to 3 credits

Designed for the professional teacher in the field, emphasizing art and its relationship to the curriculum according to contemporary and current philosophy.

350-351 PHOTOGRAPHY (1 + 4) 3 credits each

Refinement of technical and visual skills. Lecture/study of historical and contemporary photographic processes and their creative possibilities. Prerequisite: ART 251.

353 SEMINAR IN PHOTOGRAPHY 1 to 3 credits

Scheduled sections deal with in-depth investigation of a specific aspect of photography. Maximum of 6 credits. Prerequisite: ART 250 and 350.

355 EVOLUTION OF THE PHOTOGRAPH
(2 + 0) 2 credits

Survey of the historical, technical, and social foundations of photography and its relationship to the other visual arts.

357 CINEMA III/THE SOUND ERA 1 to 3 credits

Historical and critical development of specific genres, styles, and directors; investigating film as a developing art form and means of mass communication. Maximum of 6 credits. Prerequisite: ART 256 or 257.

363-364 SCULPTURE (0 + 6) 3 credits each

Individual concepts of sculptural form with emphasis on personal development. Prerequisite: ART 264.

375-376 CERAMICS (0 + 6) 3 credits each

Continuation of ART 275-276 with emphasis on sculpture, pottery, and independent investigation of the materials. Study of advanced technical and aesthetic aspects of clay, clay bodies, and glazes. Prerequisite: ART 276.

381 THE PRACTICE AND HISTORY OF PRINTING (0 + 6) 3 credits

(See L SC 381 for description.)

384 EVOLUTION OF THE PRINT (2 + 0) 2 credits

Historical, technical, and curatorial foundations of printmaking. Field trips to regional print collections are scheduled.

385-386 PRINTMAKING (0 + 6) 3 credits each

Sustained exploration in one or more of the basic print processes with emphasis on technical problems related to inks, papers, and presses. Prerequisite: ART 286.

403 POSTGRADUATE ORIENTATION (2 + 0) 2 credits

Orientation to career possibilities in the field of art. Required of all art majors.

408, 608* INDIVIDUAL STUDIES 1 to 3 credits

Individual studies in the areas of two- or three-dimensional work and art history. May be repeated to a maximum of 6 credits.

417, 617 NINETEENTH CENTURY ART (3 + 0) 3 credits

Detailed study of the Neo-Classical, Romantic, Realist, and Im-

pressionist movements in Western art, including aspects of the architectural evolution. Prerequisite: ART 116, 117.

418, 618 TWENTIETH CENTURY ART (3 + 0) 3 credits

Detailed study of the visual arts from 1880 to present time discussing the major movements of the period. Attention also given to twentieth century architecture. Prerequisite: ART 116, 117.

419, 619* SENIOR/GRADUATE PROBLEMS IN THE HISTORY OF ART 3 credits

Tutorial on independent basis arranged with departmental tutor/adviser. Prerequisite: 419—senior standing; 619—graduate standing.

428, 628* SENIOR/GRADUATE PROBLEMS IN DRAWING 3 credits

Tutorial on independent basis arranged with departmental tutor/adviser. Student exhibits work as part of course requirement. Maximum of 6 credits. Prerequisite: 428—12 credits in drawing and senior standing; 628—graduate standing.

435-436 ADVANCED PAINTING (0 + 6) 3 credits each

Integration of form, space, and color in advanced problems using still life, figure, and landscape as points of departure. Prerequisite: ART 335-336.

438, 638 SENIOR/GRADUATE PROBLEMS IN PAINTING 3 credits

Tutorial on independent basis arranged with departmental tutor/adviser. Student will exhibit work as part of the course requirement. May be repeated to a maximum of 6 credits. Prerequisite: 438—18 credits in painting and senior standing; 638—graduate standing.

450-451 ADVANCED PHOTOGRAPHY
(1 + 4) 3 credits each

Development of individual photographic expression. Exploration of a variety of manipulative photographic materials through lecture and experimentation. Prerequisite: ART 351.

458, 658 PROBLEMS IN PHOTOGRAPHY 3 credits

Tutorial on an independent basis arranged with tutor/adviser. Student will exhibit work as part of course requirement. Maximum of 6 credits. Prerequisite for ART 458: 21 units in photography and senior standing; for Art 658: graduate standing.

463-464 ADVANCED SCULPTURE (0 + 6) 3 credits each

Advanced concepts of sculptural form and individual problem solving. Prerequisite: ART 363-364.

468, 668* SENIOR/GRADUATE PROBLEMS IN SCULPTURE 3 credits

Tutorial on independent basis arranged with departmental tutor/adviser. Students exhibit work as part of the course requirement. Maximum of 6 credits. Prerequisite: 468—18 credits in sculpture and senior standing; 668—graduate standing.

475-476 ADVANCED CERAMICS (0 + 6) 3 credits each

Continuation of ART 375-376, with special emphasis on clay compounds, glazes and glaze formulation, kiln firing and temperature control. Prerequisite: ART 375-376.

478, 678* SENIOR/GRADUATE PROBLEMS IN CERAMICS 3 credits

Tutorial on independent basis arranged with departmental tutor/adviser. Students exhibit work as part of course requirement. Maximum of 6 credits. Prerequisite: 478—18 credits in ceramics and senior standing; 678—graduate standing.

*Registration within any independent study course is permitted upon written request to the department which includes three copies of a statement of objectives, the specific goals, and indicates the scope of the student's plans. A paper, a full report, or an exhibit of work produced is required.

483-484, 683-684 ADVANCED PRINTMAKING

(0 + 6) 3 credits each

Emphasis on development of individual graphic expression through experimentation and refinement of one or any combination of the print processes. Prerequisite: ART 383-384.

488, 688* SENIOR/GRADUATE PROBLEMS IN PRINTMAKING 3 credits

Tutorial on independent basis arranged with departmental tutor/adviser. Students exhibit work as part of the course requirement. Maximum of 6 credits. Prerequisite: 488-18 credit hours in printmaking and senior standing; 688-graduate standing.

498, 698 SEMINAR IN THE VISUAL ARTS

1 to 3 credits

To encourage the student of art to synthesize his formal training and to integrate his specialization into the framework of the liberal arts. Maximum of 6 credits. Prerequisite: senior or graduate standing.

Inactive Courses

105 DESIGN (0 + 4) 2 credits

115 ART APPRECIATION (2 + 0) 2 credits

191 CRAFTS (1 + 4) 3 credits

210 SURVEY OF MEXICAN ART (2 + 0) 2 credits

215 SURVEY OF PRIMITIVE ART (2 + 0) 2 credits

218 SURVEY OF ORIENTAL ART (2 + 0) 2 credits

258-259 COMMERCIAL ART (0 + 6) 3 credits each

293 JEWELRY (0 + 6) 3 credits

294 CREATIVE DESIGN WITH FABRIC (0 + 6) 3 credits

298 CREATIVE DESIGN ON TEXTILE-RESIST DYING (0 + 6) 3 credits

299 CREATIVE DESIGN ON TEXTILE-SCREEN PRINTING (0 + 6) 3 credits

303, 304 ART STRUCTURE AND PICTORIAL COMPOSITION (0 + 4) 2 credits each

318 SYMBOLIST ART (2 + 0) 2 credits

358-359 ADVANCED COMMERCIAL ART (0 + 6) 3 credits each

393 JEWELRY (0 + 6) 3 credits

394 ADVANCED CREATIVE DESIGN WITH FABRIC (0 + 6) 3 credits

396-397 ADVANCED CREATIVE DESIGN ON TEXTILE (0 + 6) 3 credits each

416-616 HISTORY OF AMERICAN ART (3 + 0) 3 credits

BELIEFS AND VALUES (B V)*Interdisciplinary Courses*

264 SCIENCE AND RELIGION (3 + 0) 3 credits

Scientific and religious modes of experience and views of the world. History of the conflict. Elements of modern theology and philosophy of science that bear on the relation of the two areas.

BIOCHEMISTRY (B CH)

280 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem.

301, 501 INTRODUCTORY BIOCHEMISTRY I

(3 + 0) 3 credits

Major metabolic pathways and control mechanisms for carbohydrates, lipids, and amino acids, includes energetics, photosynthesis, vitamins, and cell organization. Meets requirement for a single semester survey of metabolism. Prerequisite: CHEM 142 or 244 for B CH 301; CHEM 244 for B CH 501.

302, 502 INTRODUCTORY BIOCHEMISTRY II

(3 + 0) 3 credits

Carbohydrate and lipid structure, protein and nucleic acid structure and biosynthesis, enzyme kinetics and regulation of gene function using organic and physical chemistry principles. Prerequisite: CHEM 142 or 244 for B CH 302; CHEM 244 for B CH 502.

303, 503 INTRODUCTORY BIOCHEMISTRY

LABORATORY I (1 + 3) 2 credits

Selected experiments illustrating methodology used in investigating the chemistry of living systems. If laboratory is needed, 303(503) must be taken concurrently with 301(501). Prerequisite: CHEM 142 with lab or 244 and 246 for B CH 303; CHEM 244 and 246 for B CH 503.

304, 504 INTRODUCTORY BIOCHEMISTRY

LABORATORY II (0 + 6) 2 credits

Selected experiments illustrating methodology used in investigating the chemistry of living systems. If a laboratory is needed 304(504) must be taken concurrently with 302(502). Prerequisite: CHEM 142 with lab or 244 and 246 for B CH 304; CHEM 244 and 246 for B CH 504.

401 HUMAN BIOCHEMISTRY (9 + 0) 9 credits

Emphasis on application in medicine. Includes macromolecular chemistry, intermediary metabolism and biochemical regulatory mechanism in health and disease.

405-406, 605-606 ADVANCED BIOCHEMISTRY I AND

II (3 + 0) 3 credits

In-depth examination of structure, function, metabolism, and regulation of carbohydrates, lipids, proteins, enzymes, nucleic acids, relationship of metabolism to the life processes of the whole organism. Prerequisite: B CH 301-304, CHEM 244 and 354 or 357.

407-408, 607-608 ADVANCED BIOCHEMISTRY

LABORATORIES I AND II (0 + 9) 3 credits

Laboratory work which accompanies B CH 405-406, 605-606. Prerequisite or corequisite: B CH 405-406, 605-606.

409-410 BIOLOGICAL CHEMISTRY (3 + 3) 4 credits each

Chemistry of the living material, including biosynthesis, metabolic role and degradation of proteins, carbohydrates, lipids, nucleic acids, vitamins, hormones, and other compounds related to the life process. Prerequisite: CHEM 244 or 334; 354-355; and a course in biology.

412, 612 PLANT BIOCHEMISTRY (3 + 0) 3 credits

Study of plant metabolism with emphasis on reactions unique to plants such as photosynthesis, alkaloid biosynthesis, nitrogen fixation. Prerequisite: B CH 301 or equivalent.

450 RADIOTRACER TECHNIQUES (1 + 3) 2 credits

Introduction to the use of radioactive materials as tracers with special reference to agricultural application. Prerequisite: CHEM 333.

480 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem.

710 RADIOTRACER METHODOLOGY (1 + 3) 2 credits

Use of radioactive materials as tracers. Prerequisite: CHEM 333. Recommended: B CH 406 or 410 and MATH 181. (Not available for students having completed B CH 450.)

*Registration within any independent study course is permitted upon written request to the department which includes three copies of a statement of objectives, the specific goals, and indicates the scope of the student's plans. A paper, a full report, or an exhibit of work produced is required.

711-712 BIOCHEMICAL TECHNIQUES

(0 + 3 or 6) 1 or 2 credits each

Introduction in depth to details of biochemical techniques and equipment. Prerequisite: B CH 406 or 410.

722 METABOLISM (3 + 0) 3 credits

Consideration at the molecular level of selected anabolic and catabolic processes. Prerequisite: B CH 406 or 410.

731 PHYSICAL BIOCHEMISTRY (3 + 0) 3 credits

Physical chemistry of biochemical systems. Prerequisite: B CH 406 or 410, CHEM 354.

740 ENZYMOLOGY (3 + 0) 3 credits

Enzyme kinetics, specificity, mechanisms, inhibition, structure, formation, and control. Prerequisite: B CH 406 or 410. Recommended: a course in physical chemistry.

751 NUCLEIC ACIDS (3 + 0) 3 credits

Structure, synthesis, isolation, and biological role of DNA and RNA and enzymes relating to these compounds. Prerequisite: B CH 406 or 410.

752 MITOCHONDRIAL STRUCTURE AND**FUNCTION (3 + 0) 3 credits**

Respiratory chain, phosphorylation, compartmentation, metabolic control, ultrastructure, ion translocation, energy coupled changes in volume, and structure and theories of biogenesis. Prerequisite: B CH 406 or 410.

760 MINERAL METABOLISM (3 + 0) 3 credits

Biochemistry of the macro- and micronutrient trace elements with some reference to toxic and nonmetabolic elements. Prerequisite: B CH 406 or 410.

790 GRADUATE SEMINAR (1 + 0) 1 credit

Reports on topics of interest in biochemistry.

793 INDEPENDENT STUDY 1 to 6 credits

Individual study in a specialized area.

795 COMPREHENSIVE EXAMINATION0 credit *S/U only***797 THESIS 1 to 6 credits**

Thesis may be written in area of biochemistry.

799 DISSERTATION 1 to 24 credits*Inactive Courses***721 STRUCTURAL BIOCHEMISTRY (3 + 0) 3 credits****770 STEROIDS (3 + 0) 3 credits****BIOLOGY (BIOL)****100 BIOLOGY: PRINCIPLES AND APPLICATIONS**

(3 + 0) 3 credits

Introduction to basic biological principles and their applications. Cannot be used for credit toward any field of concentration in biology.

101 GENERAL BIOLOGY (3 + 3) 4 credits

Integrated treatment of biological principles common to all living organisms, including life chemistry, cellular and molecular biology, reproduction, genetics, evolution, and ecology. Unity of life emphasized.

103 GENERAL BIOLOGY (3 + 0) 3 credits

Introduction to the principles of botany and zoology. Cannot be used as a prerequisite for other botany and zoology courses. Primarily a correspondence course.

135 LOCAL FLORA (1 + 3) 2 credits

Classification of native and cultivated flowering plants of the Reno area.

160 GENERAL ZOOLOGY (3 + 0) 3 credits

Introductory course dealing with the general principles of animal biology. Offered for 3 credits (which does not include laboratory) through Independent Study only. This course does not meet the requirements for majors in the Department of Biology.

201 ANIMAL BIOLOGY (2 + 3) 3 credits

Introduction to embryology, behavior, and diversity of the major groups including evolutionary relationships. Prior knowledge of general biological principles is strongly recommended.

202 PLANT BIOLOGY (2 + 3) 3 credits

Introduction to development, physiology, and diversity of the major groups including evolutionary relationships. Prior knowledge of general biological principles is strongly recommended.

204 HEREDITY, MAN, AND ENVIRONMENT

(3 + 0) 3 credits

Similarities and variations among humans compared with other organisms. Genetic basis of differences and influence of natural and man-made factors in modifying these. Primarily for nonbiology majors. Prerequisite: one course in biology.

206 CELLULAR BIOLOGY I (2 + 0) 2 credits

Cellular phenomena which provide the foundations of life. Cell chemistry and physiology, cell organization, membrane systems, and organelles. Prerequisite: BIOL 101 and one semester of chemistry.

207 CELLULAR BIOLOGY II (2 + 0) 2 credits

Structure and function of the nucleus, cytogenetics, cellular immunology, cell interactions, cell differentiation. Prerequisite: BIOL 206.

210 BIOLOGICAL PRINCIPLES OF CONSERVATION

(2 + 0) 2 credits

Biological principles related to the conservation of animal and plant resources.

212 GENERAL ECOLOGY (3 + 3) 4 credits

Basic ecological principles; the effects of environmental factors on plants and animals with their interactions considered in detail. Prerequisite: BIOL 101, 201 or 202.

231 FUNGI AND HUMAN AFFAIRS (2 + 0) 2 credits

Facts and myths of fungi and their effect on humans and other forms of life. BIOL 101 background desirable.

232 INTRODUCTION TO PLANT DIVERSITY

(2 + 0) 2 credits

Structures, life cycles, and forms of representative algae, mosses, ferns, gymnosperms and angiosperms. Prerequisite or corequisite: BIOL 202. Corequisite for botany majors: BIOL 233.

233 PLANT DIVERSITY LABORATORY

(0 + 3) 1 credit

Optional laboratory for BIOL 232.

260 VERTEBRATE ZOOLOGY (3 + 0) 3 credits

Biology of the vertebrates. Main emphasis on the land vertebrates, amphibians, reptiles, birds and mammals. Prerequisite: BIOL 101, 201.

262 HUMAN ANATOMY AND PHYSIOLOGY I

(2 + 3) 3 credits

The body as a whole. Skeletal, muscular, nervous, sensory, and endocrine systems of man. Primarily for nursing, physical education, and home economics students. Prerequisite: BIOL 101.

263 HUMAN ANATOMY AND PHYSIOLOGY II

(2 + 3) 3 credits

Circulatory, respiratory, digestive, urogenital, and integumentary systems of man. Primarily for nursing, physical education, and home economics students. Prerequisite: BIOL 262.

300, 500 PRINCIPLES OF GENETICS (3 + 0) 3 credits

Introduction to features of heredity and variation among plants and animals. Prerequisite: BIOL 101, 201 or 202.

301, 501 GENETICS LABORATORY (0 + 3) 1 credit

Optional course to accompany BIOL 300.

302, 502 DISCUSSION IN GENETICS (1 + 0) 1 credit

Small group discussions of principles of genetics to accompany BIOL 300.

303, 503 HUMAN GENETICS (2 + 3) 3 credits

Fundamentals of genetics and their application to biology and human welfare; chromosome related abnormalities, their medical and social implications; chromosome structure, identification and function. Prerequisite: BIOL 101, 201, some training in chemistry and mathematics.

306, 506 MICROBIOLOGY (2 + 6) 4 credits

Bacteria and related microorganisms. Morphology, physiology, classification, economic, and medical importance considered. Prerequisite: BIOL 101.

309 MUSEOLOGY (3 + 0) 3 credits

(See ANTH 309 for description.)

310, 510 MUSEUM TRAINING FOR BIOLOGIST

(1 + 6) 3 credits

Collecting, preparing, and curating plant and animal specimens for museum collections and exhibits in Nevada State Museum and Biology Department Museum.

312, 512 MUSEUM FIELD AND LABORATORY**TECHNIQUES (0 + 4) 2 credits**

Collecting, preparing, identifying, and cataloging specimens for museum collections. Prerequisite: basic background in biology.

315, 515 ORGANIC EVOLUTION (3 + 0) 3 credits

Chemical origin of life. History of evolutionary thought. Fields of evidence. Genetics and mechanics of evolution. Speciation. Evolution of major groups of organisms. Prerequisite: BIOL 101.

320, 520 EXPERIMENTAL FIELD ECOLOGY

(2 + 3) 3 credits

Intensive summer course in Little Valley. Introduction to the area's natural history and to techniques for field study of plants and animals. Individual and group projects. Prerequisite: BIOL 212.

331, 531 PLANT ANATOMY (2 + 6) 4 credits

Origin, growth, and structure of plant cells, tissues, and organs; comparative anatomy of roots, stems, leaves, and flowers. Prerequisite: BIOL 101 and 202.

333, 533 SYSTEMATIC BOTANY OF FLOWERING**PLANTS (3 + 0) 3 credits**

Morphology, taxonomy, and evolution of the principal plant orders, families, and genera. Emphasis on morphological and evolutionary adaptations. Local flora recognition included. Prerequisite: BIOL 101 or 202.

334, 534 SYSTEMATIC BOTANY OF FLOWERING**PLANTS LABORATORY (0 + 6) 2 credits**

Optional laboratory to accompany BIOL 333, 533.

337, 537 INTRODUCTORY MYCOLOGY I

(2 + 0) 2 credits

The fungal organism: structure, growth, reproduction, and

classification. Prerequisite: BIOL 101. Biology majors must take BIOL 339, 539 concurrently.

338, 538 INTRODUCTORY MYCOLOGY II

(2 + 0) 2 credits

The fungal organism: nutrition, metabolism, genetics, and phylogeny. Prerequisite: BIOL 101. Biology majors must take BIOL 340, 540 concurrently.

339, 539 INTRODUCTORY MYCOLOGY I**LABORATORY (0 + 6) 2 credits**

Optional laboratory to accompany BIOL 337, 537.

340, 540 INTRODUCTORY MYCOLOGY II**LABORATORY (0 + 6) 2 credits**

Optional laboratory to accompany BIOL 338, 538.

346, 546 DESERT ECOSYSTEMS 1 credit

Extended field trip to acquaint students with the biota of selected desert areas. Prerequisite: BIOL 101, 212.

347, 547 PLANT ECOLOGY (3 + 3) 4 credits

Plant-environment interactions at the individual, population, community, and ecosystem levels. Prerequisite: BIOL 202, 212.

355, 555 PLANT PHYSIOLOGY (3 + 0) 3 credits

Introduction to the basic physiological processes in plants, nutrition, metabolism, growth, and development. Prerequisite: BIOL 101 and 202 or CHEM 142.

356, 556 PLANT PHYSIOLOGY LABORATORY

(0 + 3) 1 credit

Optional laboratory to accompany BIOL 355, 555.

360, 560 GENERAL ENTOMOLOGY (2 + 3) 3 credits

Introduction to the principles of insect biology. Prerequisite: BIOL 101 or 201.

362, 562 INSECT CLASSIFICATION (1 + 3) 2 credits

Special studies for the advanced biology and entomology students in the diversity and evolution of the Class Insecta. An insect collection is required. Prerequisite: BIOL 360 or ENT 391.

364, 564 EMBRYOLOGY (3 + 0) 3 credits

Major concepts of animal development from gametogenesis through metamorphosis. Prerequisite: three semesters of biology and one year of chemistry.

366, 566 COMPARATIVE VERTEBRATE ANATOMY

(3 + 6) 5 credits

Anatomy and evolution of structural systems in vertebrates. Complete dissection of dog-fish, salamander, and cat. Microscopic and gross demonstrations. Prerequisite: BIOL 101 or 201.

368, 568 PARASITOLOGY (3 + 0) 3 credits

Introductory study of parasitic animals of medical, veterinary, and wildlife importance.

372, 572 ICHTHYOLOGY (2 + 0) 2 credits

Systematics, ecology, and biology of fishes. Prerequisite: BIOL 101 and 201.

373, 573 ICHTHYOLOGY LABORATORY (0 + 3) 1 credit

Optional laboratory to accompany BIOL 372. Prerequisite: BIOL 101, 201.

376, 576 ORNITHOLOGY (3 + 0) 3 credits

Principles of avian biology. Prerequisite: BIOL 101.

377, 577 FIELD ORNITHOLOGY (0 + 4) 1 credit

Optional course to accompany BIOL 376, 576. The study of bird identification, behavior, and ecology in the field. Co-requisite: BIOL 376, 676.

378, 578 MAMMALOLOGY (3 + 3) 4 credits

Principles of mammalian biology. With standard laboratory experiments and preparation of museum specimens. Collecting and ecological studies in the field. Prerequisite: BIOL 101, 201, and upper-division or graduate standing.

380, 580 ADAPTATIONS FOR DESERT AND MONTANE LIFE (3 + 0) 3 credits

Morphologic, physiologic, ecologic, and ethologic adaptations of animals living in deserts and mountains. Prerequisite: BIOL 101 and 201.

381, 581 ANIMAL ECOLOGY (3 + 0) 3 credits

Topics in physiological, behavioral, population, and community ecology of animals. Prerequisite: BIOL 101 or 201.

383, 583 INVERTEBRATE ZOOLOGY I (2 + 3) 3 credits

Extensive survey of the physiology, morphology, taxonomy, phylogeny, ecology, and behavior of the "lower" invertebrates. Prerequisite: BIOL 101 or 201.

384, 584 INVERTEBRATE ZOOLOGY II (2 + 3) 3 credits

Extensive survey of the physiology, morphology, taxonomy, phylogeny, ecology, and behavior of the "higher" invertebrates. Prerequisite: BIOL 101 or 201.

385, 585 MAMMALIAN PHYSIOLOGY I (3 + 3) 4 credits

Physiology of the cell, nerve, muscle, blood, the heart, circulation, and the kidney. Designed for advanced students in the biological sciences. Prerequisite: CHEM 142 or 244, BIOL 366.

386, 586 MAMMALIAN PHYSIOLOGY II (3 + 3) 4 credits

To follow BIOL 385. Physiology of respiration, the central nervous system, vision, hearing, digestion, metabolism, endocrinology, and reproduction. Prerequisite: BIOL 385.

400, 600 BIOLOGICAL SURVEY TECHNIQUES 2 credits

Two weeks during the summer each year. Transportation provided. May be repeated to a maximum of 8 credits. Prerequisite: certification by biology staff of ability to handle a botanical or zoological specialty in the field.

401, 601 BIOLOGY JOURNAL SEMINAR (1 + 0) 1 credit

Survey of the periodical literature of biology. Oral and written reports by the student will give experience in searching and interpreting the literature. Maximum of 6 credits.

404, 604 POPULATION GENETICS (4 + 0) 4 credits

Genetics of populations and the mechanisms of evolution. Includes equilibrium conditions and the forces altering gene frequencies, and polygenic and quantitative inheritance. Prerequisite: BIOL 300.

405, 605 HISTORY OF BIOLOGY (3 + 0) 3 credits

Concepts and contributors of major historical importance in biology. Prerequisite: at least two years of course work in biology.

408, 608 CYTOGENETICS (CHROMOSOMAL MECHANISMS) (2 + 3) 3 credits

Origin, transmissibility, and effects of numerical and structural alterations of chromosomes; their role in understanding basic cytogenetic problems, evolution, and practical breeding. Prerequisite: BIOL 300 or 303.

410, 610 ECOLOGY OF POLLUTION (3 + 0) 3 credits

Emphasis on the biological aspects of current national pollution problems, especially air pollutants. Sources of major pollutants and the effects of each on man, lower animals, and plants. Prerequisite: inorganic chemistry and BIOL 101 or 210.

414, 614 ENDOCRINOLOGY (3 + 0) 3 credits

See A SC 414 for description.

415, 615 MICROBIAL PHYSIOLOGY (2 + 6) 4 credits

Isolation of representatives of major bacterial groups and selected fungi from natural flora, their growth, tolerances, metabolism, and nutritional characteristics. Prerequisite: BIOL 306 and a course in biochemistry.

420, 620 LIMNOLOGY (2 + 3) 3 credits

Biological, chemical, and physical characteristics of aquatic environment, with particular emphasis on application of limnology principles to fisheries biology. Prerequisite: BIOL 201; CHEM 101, 103.

425, 625 VEGETATION OF WESTERN NORTH AMERICA (2 + 3) 3 credits

Survey and description of the major plant communities. History of the flora, biogeography and autecology of selected dominant plant species. Required field trips. Prerequisite: BIOL 347 or equivalent.

427 FIRE ECOLOGY SEMINAR (2 + 3) 3 credits

Introduction to the uses, effects, and roles of fire in ecosystems. Required field trips. Prerequisite: BIOL 347 or equivalent.

430, 630 CRYPTOGAMIC PLANTS (3 + 0) 3 credits

Study of the morphology, taxonomy, and evolution of the principal orders and families of mosses, liverworts, and ferns. Emphasis on morphological and evolutionary adaptations. Prerequisite: BIOL 202 or equivalent.

431, 631 CRYPTOGAMIC PLANT LABORATORY (0 + 6) 2 credits

Optional laboratory to accompany BIOL 430, 630.

432, 632 SYSTEMATICS OF FUNGI (1 + 6) 3 credits

Field and laboratory oriented course dealing with the collection, isolation, and identification of fungi. Requires a mycological collection. Prerequisite: BIOL 337.

441, 641 RANGE AGROSTOLOGY (1 + 3) 2 credits

See RNR 441, 641 for description.

460, 660 COMPARATIVE PHYSIOLOGY (3 + 0) 3 credits

Comparative examination of the function of animal systems. Prerequisite: CHEM 142 or 244, BIOL 366.

461, 661 COMPARATIVE PHYSIOLOGY LABORATORY (0 + 3) 1 credit

Optional laboratory course to accompany BIOL 460.

464, 664 EMBRYOLOGY LABORATORY (0 + 3) 1 credit

Laboratory experiments relating to the basic concepts of embryological development, utilizing embryos of various organisms such as the chick, the amphibian, and the mouse. Prerequisite or corequisite: BIOL 364, 564.

468, 668 HISTOLOGY (3 + 3) 4 credits

Microscopic anatomy of tissues and organs with emphasis on mammals. Prerequisite: BIOL 101, 201; a course in vertebrate or mammalian anatomy.

469, 669 PARASITOLOGY LABORATORY (0 + 3) 1 credit

Examines morphology of important parasites and pursues experiments demonstrating basic concepts concerning host-parasite interactions. Prerequisite or corequisite: BIOL 368, 568.

470, 670 FISH HATCHERY MANAGEMENT (0 + 6) 3 credits

Familiarizes the wildlife management student with the plan and operation of the Verdi State Hatchery of the Nevada Fish and Game Commission.

475, 675 NEUROBIOLOGY (3 + 3) 4 credits

Introduction to the basic neurosciences: characteristics of excitable tissues, central nervous mechanisms in sensation,

neural control of movement, functional neuroanatomy. Prerequisite: BIOL 262, or 385, or A SC 407.

481, 681 PRINCIPLES OF ANIMAL BEHAVIOR

(3 + 0) 3 credits

(See PSY 481 for description.)

482, 682 ANIMAL BEHAVIOR LABORATORY

(0 + 3) 1 credit

(See PSY 482 for description.)

484, 684 INVERTEBRATE ZOOLOGY III 1 or 2 credits

Field oriented course studying invertebrates in selected habitats. Prerequisite or corequisite: BIOL 384.

485, 685 COMPARATIVE POPULATION

ECOLOGY (3 + 0) 3 credits

Characteristics, dynamics, and behavior of animal populations. Prerequisite: BIOL 212.

486, 686 COMMUNITY ECOLOGY (3 + 0) 3 credits

Characteristics, dynamics and interactions of the communities of organisms. Prerequisite: BIOL 212, either BIOL 347 or 381.

491, 691 SPECIAL PROBLEMS 1 to 3 credits

Special problems in (a) biology, (b) botany, or (c) zoology for investigation and report. Maximum of 8 credits.

495, 695 SEMINAR 1 credit

Presentation by students of reviews and discussion of assigned reports of research in (a) biological, (b) botanical, or (c) zoological literature. Maximum of 2 credits. Prerequisite: 9 credits of (a) biology, (b) botany, or (c) zoology.

700 STUDY IN ELECTRON MICROSCOPY

(0 + 9) 3 credits

Original research problems involving the use of the electron microscope in biological investigations.

702 SUPERVISED TEACHING IN COLLEGE

BIOLOGY (1 + 0) 1 credit

Methods and creative approaches for improving the quality of undergraduate teaching of biological science.

706 ADVANCED MICROBIOLOGY (1 + 6) 3 credits

Advanced study of bacteria, fungi, and related microorganisms. Modern techniques and laboratory tests in the fields of economic and medical microbiology stressed. Prerequisite: BIOL 306.

708 ADVANCED CYTOGENETICS (2 + 0) 2 credits

Structure, duplication, and functioning of chromosomes and nucleolus. Emphasis is on spontaneous and induced chromosome aberrations as related to chromosome structure and reproduction. Prerequisite: graduate standing.

710 CELLULAR PHYSIOLOGY (3 + 0) 3 credits

Includes consideration of the structure and function of cellular membranes and associated transport systems, the properties of intracellular physical and chemical systems, and the cellular environment. Prerequisite: BIOL 355 or 385 or 460.

712 SYSTEMS MODELING IN ECOLOGY (3 + 0) 3 credits

Structure and functions of natural ecosystems are simulated by models in a systems analysis approach to ecological problems. Prerequisite: BIOL 347, 381 or 485, a course in calculus.

713 TOPICS IN ECOLOGY (3 + 0) 3 credits

Critical analysis of selected ecological topics. Offered on a continuing basis; topics and instructors vary. Maximum of 6 credits. Prerequisite: BIOL 212.

715-716 TOPICS IN POLLUTION ECOLOGY

(3 + 0) 3 credits each

Examination in depth of selected areas of pollution ecology, i.e., energy and power, mineral cycles, or air pollutants. Maximum of 6 credits each.

720 INSECT ECOLOGY (3 + 0) 3 credits

(Same as IPM 720.)

731 VEGETATION ANALYSIS (2 + 3) 3 credits

Methods and approaches of vegetation analysis. Prerequisite: BIOL 212, 333.

733 ADVANCED SYSTEMATIC BOTANY

(2 + 6) 4 credits

Review of the recent developments in experimental plant taxonomy including a cytogenetic analysis, growth in varied and uniform environments; the role of comparative anatomy and morphogenesis in determining phylogenetic relationships; the rationale of various plant nomenclatorial systems.

738 ECOLOGY OF FUNGI (2 + 0) 2 credits

Fungi and their environments: Emphasizes their role as saprobes, symbionts, and parasites of plants, vertebrate and invertebrate animals, and other fungi.

760 VERTEBRATE REPRODUCTIVE BIOLOGY

(3 + 3) 4 credits

Current research on the morphology and physiology of reproductive systems in vertebrates, including reproductive cycles and their regulatory mechanisms. Prerequisite: BIOL 364, 366, 386, or equivalent courses.

762 ZOOLOGICAL SYMBIOSIS (3 + 0) 3 credits

Physiological and ecological study of symbiotic relationships among animals.

765 TOPICS IN INVERTEBRATE PHYSIOLOGY

(3 + 0) 3 credits

Critical analysis of selected topics concerned with the physiology of various invertebrate groups. Subjects considered depend upon student interest. Maximum of 6 credits. Prerequisite: BIOL 383, 384.

766 UTERUS, PLACENTA, AND FETUS (3 + 0) 3 credits

Fetal-maternal association which exists during the intrauterine development of viviparous vertebrates. Prerequisite: graduate standing.

767 SPECIAL TOPICS IN ENDOCRINOLOGY

(2 + 0) 2 credits

Subjects considered depend upon student interest. Requires extensive review of recent literature, lecture presentation of review, and the design of a related research proposal. Maximum of 6 credits. Prerequisite: BIOL 363.

768 EXPERIMENTAL ENDOCRINOLOGY

(0 + 9) 3 credits

Student-designed laboratory experiments based on proposals developed in BIOL 767. Surgical procedures, gland histology, hormone extraction and purification, assay techniques, and hormone actions at the molecular level. Prerequisite: BIOL 767.

769 CURRENT TOPICS IN ANIMAL

PHYSIOLOGY (3 + 0) 3 credits

Selected topics dealing with current research in animal physiology. Subjects considered will depend on student interest. May be repeated to a maximum of 6 credits. Prerequisite: BIOL 385 and 386.

776, 777 ADVANCED ORNITHOLOGY

(2 + 3) 3 credits each

Recent developments in avian biology as described by the current ornithological literature. The laboratory consists of an original research problem by each individual. Prerequisite: graduate standing, an introductory course in ornithology, or its equivalent.

781 ADVANCED ANIMAL ECOLOGY (2 + 3) 3 credits

Selected topics in physiological, community, and ecosystem

ecology in conjunction with related topics in bioenergetics. Prerequisite: BIOL 212 and 381, or the equivalent.

782 ADVANCED POPULATION ECOLOGY

(2 + 3) 3 credits

Seminars and group or individual research projects in current problems of population ecology. Prerequisite: BIOL 381, 485, or the equivalent.

783 ADVANCED WILDLIFE ECOLOGY

(2 or 3 + 0) 2 or 3 credits.

Seminars and/or lectures in current problems of wildlife ecology. Emphasis on current literature. Prerequisite: BIOL 212 or 381, or the equivalent. Credit hours determined by department.

785 ADVANCED POPULATION ECOLOGY

(2 + 3) 3 credits

Seminars and group or individual research projects in current problems of population ecology. Prerequisite: BIOL 381, 485, or the equivalent.

792 SPECIAL PROBLEMS 1 to 3 credits

Special problems for graduate investigation and report in (a) biology, (b) botany, or (c) zoology. May be repeated to a maximum of 6 credits. Prerequisite: graduate standing.

794 COLLOQUIA (1 + 0) 1 credit

Results of research and independent investigation by a variety of lecturers drawn from this campus, from the numerous visitors to this department, and from other science departments at the university and Desert Research Institute. Maximum of 2 credits.

795 COMPREHENSIVE EXAMINATION

0 credit *S/U only*

797 THESIS 1 to 6 credits

(a) biology, (b) botany, (c) zoology

799 DISSERTATION 1 to 24 credits

(a) biology, (b) botany, (c) zoology

Inactive Courses

230 ECONOMY BOTANY (2 + 0) 2 credits

335 THE STUDY OF ALGAE (2 + 0) 2 credits

336 THE STUDY OF ALGAE LABORATORY (0 + 3) 1 credit

345, 545 ECOLOGY OF XEROPHYTES (2 + 3) 3 credits

374, 574 HERPETOLOGY (2 + 0) 2 credits

375, 575 HERPETOLOGY LABORATORY (0 + 3) 1 credit

406, 606 MICROBIOLOGY OF FOODS AND RELATED INDUSTRIAL PROCESSES (2 + 3) 3 credits

730 PHYSIOLOGICAL ECOLOGY (2 + 0) 2 credits

764 CURRENT RESEARCH IN DEVELOPMENTAL BIOLOGY (3 + 0) 3 credits

CHEMICAL ENGINEERING (CH E)

101 INDUSTRY ORIENTATION LECTURES

(1 + 0) 1 credit

(See MINE 101 for description.)

102 INTRODUCTION TO METALLURGICAL AND CHEMICAL PROCESSES (2 + 0) 2 credits

Introductory survey of integrated industrial processes of the chemical and metallurgical industries. (Same as METE 102.)

232 PRINCIPLES OF METALLURGICAL AND CHEMICAL ENGINEERING (3 + 0) 3 credits

(See METE 232 for description.)

301 CHEMICAL OR METALLURGICAL INDUSTRY SEMINAR 1 credit

Written and oral engineering reports covering work during sophomore or junior vacation, or equivalent library research, in chemical or metallurgical industry. Library research or computer use may be required to supplement work experience. Seminar may include professors and guest speakers. (Same as METE 301.)

332, 532 UNIT PROCESSES OF CHEMICAL METALLURGY I (3 + 0) 3 credits

(See METE 332 for description.)

361, 561 THERMODYNAMICS (4 + 0) 3 or 4 credits

Thermodynamic principles and their application to problems involving physical and chemical changes. Chemical and metallurgical engineering majors must take the course for 4 credits. Prerequisite: MATH 281, PHYS 210.

423 SURFACE CHEMISTRY (3 + 0) 3 credits

(See METE 423 for description.)

437, 637 UNIT OPERATIONS I (4 + 0) 4 credits

Analytical study of unit operations commonly employed in chemical industries. The major emphasis is on fluid flow and heat exchange. Field trip. Prerequisite: CH E 232. Corequisite: MATH 320.

438, 638 UNIT OPERATION II (3 + 0) 3 credits

Continuation of CH E 437. The major emphasis is on equilibrium stage and mass transport operations. Prerequisite: CH E 232. Corequisite: MATH 320.

440, 640 KINETICS AND CATALYSIS (3 + 0) 3 credits

Reaction rates and the factors controlling them. The design of reactors for chemical processing is emphasized. Prerequisite: CH E 232, MATH 320, CHEM 353.

441 UNIT OPERATIONS LABORATORY I (0 + 3) 1 credit

Experiments to demonstrate equipment and operations of chemical engineering and to provide practice in technical report writing. Corequisite: CH E 437.

442, 642 UNIT OPERATIONS LABORATORY II (0 + 6) 2 credits

Quantitative experiments to illustrate unit operations commonly employed in chemical industries. Corequisite: CH E 438.

451, 651 CONTROL OF PROCESS SYSTEMS (3 + 0) 3 credits

Chemical and metallurgical process dynamics and their responses to control systems. Corequisite: MATH 321.

462, 662 THERMODYNAMICS OF IRREVERSIBLE PROCESSES (3 + 0) 3 credits

(See METE 462 for description.)

471, 671 TRANSPORT OPERATIONS (3 + 0) 3 credits

Mass, momentum, and energy transport phenomena and their

BUSINESS ADMINISTRATION (B A)

480, 680 SMALL BUSINESS INSTITUTE (SBI)

(1 + 6) 3 credits

Students provide management assistance counseling to the small business community for qualified cases designated by the U.S. Small Business Administration. Prerequisite: senior standing.

795 COMPREHENSIVE EXAMINATION

0 credit *S/U only*

application in chemical engineering. Prerequisite: MATH 320. Field trip.

482, 682 CHEMICAL ENGINEERING DESIGN
(1 + 6) 3 credits

Individual projects in the design of processes and plant components. Corequisite: CH E 438.

483, 683 ADVANCED CHEMICAL ENGINEERING DESIGN (3 + 0) 3 credits

Application of advanced mathematics to chemical engineering design. Emphasis upon derivation of differential equations describing physical situations and solution of these equations.

485 COMPUTER SOLUTIONS TO CHEMICAL AND METALLURGICAL ENGINEERING PROBLEMS
(3 + 0) 3 credits

Theory and techniques of extended FORTRAN IV used in programming chemical and metallurgical engineering problems encountered in industry and research. Prerequisite: E E 131 or MINE 213. Corequisite: CH E 437.

495 SPECIAL PROBLEMS 1 to 3 credits

Individual problems in chemical engineering. Maximum of 6 credits.

CHEMISTRY (CHEM)

Registration in laboratory courses requires a \$10 deposit with the unused amount refunded at the end of the semester.

100 THE CHEMISTRY OF MAN'S ENVIRONMENT
(3 + 0) 3 credits

Introductory lecture course for nonscience majors. Chemistry is a human endeavor in man's attempts to understand, control, and modify his environment. Open only to students with no prior college chemistry.

101 GENERAL CHEMISTRY (3 + 3) 4 credits

Fundamental principles of chemistry and the properties and uses of the common nonmetallic elements. Credit allowed in only one of the following: CHEM 101, 103.

102 GENERAL CHEMISTRY (3 + 3) 4 credits

Fundamental principles of chemistry, properties and uses of the common metals, their compounds, elementary chemistry of carbon, and introductory qualitative and quantitative analysis. Prerequisite: CHEM 101 or 103. Credit not allowed in both CHEM 102 and 104.

103 GENERAL CHEMISTRY FOR SCIENTISTS AND ENGINEERS (3 + 3) 4 credits

Fundamental principles of chemistry including stoichiometry, atomic structure, periodic table, chemical bonding, molecular structure, kinetic theory of gases, gas laws, solutions, colligative properties, equilibrium, electrochemistry. Prerequisite: 28 or above on the Mathematics ACT examination and/or a year of high school chemistry.

104 GENERAL CHEMISTRY FOR SCIENTISTS AND ENGINEERS (3 + 3) 4 credits

Continuation of CHEM 103 including thermodynamics, thermochemistry, redox systems, chemical kinetics, nuclear chemistry, metals and non-metals, coordination compounds, qualitative and quantitative analysis, organic chemistry, biochemistry. Prerequisite: CHEM 103, or a grade of A or B in CHEM 101.

142 INTRODUCTORY ORGANIC CHEMISTRY
(3 + 0 or 3) 3 or 4 credits

Acquaints students with some of the fundamental principles of carbon chemistry. Prerequisite: CHEM 101 or 103. Credit

allowed in only one of the following: CHEM 142 or 243 and 245.

243 ORGANIC CHEMISTRY (3 + 0) 3 credits

Integrated treatment of aliphatic and aromatic compounds embracing nomenclature, structure, general methods of preparation, and a mechanistic interpretation of typical reactions. Prerequisite: CHEM 102 or 104.

244 ORGANIC CHEMISTRY (3 + 0) 3 credits

Continuation of CHEM 243 including a more advanced treatment of synthetic procedures. Prerequisite: CHEM 243.

245 ORGANIC CHEMISTRY LABORATORY

(0 + 3 or 6) 1 or 2 credits

Designed to develop laboratory skills and an understanding of the techniques and principles involved in carrying out typical organic reactions. Prerequisite or corequisite: CHEM 243.

246 ORGANIC CHEMISTRY LABORATORY

(0 + 3 or 6) 1 or 2 credits

Continuation of CHEM 245 but at a more advanced level. Prerequisite or corequisite: CHEM 244 or 245.

330 ANALYTICAL CHEMISTRY (2 + 6) 4 credits

Principles and techniques of quantitative chemical analysis including an introduction to instrumental methods. Prerequisite: CHEM 102, or 104.

353-354, 553-554 PHYSICAL CHEMISTRY

(3 + 0) 3 credits each

Systematic treatment of the fundamental principles of physical chemistry. Prerequisite: two years of college chemistry, one year of college physics, and MATH 216. CHEM 353 is prerequisite to 354.

355, 555 PHYSICAL CHEMISTRY LABORATORY

(0 + 6) 2 credits

Training in physico-chemical laboratory techniques provided by experimental verification of the principles of physical chemistry. Prerequisite or corequisite: CHEM 353.

357, 557 BIOPHYSICAL CHEMISTRY (3 + 0) 3 credits

Selected topics in physical chemistry for life and health sciences. Prerequisite: two years of college chemistry, one year of college physics, mathematics through MATH 265 or equivalent.

387 CHEMICAL LITERATURE AND UNDERGRADUATE COLLOQUIUM (1 + 0) 1 credit

Introduction to chemical information retrieval, includes oral and/or written reports. Prerequisite: two years of college chemistry. Recommended to be taken concurrently with CHEM 391 or CHEM 497.

391 SPECIAL PROBLEMS 1 to 3 credits

Laboratory and/or literature course giving training in a field not covered in scheduled courses. Prerequisite: CHEM 246. Maximum of 3 credits.

415, 615 ADVANCED INORGANIC CHEMISTRY

(3 + 0) 3 credits

Atomic structure; types of bonding; periodic relationships between structure, physical properties, and reactivity of the elements; preparation and application of the elements and their compounds. Prerequisite: CHEM 354.

434, 634 INSTRUMENTAL ANALYSIS (2 + 3) 3 credits

Critical examination of the process of quantitative chemical measurement entailing a systematic treatment of instrument design and instrumental methods. Prerequisite or corequisite: CHEM 330 and 354.

442, 642 ADVANCED ORGANIC CHEMISTRY

(3 + 0) 3 credits

Organic reactions not generally covered in introductory courses

in organic chemistry. Emphasis on both synthetic utility and reaction mechanisms. Prerequisite: CHEM 244 and 354.

443, 643 MODERN METHODS OF ORGANIC

ANALYSIS (2 + 3 or 6) 3 or 4 credits

Identification of unknown organic compounds by spectroscopic techniques (IR, NMR, UV, mass spectrometry) and wet laboratory methods; microtechniques; separations of mixtures (GLC, TLC, HPLC). Prerequisite: CHEM 244, 246.

450, 650 PHYSICAL CHEMISTRY (3 + 0) 3 credits

Study of selected topics (thermodynamics, kinetics, molecular structure, chemical statistics, etc.) at an intermediate level. Prerequisite: CHEM 354, 355, and MATH 320 or equivalent.

451, 651 THE ELEMENTARY PHYSICAL CHEMISTRY OF MACROMOLECULES (3 + 0) 3 credits

Elementary physical chemistry and physical characterization methods applicable to synthetic and biological macromolecules in solution and in the bulk phase. Prerequisite: CHEM 354 (may be taken concurrently) or CHEM 357.

456, 656 ADVANCED PHYSICAL CHEMISTRY

LABORATORY (0 + 6) 2 credits

Studies in the interpretation of data from, and the basic theory behind, modern research instrumentation. Representative topics include optical spectroscopy, mass spectroscopy, and magnetic resonance. Prerequisite: CHEM 354 (may be taken concurrently) and CHEM 355.

471-472, 671-672 GENERAL BIOCHEMISTRY

(3 + 0) 3 credits each

Chemistry of constituents of living matter and their role in biochemical processes of living organisms. Prerequisite: CHEM 244-246, 354-355 or their equivalent, and a year of college biology, botany, or zoology. The lower-numbered course is prerequisite for the second in each sequence.

473-474, 673-674 GENERAL BIOCHEMISTRY

LABORATORY (0 + 6) 2 credits each

Introduction to experimentation with biochemical systems, processes, and compounds of biochemical importance. Prerequisite or corequisite: CHEM 471-472. The lower-numbered course is prerequisite for the second in each sequence.

497 SENIOR PROBLEMS (0 + 6) 2 credits

Introduction to research methods using a problem chosen from inorganic, analytical, organic, or physical chemistry. Problem director may be chosen by student. Prerequisite: three years of college chemistry. Maximum of 6 credits.

711 THEORETICAL INORGANIC CHEMISTRY

(3 + 0) 3 credits

Atomic structure, chemical bonding, and molecular structure; applications of group theory to inorganic spectroscopy. Prerequisite: CHEM 615.

712 THE LESS FAMILIAR ELEMENTS (3 + 0) 3 credits

Survey of the chemistry of the less familiar elements including the lanthanides and actinides with emphasis on periodic correlations. Prerequisite: CHEM 615.

714 SPECIAL TOPICS IN INORGANIC CHEMISTRY

(3 + 0) 3 credits

Selected topics of current interest. Prerequisite: CHEM 615. May be repeated only in different subject areas to a maximum of 6 credits.

740 ADVANCED ORGANIC SYNTHESIS (3 + 0) 3 credits

Survey of reactions of value in synthesis. Prerequisite: CHEM 642.

741 ADVANCED ORGANIC STRUCTURE

ELUCIDATION (3 + 0) 3 credits

Methods used for structure elucidation. Prerequisite: CHEM 643 or equivalent.

742 THEORETICAL ORGANIC CHEMISTRY

(3 + 0) 3 credits

Reaction mechanisms, reactivity, linear free energy relationships, and intermediates. Prerequisite: CHEM 642.

743 SPECIAL TOPICS IN ORGANIC CHEMISTRY

(3 + 0) 3 credits

Topics of current interest in organic chemistry. May be repeated only in different subject areas to a maximum of 6 credits. Prerequisite: CHEM 642.

744 STEREOCHEMISTRY AND CONFORMATIONAL ANALYSIS (3 + 0) 3 credits

Stereoisomerism, molecular symmetry, chirality, optical activity, torsional isomerism, conformations of cyclic and acyclic molecules, stereoselectivity and stereospecificity, chiral discrimination, stereochemical methods. Prerequisite: CHEM 642.

745 CHEMISTRY OF NATURAL PRODUCTS

(3 + 0) 3 credits

The chemistry of naturally occurring compounds with emphasis on isolation, structure determination, synthesis, biogenesis, and physiological importance. Prerequisite: CHEM 642.

750 ADVANCED PHYSICAL CHEMISTRY

(3 + 0) 3 credits

Thermodynamics, kinetic theory of gases, quantum theory, statistical mechanics, and related subjects. Prerequisite: CHEM 650 or equivalent.

751 SPECIAL TOPICS IN PHYSICAL CHEMISTRY

(3 + 0) 3 credits

Selected topics of current interest. Prerequisite: CHEM 650 or 750. May be repeated only in different subject areas to a maximum of 6 credits.

752 CHEMICAL KINETICS (3 + 0) 3 credits

Rate processes, the factors influencing reaction rates, and the correlation of kinetics and mechanisms of reaction. Prerequisite: CHEM 650 or equivalent.

753 PHYSICAL CHEMISTRY OF

MACROMOLECULES (3 + 0) 3 credits

Advanced considerations in polymer chain statistics, structural and dynamical models. Solution and thermodynamic properties of nonelectrolyte and polyelectrolyte polymers. Advanced characterization methods. Prerequisite: CHEM 650.

755 STATISTICAL THERMODYNAMICS (3 + 0) 3 credits

Molecular approach to the study of fundamental thermodynamic energy relationships. Prerequisite: CHEM 750.

757 QUANTUM CHEMISTRY (3 + 0) 3 credits

Intensive study of the general aspects of quantum mechanics and its application to chemistry. Prerequisite: CHEM 750.

771-772 ADVANCED BIOCHEMISTRY

(3 + 0) 3 credits each

Consideration of biological processes at the molecular level including bioenergetics, biosynthesis, degradative pathways, metabolic regulation, enzyme reaction mechanisms, biological specificity, genetic molecules, and related subjects. Prerequisite: CHEM 672. CHEM 771 is prerequisite for 772.

773 EXPERIMENTAL TECHNIQUES IN

BIOCHEMISTRY (1 + 6) 3 credits

Experiments in the isolation, purification, and characterization of biological materials. Prerequisite: CHEM 672 and 674.

774 SPECIAL TOPICS IN BIOCHEMISTRY

(3 + 0) 3 credits

Selected topics of current interest. Prerequisite: CHEM 672.

790 SEMINAR (1 + 0) 1 credit

Maximum of 4 credits.

793 INDEPENDENT STUDIES 1 to 6 credits

May be repeated to a maximum of 12 credits.

794 COLLOQUIA (1 + 0) 1 credit *S/U only*

Presentation of original research in (a) inorganic chemistry, (b) organic, (c) physical. Maximum 8 credits.

795 COMPREHENSIVE EXAMINATION0 credit *S/U only***797 THESIS 1 to 6 credits****799 DISSERTATION 1 to 24 credits***Inactive Courses*

171 LIFE SCIENCE CHEMISTRY I (3 + 3) 4 credits

172 LIFE SCIENCE CHEMISTRY II (3 + 3) 4 credits

250 PHYSICAL PRINCIPLES OF CHEMISTRY

(3 + 0) 3 credits

271 PHYSIOLOGICAL CHEMISTRY

(3 + 0 or 3) 3 or 4 credits

291 SCIENTIFIC GLASSBLOWING (0 + 3) 1 credit

435, 635 RADIOCHEMISTRY (2 + 0 or 3) 2 or 3 credits

CIVIL ENGINEERING (C E)**140 INTRODUCTION TO CIVIL ENGINEERING**

(2 + 0) 2 credits

History and overview of civil engineering including: aspects of environmental/sanitary, geotechnical, high/transportation, land surveying, structural, and water resource engineering.

150, 250, 350, 450 SUMMER COOPERATIVE TRAINING

(1 + 0) 1 credit

Preparation of written reports based on summer cooperative program assignments. Required of all students in civil engineering cooperative training programs.

241 ENGINEERING MEASUREMENTS (2 + 3) 3 credits

Introductory study of the theory of engineering measurements and the instruments used. Introductory studies of theory of errors, statistics, field astronomy, and topographic surveying. Prerequisite: trigonometry. Corequisite: MATH 140.

243 CIVIL ENGINEERING I (1 + 3) 2 credits

Computational methods applied to simple engineering problems. Introduction to electronic computers. Prerequisite: elementary calculus.

246 CONSTRUCTION MATERIALS (3 + 0) 3 credits

Detailed study of the source, manufacture, properties, and use of the materials ordinarily used in construction and machines. Corequisite: M E 241

342 ADVANCED SURVEYING (3 + 0) 3 credits

Modern surveying measurements for trilateration, triangulation, traverse and level nets. Adjustment of measurements by least squares and matrices. State plane coordinate system. Practical astronomy. Prerequisite: C E 241.

360 SEMINAR (1 + 0) 1 credit

Preparation of written reports and/or delivery of oral presentations. Guest lectures. Maximum of 3 credits.

364, 564 ENGINEERING HYDROLOGY (2 + 0) 2 credits

Fundamental principles of hydrology for engineers. Quan-

titative hydrology; application of statistics to prediction of runoff; ground water flow. Corequisite: C E 367.

366, 566 HIGHWAY/TRANSPORTATION

ENGINEERING (3 + 0) 3 credits

Engineering problems encountered in the planning and design of highway transportation facilities. Prerequisite: C E 241, 246.

367, 567 ELEMENTARY FLUID MECHANICS

(3 + 0) 3 credits

Behavior of fluids at rest and in motion. Prerequisite: MATH 310, M E 241.

368 FLUID MECHANICS LABORATORY (0 + 3) 1 credit

Exemplifies the principles studied in C E 367. Prerequisite or corequisite: C E 367.

369 NONMETALLIC TESTING LABORATORY

(0 + 3) 1 credit

Physical properties of the nonmetallic materials used in construction, including soils, portland cement, concrete, aggregates, timber, and bituminous materials. Prerequisite: C E 246.

372 STRENGTH OF MATERIALS (3 + 0) 3 credits

Stress-strain relationship of structural elements under load. Prerequisite: M E 241.

374 MATERIALS TESTING LABORATORY

(0 + 3) 1 credit

Detailed study of physical properties of metals generally used in engineering operations. This course is coordinated with, and supplements, C E 372. Prerequisite: M E 241, C E 246.

381 STRUCTURAL ANALYSIS I (3 + 0) 3 credits

Development of the principles and techniques of structural mechanics and their application to the analysis of statically determinate and indeterminate structures. Prerequisite: C E 372.

388 INTRODUCTION TO ENGINEERING ECONOMY

(1 + 0) 1 credit

Consideration of various economic calculations such as present worth, benefit-cost, and rate of return analyses in engineering decision making. Prerequisite: junior standing.

389 PROBABILITY AND STATISTICS FOR CIVIL

ENGINEERS (2 + 0) 2 credits

Statistics, probability distributions, and regression analysis with civil engineering applications. Prerequisite: C E 388.

390, 590 WATER QUALITY CONTROL (2 + 3) 3 credits

Study of the control of water quality including laboratory studies of the characteristics of water and its impurities and an introduction to the fundamentals of water treatment, waste water treatments, and the self-purification of water in the natural environment. Prerequisite: CHEM 101.

401, 601 CITY AND REGIONAL PLANNING I

(2 + 3) 3 credits

Theories and methods involved in area planning; importance of physical planning in local government; zoning and land uses; estimating population trends; subdivision planning. Social and economic implications assessed from the standpoint of the engineer. Prerequisite: senior standing.

402, 602 CITY AND REGIONAL PLANNING II

(3 + 0) 3 credits

Further studies based on C E 401. Prerequisite: C E 401.

410, 610 HYDRAULICS OF OPEN CHANNELS

(3 + 0) 3 credits

Advanced study of the flow of water through open channels. Prerequisite: C E 367.

411, 611 ENVIRONMENTAL LAW (3 + 0) 3 credits

An examination of current federal laws, rules and regulations concerning the environment. Emphasis on court decisions and interpretations of the law. Prerequisite: senior standing.

415, 615 WATER RIGHTS (3 + 0) 3 credits

Study of the riparian doctrine and appropriation doctrine along with some of the federal aspects of water rights. Study to include both statutory law and case law.

429, 629 TIMBER STRUCTURES

(2 + 0 or 3) 2 or 3 credits

Fundamentals of design of timber structures and application to simple structures. Prerequisite: C E 381.

451, 651 TRANSPORTATION ENGINEERING

(3 + 0) 3 credits

Function, characteristics, and operation of transportation facilities and systems and their economic and social impact on man's environment. Prerequisite: C E 241 and 243.

452, 652 INTRODUCTION TO TRAFFIC ENGINEERING (2 + 3) 3 credits

Problems of traffic control and regulation as related to streets and highways. Principles of design of thoroughfares based on operational characteristics. Prerequisite: C E 451.

460, 660 CONSTRUCTION ENGINEERING

(3 + 0) 3 credits

Construction practices and methods. Job planning and scheduling. Selection of equipment. Problems of management and related topics. Corequisite: C E 473.

473, 673 DECISION MAKING TECHNIQUES

(3 + 0) 3 credits

Introduction to linear programming, network analysis, dynamic programming, classical optimization, and systems analysis. Prerequisite: Elementary calculus and C E 388.

479, 679 EARTHQUAKE ENGINEERING (3 + 0) 3 credits
(See GEOL 479 for description.)

483, 683 STRUCTURAL ANALYSIS II (3 + 0) 3 credits
Classical methods of structural analysis for static and dynamic loads and structural stability including matrix formulation for application of electronic computers. Prerequisite: C E 381.

484, 684 STRUCTURAL DESIGN (2 + 6) 4 credits

Comprehensive and total problems in the structural design of typical engineering structures. Prerequisite: C E 381.

485, 685 REINFORCED CONCRETE FUNDAMENTALS (3 + 0) 3 credits

Design and analysis of reinforced concrete members by elastic and inelastic procedures. Prerequisite: C E 369, 381.

486, 686 REINFORCED CONCRETE DESIGN (2 + 3) 3 credits

Continuation of C E 485 with emphasis upon the total design of reinforced concrete structures. Prerequisite: C E 485.

489, 689 WATER RESOURCES ENGINEERING I (2 + 3) 3 credits

Fundamental principles for the design and operation of systems for the transmission, storage and distribution of water and for the collection of waste water. Prerequisite: C E 364. Corequisite: C E 473.

490, 690 WATER RESOURCES ENGINEERING II (3 + 0) 3 credits

Conventional engineering economic analysis of multipurpose water resources projects and a study of the components of systems which provide for the principal beneficial uses of water. Prerequisite: C E 364.

491, 691 CONTRACTS, SPECIFICATIONS (2 + 0) 2 credits

Elementary presentation of the engineering aspects of contracts, specifications, and supporting documents for materials and services associated with the construction of private and public works. Prerequisite: senior standing in engineering.

492, 692 SOIL MECHANICS (2 + 3) 3 credits

Introductory study of the structure of soil and its reaction to loads and deformations. Prerequisite: C E 372.

493, 693 GEOTECHNICAL ENGINEERING:**FOUNDATIONS (3 + 0) 3 credits**

Geotechnical analysis of footings, mats, piers, piles and related fill and excavation operations. Consideration of stress distribution, settlement, time rate of settlement, and load capacity. Prerequisite: C E 492.

495 SPECIAL PROJECTS 1 to 3 credits

Study and/or experimentation in areas of special interest to the student. Maximum of 6 credits.

498, 698 WATER QUALITY MANAGEMENT

(3 + 0) 3 credits

Water quality criteria for beneficial uses and the methodology for establishing water quality standards. Changes in water quality attributes through beneficial uses and through natural and engineered systems. Systems analysis applications to models to provide optimal water quality management for selected water resources systems. Prerequisite: C E 390.

499, 699 ADVANCED SANITARY ENGINEERING I

(3 + 0) 3 credits

Unit operations and processes of wastewater treatment, sedimentation, filtration, activated sludge, lagoons. Sludge treatment and disposal. Prerequisite: C E 390.

704 APPLIED FINITE ELEMENT ANALYSIS

(3 + 0) 3 credits

Basic concepts, formulation and application of finite element techniques for numerical solution of problems in structural and continuum mechanics, geotechnical and water resources engineering. Prerequisite: C E 243, M E 300 or MATH 320.

711 WATER RESOURCES SYSTEMS ANALYSIS

(3 + 0) 3 credits

Application of systems analysis methods to the planning and management of water resource systems. Prerequisite: C E 364.

712 WATER RESOURCES PROJECTS (3 + 0) 3 credits

Engineering requirements for the economic and beneficial uses of water. Prerequisite: C E 364.

714 ADVANCED WATER RESOURCES TOPICS

1 to 4 credits

Advanced studies in the field of water resources not included in other courses. Prerequisite: C E 367.

717 STATISTICAL METHODS IN HYDROLOGY

(3 + 0) 3 credits

Frequency distributions of hydrologic data. Analysis of time series including trends, periodicities, oscillations and cycles, serial correlation, spectral and cross spectral analysis. Introduction to stochastic simulation. Prerequisite: C E 364.

718 ADVANCED HYDROLOGY I (3 + 0) 3 credits

Detailed aspects of surface water hydrology. Interrelationships of geomorphic features and water yield; peak rates of runoff. Mechanics of snowmelt. Deterministic models of basins including Stanford Watershed Model. Prerequisite: C E 364.

720 ADVANCED STRUCTURAL ANALYSIS AND DESIGN I (3 + 1) 3 credits

Advanced methods and problems in structural analysis and design. Prerequisite: C E 483, 484, 485.

721 ADVANCED STRUCTURAL ANALYSIS AND DESIGN II (3 + 0) 3 credits

Continuation of C E 720. Prerequisite: C E 720.

722 PLASTIC DESIGN IN STEEL (2 + 0) 2 credits

Design and behavior of structural steel frames in the inelastic stress range. Prerequisite: C E 381, 483, 484.

723 ADVANCED REINFORCED CONCRETE (3 + 0) 3 credits

Special problems in reinforced concrete. Prerequisite: C E 483, 486.

724 APPLIED ELASTICITY I (3 + 0) 3 credits

Development of the three-dimensional equations of elasticity, analysis of stress and strain compatibility, stress-strain relations, plane stress, plane strain, and torsion. A study of the stresses and displacements in rectangular, circular, and ring-shaped plates and cylinders. Prerequisite: C E 372 and MATH 320 or M E 300.

725 APPLIED ELASTICITY II (3 + 0) 3 credits

Continuation of C.E. 724 with emphasis on the variation principles of mechanics including the principles of stationary potential and complimentary energy. Hamilton's principle and the methods of Ritz and Galerkin. Prerequisite: C E 724.

726 THEORY OF PLATES AND SHELLS (3 + 0) 3 credits

Analysis of plates and shells by classical and numerical methods including the finite difference and finite element methods. Prerequisite: C E 372; corequisite: C E 704.

727 MATRIX METHODS IN STRUCTURAL ANALYSIS (3 + 0) 3 credits

Formulation of displacement and force methods for structural systems using matrix techniques. Introduction to efficient computer methods in analysis of structures. Prerequisite: C E 483.

730 DYNAMICS OF STRUCTURES (3 + 0) 3 credits

Analysis of single and multidegree of freedom systems for time dependent loadings, with particular attention to earthquake excitation and response spectrum techniques. Prerequisite: C E 381.

740 GEOTECHNICAL ENGINEERING: RETAINING STRUCTURES (3 + 0) 3 credits

Geotechnical analysis of rigid and flexible earth retaining structures: retaining wall, anchored bulkhead, braced cut, tie-back cut, slurry trench wall, reinforced earth wall and cofferdam. Prerequisite: C E 492.

741 GEOTECHNICAL ENGINEERING: SEEPAGE, SLOPES, EMBANKMENTS (3 + 0) 3 credits

Seepage effects and control; flow net. Stability of natural and man-made slopes under various loading conditions. Design and construction of earth dams and embankments. Prerequisite: C E 492.

742 SOIL PROPERTIES, SOIL BEHAVIOR (3 + 0 or 3) 3 or 4 credits

Influence of geology on soil properties, drilling, sampling, and testing of soils, creep rupture in soils, frozen soils, soil stabilization, soil as a highway material. Prerequisite: C E 493 or C E 740 or C E 741.

745 SOIL DYNAMICS (3 + 0) 3 credits

Earthquakes: dynamic soil properties, ground response analysis, soil-structure interaction effects, soil liquefaction, dynamic analysis of earth dams, etc. Machine foundation vibrations; seismic surveying. Prerequisite: C E 493, or C E 740 or C E 741. Corequisite: C E 730.

750 GRADUATE SEMINAR 1 to 3 credits

Study and discussion of important new developments in par-

ticular fields of civil engineering. Prerequisite: graduate standing in civil engineering.

752 ADVANCED SANITARY ENGINEERING II 1 to 3 credits

Advanced wastewater treatment techniques including unit processes and operations for reduction of phosphorous, nitrogen, residual organics, residual solids, salinity. Introduction to eutrophication. Prerequisite: C E 499.

761 PLANNING AND SCHEDULING OF CONSTRUCTION PROJECTS (2 + 0) 2 credits

Planning, scheduling, and progress control of construction projects with emphasis on Critical Path Method, including network diagramming and calculations, and resource leveling. Basics of the PERT system are investigated. Prerequisite: graduate standing.

771 SPECIAL ENGINEERING PROBLEMS 1 to 3 credits
Specialized study in any of the subjects pertaining to civil engineering. The subject matter may be arranged after conference with the staff members and administrative officers concerned. Maximum of 6 credits.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

796 PROFESSIONAL PAPER 1 to 3 credits S/U only
Report, of professional quality, based on engineering experience and independent study or investigation. May be required for completion of plan B, M.S. program.

797 THESIS 1 to 6 credits

799 DISSERTATION 1 to 24 credits

Inactive Courses

244 CIVIL ENGINEERING II (2 + 3) 3 credits

347, 547 ENGINEERING REPORTS (1 + 0) 1 credit

373 STRENGTH OF MATERIALS LABORATORY (0 + 3) 3 credits

416, 616 EMINENT-DOMAIN LAW AND CONDEMNATION PROCEDURE (2 + 0) 2 credits

419, 619 SNOW AND ICE SCIENCE (2 + 0) 2 credits

420, 620 ADVANCED PORTLAND CEMENT CONCRETE (2 + 3) 3 credits

471, 671 MATHEMATICAL METHODS IN CIVIL ENGINEERING (1 + 0 per credit) 1 to 3 credits

703 AIRPORT PLANNING AND DESIGN (3 + 3) 3 credits

719 ADVANCED HYDROLOGY II 1 to 4 credits

728 EXPERIMENTAL STRESS ANALYSIS (2 + 3) 3 credits

731 HIGHWAY AND AIRPORT PAVEMENTS (2 + 3) 3 credits

732 ASPHALT PAVEMENT DESIGN (0 + 6) 2 credits

753 AIR POLLUTION CONTROL 2 credits

CIVIL ENGINEERING TECHNOLOGY (C E T)

101 BASIC DRAFTING (0 + 3) 1 credit

Engineering graphics used in design, drafting standards, orthographic projects, and visual communication through the use of engineering sketches and drawings.

130 PLANE SURVEYING (1 + 6) 3 credits

Elements of plane surveying, including field practice and office procedures.

215 PROPERTIES OF MATERIALS (2 + 0) 2 credits

Properties of ferrous and nonferrous metals, timber, stone, clay products, plastics, bituminous cementing materials; behavior of materials under load; control of the properties of the material.

224 STATICS AND STRENGTH OF MATERIALS

(4 + 0) 4 credits

Introduction to the free body diagram concept of statics, centroids, and moments of inertia. Elements of strength of machinery and beams in bending, torsion, tension, compression, and buckling.

254 TECHNICAL ECONOMICS (3 + 0) 3 credits

Study of basic economics emphasizing relation to technical operations.

258 STRUCTURAL ANALYSIS (3 + 0) 3 credits

Application of fundamental principles and techniques to the analysis of typical structural details involving the most commonly used building materials. Emphasis is placed on practical procedures used in the design of structural members.

260 COST ESTIMATES AND SPECIFICATIONS

(2 + 0) 2 credits

Elementary presentation of the engineering aspects of contracts, specifications, cost estimation, and accounting.

299 RESEARCH REPORT (Special Problem)

(0 + 3 per credit) 1 to 4 credits

Individual assignment to the development of a project of special interest to the student with the instructor's approval. A written report of the work is required.

*Inactive Courses***131 PLANE SURVEYING II (1 + 6) 3 credits****132 PLANE SURVEYING III (1 + 6) 3 credits****235 MATERIALS TESTING I (1 + 3) 2 credits****236 MATERIALS TESTING II (1 + 3) 2 credits****240 APPLIED MATHEMATICS OF**

CONSTRUCTION (2 + 0) 2 credits

244 WATER WORKS, SEWAGE AND HYDROLOGY

(4 + 0) 4 credits

250 TRANSPORTATION TECHNOLOGY (3 + 0) 3 credits**251 TRAFFIC TECHNOLOGY (3 + 3) 4 credits****255 CIVIL ENGINEERING DRAFTING-DESIGN**

(1 + 6) 3 credits

COUNSELING AND GUIDANCE PERSONNEL SERVICES (CAPS)

022 HOW TO SURVIVE IN COLLEGE

(1 + 0) 1 credit *S/U only*

Focus on characteristics of college students and their environment central to college success. Development of skills for academic success and personal growth.

123 CAREER DEVELOPMENT (2 + 1) 2 credits *S/U only*

Occupational choice processes leading to control over one's own life/career development by planning and decision-making.

330 EDUCATIONAL PSYCHOLOGY (3 + 0) 3 credits

Overview of the psychology of learning, motivation, growth and development, personality dynamics, and social adjustment. Field experience required during course. Prerequisite: PSY 101.

331 EDUCATIONAL PSYCHOLOGY EXPERIENCE

(0 + 2) 1 credit *S/U only*

Field experience to assist students to apply basic helping principles of educational psychology to tutoring and school situations. Prerequisite or corequisite: CAPS 330.

400, 600 INTRODUCTION TO COUNSELING AND GUIDANCE (3 + 0) 3 credits

Overview of personnel services that include counseling, individual appraisal, occupational information, group procedures, referral, and follow-up. Prerequisite: PSY 101. Meets teacher certification requirements. Graduate program credit for nonmajors and international students only.

401, 601 INTRODUCTION TO ELEMENTARY SCHOOL GUIDANCE (3 + 0) 3 credits

Overview of personnel services at the elementary school and pre-school levels. The teacher's role emphasized. Meets teacher certification requirements. Graduate program credit for nonmajors and international students only. Prerequisite: PSY 101.

410, 610 INTRODUCTION TO EMPLOYMENT COUNSELING (3 + 0) 3 credits

Principles, procedures, techniques, backgrounds of public and private employment agencies. Emphasis on employment records, tests (General Aptitude Test Battery), occupational information, referral, placement, employer relations. Prerequisite: CAPS 400.

414, 614 THE COLLEGE STUDENT (3 + 0) 3 credits

Characteristics of college students; goals, values, attitudes, and relationships. Student personnel systems designed to facilitate personal, social, academic, and vocational growth. Prerequisite: CAPS 400.

417, 617 INTRODUCTION TO REHABILITATION COUNSELING (3 + 0) 3 credits

Philosophy, procedures, staff and professional relationships employed in the rehabilitation process including evaluation, interviewing, planning, and placement. Prerequisite: CAPS 400.

420, 620 THE INFORMATION SERVICES (3 + 0) 3 credits

Procurement, evaluation, and utilization of occupational, educational, and personal-social information within the context of a guidance program; includes the follow-up and community surveys, placement and referral agencies. Prerequisite: CAPS 400 or 401.

422, 622 CAREER EDUCATION (3 + 0) 3 credits

Career education encompasses the career development experiences for kindergarten through twelfth-grade instructional sequences. The goal is self and environmental awareness by approaching subject matter from the standpoint of vocational utility. Designed for the classroom teacher. Prerequisite: CAPS 330.

431, 631 BEHAVIORAL ANALYSIS (3 + 0) 3 credits

Interaction analysis of groups and diagnosis of individual behavior. Prerequisite: CAPS 330.

432, 632 AFFECTIVE EDUCATION (2 + 2) 3 credits

Human relations, psychological education, and humanistic skills identified, clarified, expressed and developed. An overview of the emotional aspects of learning, valuing, and communicating. Prerequisite: CAPS 330.

442, 642 INDIVIDUAL APPRAISAL I (3 + 0) 3 credits

Selection, administration, interpretation, and statistical understanding of standardized aptitude, achievement, and personal-social adjustment tests. Prerequisite: CAPS 400 or 401.

460, 660 THE GROUP PROCESS

(3 + 0) (2 or 3 credits)

Theory and techniques in understanding group behavior and the development of experiences that lead to self-insight. Prerequisite: CAPS 400 or 401.

465, 665 CHILD AND FAMILY GUIDANCE

(3 + 0) 3 credits

Principles of child behavior at home and school are studied with actual teachers, children, and families involved. Application for counselors and teachers is emphasized. Prerequisite: CAPS 400 or 401.

490, 690 WORKSHOP IN COUNSELING AND**GUIDANCE (1 + 0 per credit) 1 to 4 credits**

Specialized instruction in counseling and guidance designed to develop depth in understanding of a current guidance problem. Maximum of 4 credits.

499, 699 SPECIAL PROBLEMS IN COUNSELING

1 to 6 credits

Specialized instruction in counseling and guidance personnel services designed to develop depth in understanding of current counseling problems of the in-service counselor. A maximum of 6 credits accepted in special problems for graduate degree programs.

715 FINANCIAL AIDS AND PROFESSIONAL**PLACEMENT (3 + 0) 3 credits**

Student-personnel functions of developing, implementing, and evaluating financial aid programs to include scholarships, loans, work-study patterns, and grants. Career-placement activities provided college program graduates to facilitate their appropriate vocational placement. Prerequisite: CAPS 400.

721 THEORIES OF OCCUPATIONAL CHOICE

(3 + 0) 3 credits

Analysis of the relationships among theoretical constructs, counselor behavior, and vocational counseling services. Prerequisite: CAPS 400 or 401.

738 LEARNING THEORIES IN EDUCATION

(3 + 6) 3 credits

Problem-solving, cognitive processes, concept formation, and creativity from the viewpoint of major learning theorists as applied to the educational and classroom setting. Conditions and processes of behavior modification. Prerequisite: CAPS 631, 632.

742 INDIVIDUAL APPRAISAL II (3 + 0) 2 or 3 credits

Nonstandardized processes for assessing individuals and groups to include observation and annotations, rating scales, opinions, interests, and attitudes. The guidance role in diagnostic and remedial programs and cumulative and other record systems. Prerequisite: CAPS 642.

744 INDIVIDUAL APPRAISAL III (4 + 6) 6 credits

Selection, administration, and interpretation of individually administered scales of mental capacity and emotional analysis. Prerequisite: CAPS 742 and 770.

749 CASE STUDY SEMINAR (2 + 1) 2 credits

Study, diagnosis, planning, and evaluation of program of services provided counselees and students. Instructional processes include staff-study in demonstration of cooperative inter-professional relationships. Prerequisite: CAPS 750 plus 18 graduate credits in CAPS courses.

750 THE COUNSELING PROCESS (3 + 0) 3 credits

Theory and techniques of therapeutic counseling; self-theory emphasized, with dyadic relationships the focus. Prerequisite: CAPS 400 or 401. Prerequisite or corequisite: CAPS 642.

751 COUNSELING THE CULTURALLY DIFFERENT

(3 + 0) 3 credits

Special relational problems and processes in the counseling setting in effectively dealing with counselees from non-middleclass and/or non-Caucasian backgrounds. Values, attitudes, and beliefs of various subcultures. Prerequisite: CAPS 750.

752 ADVANCED COUNSELING THEORY

(3 + 0) 3 credits

Depth investigation of major theoretical positions related to professional counseling services. Ethical and procedural components stressed. Prerequisite: CAPS 770.

753 COUNSELING THE OLDER WORKER

(3 + 0) 3 credits

The concerns of older persons preparing for retirement and lifestyle changes; agency counseling assistance programs; special relational skills and intervention systems when dealing with the aging person. Prerequisite: CAPS 750.

755 SEMINAR IN ELEMENTARY SCHOOL COUNSELING

(3 + 0) 3 credits

Directed seminar format considering the roles and relationships of pupil personnel specialists within the grades kindergarten through sixth. Case studies illustrate inter-professional functioning between school and community agencies. Pupil, parental, and faculty concerns explicated. Prerequisite: CAPS 642, 660, 750.

764 GROUP COUNSELING THEORY

(1 + 0 per credit) 2 or 3 credits

Group counseling processes provided for small groups. Includes co-counseling designs: (a) family groups, (b) employment groups, (c) need groups. Prerequisite: C.A.P.S. 660 plus 15 graduate credits in CAPS courses.

770 PRACTICUM IN COUNSELING (1½ + 6) 3 credits

Supervised counseling internship. May be repeated to a maximum of 6 credits per advanced degree. Written applications required one month prior to registration. Prerequisite: CAPS 620 or 721, 642, 660, and 750. (a) Elementary schools; (b) secondary schools; (c) higher education; (d) employment service; (e) vocational rehabilitation; (f) private agencies; (g) families.

772 PRACTICUM IN GROUP COUNSELING

(1½ + 6) 3 credits

Supervised counseling internships with small groups. May be repeated to a maximum of 6 credits. Written applications required one month prior to registration. Prerequisite: CAPS 770.

776 GUIDANCE LABORATORY (1½ + 6) 3 credits

Supervised guidance work experience at a professional leadership level. Prerequisite: 12 graduate CAPS credits appropriate to the task activities. (a) financial aids and graduate placement, (b) residence halls and college housing, (c) occupational information and vocational placement, (d) career education, (e) consulting, (f) appraisal, (g) substance abuse.

779 PRACTICUM IN SCHOOL PSYCHOMETRY

(1½ + 6) 3 credits

Directed experiences in the administration, interpretation and write-up of individually administered mental or personality tests. May be repeated to a maximum of 6 credits. Written applications required one month prior to registration. Prerequisite: CAPS 744.

784 STRUCTURE AND SUPERVISION OF PUPIL PERSONNEL PROGRAMS (2 + 0) 2 credits

Assessing the need, determining the structure, supervising the specialists, and evaluating the functions of pupil and student personnel programs. Emphasizes procedures for incorporating guidance services within the educational setting. Meets cer-

tification requirements for school counselors. Prerequisite: CAPS 750.

790 SEMINAR 2 to 4 credits
Prerequisite: graduate standing. Maximum of 4 credits.

791 SPECIAL TOPICS 1 credit
Selected basic problems related to counseling and guidance personnel services. Maximum of 4 credits.

795 COMPREHENSIVE EXAMINATION
0 credit *S/U only*

797 THESIS 1 to 6 credits

798 COUNSELING INTERNSHIP
(2 + 36) 1 credit *S/U only*
Development and improvement of a program of professional counseling services in one of the following areas: (a) elementary schools, (b) secondary schools, (c) higher education, (d) employment service, (e) vocational rehabilitation, (f) private agencies, (g) marriage and family. Supervision and evaluation by cooperating university/agency staff. Six hundred clock hours required; may be repeated to a maximum of 2 credits. Prerequisite: post-master's standing in CAPS.

799 DISSERTATION 1 to 12 credits

CRIMINAL JUSTICE (C J)

110 INTRODUCTION TO CRIMINAL JUSTICE
(3 + 0) 3 credits

Introduction to the history, philosophy, and functions of community, state and federal agencies or services involved in the criminal justice system. Chronological process of procedures from incident to final disposition.

112 ADMINISTRATION (3 + 0) 3 credits
Principles of criminal justice management and organization.

120 CRIMINAL LAW (3 + 0) 3 credits
General introduction to the substantive law of crimes, emphasizing historical development; types and elements of crime; criminal responsibility; justification and defense; and anticipatory offenses.

214 PRINCIPLES OF POLICE PATROL TECHNIQUES
(3 + 0) 3 credits

Identification of community problems which require prevention, suppression, or control through the basic methods and techniques of police patrol. Special attention to the responsibilities of officers in varying patrol situations such as foot beats, one-man cars, two-man cars, K-9 corps, and/or tactical units. Techniques of observation and perception. Recognition of police hazards; their evaluation and proper police patrol action. Prerequisite: sophomore standing. Open only to criminal justice majors.

220 CRIMINAL PROCEDURE (3 + 0) 3 credits
Origin, development, and rationale of the structural and procedural aspects of America's criminal justice system; emphasis on arrest, search-seizure, confessions, and related legal issues.

226 PREVENTION AND CONTROL OF DELINQUENCY (3 + 0) 3 credits
Survey and evaluation of programs designed to prevent juvenile delinquency. Legal consideration of juvenile rights and court processing of delinquency cases.

230 RESEARCH PAPER 2 credits
Prerequisite: L SC 135 and ENGL 102.

231 CORRECTIONS (3 + 0) 3 credits
Overview of development of corrections, recent innovations, and future correctional systems structure and programs. Prerequisite: C J 110.

232 COMMUNITY CORRECTIONS (3 + 0) 3 credits
Philosophy of community corrections, alternatives to confinement, the role of corrections in the community, evaluation of existing programs, and administration of and planning for community corrections. Prerequisite: C J 231.

312 SUPERVISION AND MANAGEMENT (3 + 0) 3 credits
Supervisor's management role in criminal justice agencies. Prerequisite: C J 110 and 112.

313 CRIMINAL JUSTICE AND COMMUNITY RELATIONS (3 + 0) 3 credits
Current issues and theories in relationships between the criminal justice system and the community. Prerequisite: C J 110 or 112.

316 TECHNIQUES OF POLICE TRAFFIC FUNCTIONS (3 + 0) 3 credits
Laws pertaining to vehicles, vehicle operators, and traffic safety. Traffic law enforcement including line patrol, selective enforcement, radar, and public education. Basic accident investigation, diagramming, and follow-up investigation. Case preparation and presentation. Open only to criminal justice majors.

320 LEGAL SEMINAR I (3 + 0) 3 credits
Elements of criminal law, procedure and evidence. Prerequisite: C J 110, 120, and 220.

324 PRINCIPLES OF CRIMINAL INVESTIGATION (3 + 3) 4 credits
Fundamental principles of criminal investigation including crime scene work, collection and analysis of physical evidence, sketching, forensic photography, and identification techniques. Prerequisite: completion of all required lower division criminal justice courses. Open only to criminal justice majors and minors.

328 STATISTICS FOR CRIMINAL JUSTICE (3 + 0) 3 credits
Study and practice with statistical methods which are useful in the collection, processing, and utilization of data relative to criminal justice work.

330 PROFESSIONAL PAPER-RESEARCH PROBLEM 2 credits
Prerequisite: C J 230 and upper-division standing.

331 THE CORRECTIONAL INSTITUTION (3 + 0) 3 credits
Analysis of the administration and societies of the prison community. Prerequisite: C J 110 and 231.

332 PROBATION AND PAROLE (3 + 0) 3 credits
Scope and functions of probation and parole, decision-making processes, differences in supervision of clients, management of resources, use of volunteers and current trends in these fields. Prerequisite: C J 231.

336 JUVENILE CORRECTIONS (3 + 0) 3 credits
Overview of development of juvenile corrections, nature of the offender, processing, treatment and aftercare facilities. Prerequisite: C J 110.

367 PENOLOGY (3 + 0) 3 credits
(See SOC 367 for description.)

410 CRIMINAL JUSTICE SEMINAR (2 + 0) 2 credits
Prerequisite: junior standing.

412 ADVANCED ORGANIZATION AND ADMINISTRATION (3 + 0) 3 credits

Advanced concepts and theories of criminal justice organization and administration. Prerequisite: C J 110 and 112.

420 LEGAL SEMINAR II (3 + 0) 3 credits

Continuation of C J 320. Prerequisite: C J 320

424 CRIMINALISTICS (2 + 3) 3 credits

Gathering and preservation of evidence. Preparation of evidence for forensic use. Open only to criminal justice majors. Prerequisite: C J 324 and senior standing.

425 ADVANCED CRIMINAL INVESTIGATION (2 + 3) 3 credits

Continuation of C J 324 with emphasis on crime scene work and use of the crime laboratory. Prerequisite: C J 324.

450 CRIMINAL JUSTICE INTERNSHIP

1 to 6 credits *S/U only*

Individual student internships are arranged with appropriate federal, state, or local criminal justice agencies. Regular written reports on observations and activities are required. Maximum of 9 credits.

498 SELECTED TOPICS IN CRIMINAL JUSTICE

1 to 3 credits

Study of a major topic or issue in criminal justice. Maximum of 9 credits when content differs.

499 INDEPENDENT STUDY IN CRIMINAL JUSTICE

1 to 3 credits

Maximum of 6 credits. Open only to criminal justice majors.

*Inactive Course***260 THE VOLUNTEER IN COURTS AND CORRECTIONS (4 + 0) 4 credits****CURRICULUM AND INSTRUCTION (C I)****110 INTRODUCTION TO SPECIAL EDUCATION**

(1 + 0 per credit) 2 or 3 credits

Exploration of services and professional opportunities in the education of exceptional children. Emphasis upon field experiences with children in public school and institutional settings.

240 MANPOWER NEEDS AND JOB ANALYSIS

(3 + 0) 3 credits

(See AIM 240 for description.)

250 SCHOOL LABORATORY EXPERIENCES

(½ + 1½ per credit) 1 to 3 credits *S/U only*

Self-assessment of professional goals through a variety of sequential laboratory experiences in actual classroom situations and in campus seminars. Prerequisite or corequisite: EDFM 101.

270 HUMAN GROWTH AND DEVELOPMENT

(3 + 0) 3 credits

Principles of human growth and development, the nature of the child, and child and adolescent learning. Laboratory with K-12 pupils required. Prerequisite: general psychology.

300 TEACHING OF READING IN THE ELEMENTARY SCHOOL (3 + 0) 3 credits

Instruction in phonics, word recognition, and comprehension. Basic understanding, techniques, and approaches which are related to developmental programs in the elementary schools.

310 EDUCATION OF THE EXCEPTIONAL CHILD

(1 + 0 per credit) 2 or 3 credits

Survey of the various types of exceptionalities. Emphasis on etiology, physical, and educational characteristics.

311 INTRODUCTION TO LEARNING AND BEHAVIOR DISORDERS (3 + 0) 3 credits

Overview of contemporary theories and approaches to learning and behavior disorders with emphasis on assessment and treatment methodologies. Prerequisite: C I 310.

312 EXCEPTIONAL CHILD EXPERIENCE (0 + 3) 1 credit

Field experience to acquaint students with types of handicapping conditions and kinds of services available to handicapped persons. Prerequisite or corequisite: C I 310.

346 ART EDUCATION: SECONDARY SCHOOLS

(0 + 6) 3 credits

(See ART 346 for description.)

349 TEACHING OF SECONDARY MUSIC

(2 + 0) 2 credits

(See MUS 349 for description.)

350 OBSERVATION IN THE SCHOOL (1 + 3) 2 credits

Observation of children and adolescents and the effect of teaching on the learning process.

372 METHODS OF TEACHING PHYSICAL EDUCATION (2 + 2) 3 credits

(See RPED 372 for description.)

401, 601 INDIVIDUALIZED METHODS OF TEACHING

READING (3 + 0) 3 credits

Theory, procedures, organization, and content of an individualized approach to the teaching of reading. Prerequisite: C I 300.

402, 602 READING IN THE LOWER ELEMENTARY

GRADES (3 + 0) 3 credits

Advanced work in developmental reading including new developments, techniques, and methods which are related to the primary grades. Prerequisite: C I 300.

403, 603 READING IN THE UPPER ELEMENTARY

GRADES (3 + 0) 3 credits

Advanced work in developmental reading for the reading teacher and the subject-matter teachers, including new developments, techniques, and methods which are related to the upper elementary grades. Prerequisite: C I 300.

404, 604 READING IN THE SECONDARY SCHOOL

(2 + 2) 3 credits

Sources of reading difficulties; reading skills; developmental reading; reading in content fields. Laboratory experiences required. Prerequisite: C I 270, CAPS 330 or valid teaching certificate.

405, 605 PRACTICUM IN THE READING CLINIC

(1 + 5) 3 credits

Apprentice teaching in the Reading Clinic with emphasis on testing procedures, corrective and remedial techniques that may be utilized with children in the classroom setting. Prerequisite: C I 300.

406, 606 SURVEY OF REMEDIAL READING

PROBLEMS (3 + 0) 3 credits

Introductory course for remedial reading training. Offers specialized instruction in reading designed to develop depth in remedial reading problems. Prerequisite: C I 300.

409, 609 HANDICAPPED LEARNERS IN THE REGULAR CLASSROOM (3 + 0) 3 credits

Preparation of teachers to deal with assessment and program development for handicapped children who are placed in the regular classroom. Meets new teacher education certification

requirements. Prerequisite: EDFM 101 and C I 270, or equivalent.

411 INTRODUCTION TO STUDY OF MENTAL

RETARDATION (3 + 0) 3 credits

Introduction to theories of intelligence, learning, psychological and physical aspects of mental retardation.

412, 612 CURRICULUM: SEVERE LEARNING AND

BEHAVIOR DISORDERS (3 + 3) 4 credits

Behavioral and learning management for children with severe disorders such as autism, extreme perceptual, thinking and communication disorders. Course includes field experience with severely disordered population. Prerequisite: C I 311 or 411.

413, 613 ADVISING EXCEPTIONAL CHILDREN

(3 + 0) 3 credits

Implications of pupil-personnel administered standardized tests as they apply to the instructional objectives of the classroom teacher. Emphasis on the advisement of students and parents. Prerequisite: must meet screening requirements.

414, 614 PROBLEMS IN SPECIAL EDUCATION

(1 + 0 per credit) 1-3 credits

Integration of subject matter into the learning situation. New procedures on developments in the area of special education. Observation of special classrooms is required. May be repeated up to 12 credits, only 6 of which may apply to a degree. Prerequisite: C I 310, 311 or 411, 418 or 471.

416, 616 CURRICULUM FOR MODERATELY AND

SEVERELY RETARDED CHILDREN (3 + 3) 4 credits

Curriculum developments and methods in teaching the moderately and severely retarded child. Includes an experience with severely handicapped children. Prerequisite: C I 411.

417, 617 CURRICULAR APPROACHES FOR THE

HANDICAPPED ADOLESCENT (3 + 0) 3 credits

Problems and methods for designing curriculum for secondary special education students with emphasis on vocational experience. Prerequisite: C I 311 or 411.

418, 618 CURRICULUM DEVELOPMENT FOR THE

MILDLY HANDICAPPED (3 + 3) 4 credits

Problems and procedures in curriculum development for the mildly handicapped child. Materials and technique development for use in special, regular, or resource classrooms. Field experience is required as a part of the course to practice techniques. Prerequisite: C I 471.

419, 619 TEACHING THE BLIND AND VISUALLY

HANDICAPPED (1 + 1 per credit) 2 or 3 credits

Anatomy and physiology of the eye. Instruction of the partially seeing and blind. Instruction in Braille, six-key typewriter, and other audiovisual equipment. Prerequisite: C I 110 and 310.

420, 620 METHODOLOGY OF MULTICULTURAL

EDUCATION (3 + 0) 3 credits

Methods and instructional strategies appropriate for teaching students from Black American, Native American, Spanish-speaking American, Asian American, and other cultures. Evaluation and selection of relevant curriculum materials for classroom use. Meets new teacher education certification requirements. Prerequisite: C I 270 or CAPS 330.

421 TEACHING OF SOCIAL STUDIES (3 + 0) 3 credits

Nature of social growth of children and adolescents in a democratic culture. Content and procedures in social studies. Development of instructional materials and techniques. (a) Elementary, (b) Secondary.

422 TEACHING OF MATHEMATICS (3 + 0) 3 credits

Content and methods of mathematics; diagnosis and remedial

treatment of pupil difficulties; readiness; objectives of mathematics; recent trends. (a) Elementary, (b) Secondary. Prerequisite: 6 credits of college mathematics.

423 TEACHING OF LANGUAGE ARTS (3 + 0) 3 credits

Language needs of children and adolescents with emphasis on written expression, language skills, speaking, and listening. Criteria for selection and integration of literature are applied. (a) Elementary, (b) Secondary.

424 TEACHING OF SCIENCE (1 + 0 per credit) 2 or 3 credits

Content and procedures in teaching science; demonstrations; experiments; evaluation of curricular materials. (a) Elementary, (b) Secondary.

425 METHODS AND MATERIALS IN TEACHING

BUSINESS EDUCATION (3 + 0) 3 credits

(See O A 425 for description.)

426 METHODS AND MATERIALS IN TEACHING

FOREIGN LANGUAGES AND BILINGUAL

EDUCATION (3 + 0) 3 credits

Specific instructional strategies, techniques, and materials for teaching basic skills and culture in American public school settings. Includes procedures for teaching subject matter in English and a second language. Field experience is required.

427, 627 TEACHING INDUSTRIAL EDUCATION

(3 + 0) 3 credits

Techniques of teaching applied to individual and group instruction in industrial education. Shop organization and planning, location and standards of equipment, checking plans and specifications, safety precautions, shop rules and regulations. Prerequisite: C I 270 or CAPS 330.

428 GENERAL PRINCIPLES OF SECONDARY

EDUCATION (2 + 0) 2 credits

Basic orientation and preparation for supervised teaching. To be taken as part of the professional semester. Corequisite: C I 457.

429, 629 METHODS OF TEACHING ENVIRONMENTAL

SCIENCE (1 + 0 per credit) 2 or 3 credits

Methods of teaching environmental science. Special emphasis on outdoor education methods. Materials and media for effective teaching. Prerequisite: 9 credits in science and a science methods course.

430, 630 KINDERGARTEN EDUCATION

(1 + 0 per credit) 2 or 3 credits

Practical problems of organizing kindergarten programs. Emphasis on methods, materials, and development aspects of learning.

431 APPLIED METHODS FOR GRADES K-3

(2 + 4) 4 credits

In-depth study of teaching-learning patterns within the curriculum. Skills in planning and organizing, and materials to maximize the learning potential of primary children developed. Laboratory required.

433, 633 CREATIVE EXPERIENCES IN ELEMENTARY

EDUCATION (1 + 0 per credit) 1 to 3 credits

Analysis of the nature of creative expression including art, music, movement, drama, and creative thinking. Prerequisite: EDFM 101.

434, 634 CLASSROOM MANAGEMENT TECHNIQUES

(2 + 0) 2 credits

The ability to respond appropriately to many types of classroom situations including pupil-teacher interaction, daily planning, large and small group management, emergencies, and discipline is developed. (a) Young children, (b) intermediate grade children, (c) middle school pupils, (d) high school pupils.

437, 637 LAW, SOCIETY, AND EDUCATION

(3 + 0) 3 credits

Effects of judicial decisions upon society and education; interactions among the law, society, and education. Prerequisite: C I 270 or CAPS 330.

439, 639 THE JUNIOR HIGH SCHOOL/MIDDLE SCHOOL

(3 + 0) 3 credits

Development, basic philosophy, and functions. Psychological and educational foundations. Problems and practices in administration, curriculum, instruction, guidance, and student activities. Prerequisite: C I 270 or CAPS 330.

440, 640 THE INTEGRATED CURRICULUM

(3 + 0) 3 credits

Integration of subject matter into a functional learning situation. Attention is given to curricular areas and methods of instruction. Prerequisite: C I 270 or CAPS 330.

441, 641 CURRICULUM DEVELOPMENT IN THE SOCIAL STUDIES (3 + 0) 3 credits

Research and curriculum studies dealing with content and procedures of the social studies. Prerequisite: C I 421.

442, 642 CURRICULUM DEVELOPMENT IN MATHEMATICS (3 + 0) 3 credits

Research and curriculum studies dealing with content and procedures of mathematics. Prerequisite: C I 422.

443, 643 CURRICULUM DEVELOPMENT IN THE LANGUAGE ARTS (3 + 0) 3 credits

Research and curriculum studies dealing with the content and procedures of the language arts. Prerequisite: C I 423.

444, 644 CURRICULUM DEVELOPMENT IN SCIENCE

(3 + 0) 3 credits

Research and curriculum studies dealing with content and procedures of the science program. Prerequisite: C I 424.

446, 646 CURRICULUM DEVELOPMENT IN FOREIGN LANGUAGES (3 + 0) 3 credits

Research and curriculum studies dealing with content and procedures of the foreign language program. Prerequisite: C I 426.

447, 647 CURRICULUM DEVELOPMENT IN VOCATIONAL AND INDUSTRIAL EDUCATION

(3 + 0) 3 credits

Research and curriculum studies dealing with content and procedures of the vocational, technical, and industrial education program. Prerequisite: C I 427.

448, 648 CURRICULUM DEVELOPMENT IN ECONOMICS EDUCATION (3 + 0) 3 credits

Recent curriculum developments in economics education, review of pertinent literature, and development of techniques for imparting basic concepts of economics. Meets new teacher education certification requirements. Prerequisite: C I 421.

449, 649 CURRICULUM DEVELOPMENT IN ENVIRONMENTAL EDUCATION

(1 + 0 per credit) 2 or 3 credits

Development of the school curriculum in the area of environmental education. Special emphasis is given to school and school-camp programs. Activities for promoting the acquisition of environmental concepts are demonstrated. Prerequisite: 6 credits of science.

451 SUPERVISED TEACHING IN THE ELEMENTARY GRADES (0 + 2½ per credit) 4 to 10 credits

Observation, planning, and teaching of units, classroom management, participation and direction of school activities, pupil and parent conferences. Prerequisite: meet screening criteria. (See statement under Supervised Teaching.)

452, 652 ADVANCED SUPERVISED TEACHING

(0 + 2) 1 to 6 credits

Supervised teaching experience in elementary, special, or secondary education, beyond that required for original certification.

453 SUPERVISED TEACHING WITH EXCEPTIONAL CHILDREN (0 + 2½ per credit) 4-16 credits

Practical experience in the classroom management and teaching of exceptional children: (a) mental retardation, (b) speech therapy, (c) learning disabilities, (d) emotionally handicapped. Prerequisite: C I 310, 311 or 411, 418 and 471.

454 SUPERVISED TEACHING IN PHYSICAL EDUCATION IN ELEMENTARY SCHOOL 1 to 6 credits

Experience teaching physical education under supervision in an elementary school. Not applicable for teaching other elementary subjects. Prerequisite: meet screening criteria.

457 SUPERVISED TEACHING IN THE SECONDARY SCHOOL (0 + 2½ per credit) 4 to 8 credits

Experience teaching major and/or minor field under supervision in either middle school or senior high school. Prerequisite: meet screening criteria. (See statement under Supervised Teaching.)

458, 658 DRIVER TRAINING AND TRAFFIC SAFETY EDUCATION (3 + 0) 3 credits

Development of the knowledge, skills, and attitudes needed for competent teaching of driver training and traffic safety. Prerequisite: C I 270 or CAPS 330.

460, 660 ADULT EDUCATION

(1 + 0 per credit) 1 to 6 credits

Programs in adult education authorized under the vocational education program; additional credit for field work in promoting, organizing and observing, and teaching adult classes. (a) Promotion practices, (b) organization, (c) instructional observation, (d) programmed instruction, (e) curriculum. Maximum of 6 credits.

461, 661 DEVELOPMENT OF VOCATIONAL AND INDUSTRIAL EDUCATION (3 + 0) 3 credits

History, development, and current status of vocational and technical education programs. Societal conditions that led to these programs. Prerequisite: C I 270 or CAPS 330.

462, 662 VOCATIONAL EDUCATION (3 + 0) 3 credits

Nature and purposes of vocational education, including vocational-technical and distributive education; social and economic values for public school programs. Prerequisite: C I 457 or equivalent.

473 DISASTER PREPAREDNESS FOR EDUCATORS(2 + 0) 2 credits *S/U only*

Methods and techniques of disaster preparedness appropriate for preservice and inservice teachers and administrators. Includes natural and man-made disasters that might impinge on school systems. Individual school system plans for coping with disasters are stressed. Prerequisite: all preliminary course work prior to student teaching must be completed.

480, 680 INDEPENDENT STUDY IN CURRICULUM AND INSTRUCTION (0 + 2 per credit) 1 to 3 credits

Action or library research in an appropriate area of curriculum and instruction. Maximum of 6 credits. Prerequisite: C I 440 or other curriculum course.

481, 681 SPECIAL PROBLEMS IN CURRICULUM AND INSTRUCTION (1 + 0 per credit) 1 to 6 credits

Specialized instruction designed to develop depth in understanding of a current education problem of the inservice teacher. May be repeated to a maximum of 12 credits, only 6

of which may be applied toward any degree. Prerequisite: C I 440 or other curriculum course.

482, 682 FIELD STUDIES IN CURRICULUM AND INSTRUCTION (1 + 0 per credit) 2 or 3 credits

Intensive study on organization and interpretation of data relative to selected problems such as curriculum development, parent-teacher relations, grouping of pupils. May be repeated to a maximum of 12 credits. Prerequisite: C I 440 or other curriculum course.

483, 683 SPECIAL PROJECT WORKSHOP IN CURRICULUM AND INSTRUCTION
(1 + 0 per credit) 1 to 3 credits

Study of emerging problems in curriculum and instruction. Maximum of 12 credits.

484, 684 WORKSHOP IN VOCATIONAL EDUCATION
(1 + 0 per credit) 1 to 6 credits

Modern developments in vocational and technical education programs; local vocational education and administration and supervision, agriculture, home economics, trades and industries, business and office occupations, health occupations, technical occupations, marketing and distributive occupations, and vocational guidance. Maximum of 6 credits. (Same as H EC 484.)

485, 685 WORKSHOP IN BUSINESS EDUCATION
(1 + 0 per credit) 2 to 6 credits

For experienced teachers, office personnel, and those entering these job areas. Emphasis on techniques, materials, methods, equipment, and trends. (a) Secretarial procedures, (b) stenography, (c) typewriting, (d) office automation, (e) business machines, (f) economic education. Maximum of 6 credits. Prerequisite: C I 425.

701 FIELD WORK AND CLINICAL PRACTICE IN READING (1 + 5) 3 credits

Practice in reading with emphasis upon clinical diagnosis, prognosis, and remediation. Maximum of 6 credits. Prerequisite: C I 606.

702 READING CLINIC (1 + 5) 3 credits

Administration of the reading clinic. Observation, planning, and management of the pupil's diagnosis and remediation as well as staffing and parent conference. Maximum of 6 credits. Prerequisite: C I 701.

711 CLINICAL PRACTICE IN LEARNING DISABILITIES (3 + 0) 3 credits

Practical experience in learning disabilities to assess, prescribe, and trial teach in a clinical situation. Prerequisite: C I 311, 418, CAPS 442, or equivalent.

713 ORGANIZATION OF PROGRAMS FOR EXCEPTIONAL CHILDREN (3 + 0) 3 credits

Problems of organization of public school programs for exceptional children. Involves the planning and programs and facilities for the exceptional child in public and private institutions. Prerequisite: C I 411, 412, 413, 453.

715 EDUCATION OF THE GIFTED
(1 + 0 per credit) 2 or 3 credits

Consideration of educational programs and procedures to develop stimulating environments for the maximum development of gifted or superior children. Specific cases and demonstration. Prerequisite: C I 310.

716 TEACHING THE NEUROLOGICALLY HANDICAPPED (1 + 0 per credit) 2 or 3 credits

Principles, methods, and materials appropriate for the instruction of the neurologically handicapped.

717 EDUCATION OF THE EMOTIONALLY HANDICAPPED (3 + 1) 3 credits

Consideration of school programs for emotionally disturbed children, methods and procedures in regular and/or special classrooms and institutions. Field trips to mental institutions and special education classes for the emotionally disturbed. Prerequisite: C I 310.

718 PSYCHOEDUCATIONAL PROBLEMS OF EXCEPTIONAL CHILDREN (3 + 0) 3 credits

Study of research dealing with physical, mental, emotional, and social characteristics of exceptional children. Emphasis on the implications of research for program development. Prerequisite: C I 413.

719 DIAGNOSIS AND TREATMENT OF LEARNING DIFFICULTIES (3 + 0) 3 credits

Studies the more prominent theories of learning as a basis for understanding failure to learn in the school situation. Deals specifically with (a) reading; (b) mathematics. Prerequisite: C I 311. May repeat subtopics to a maximum of 6 credits.

720 ADVANCED METHODOLOGY (3 + 0) 3 credits

Study and evaluation of innovative teaching in elementary and secondary schools. Prerequisite: C I 451, 453 or 457, and a curriculum course.

721 EVALUATION OF CLASSROOM LEARNING
(3 + 0) 3 credits

Construction and use of classroom tests, performance instruments, and other methods of evaluating learning. Prerequisite: C I 451, 453 or 457.

728 PROBLEMS IN TEACHING

(1 + 0 per credit) 1 to 6 credits

Research projects required of each student in the field of special interest. (a) Social studies, (b) English, (c) science, (d) mathematics, (e) business education, (f) foreign language, (g) industrial education, (h) bilingual-bicultural education, (j) agricultural industrial mechanics. Maximum of 6 credits. Prerequisite: EDFM 700.

740 ELEMENTARY SCHOOL CURRICULUM
(1 + 0 per credit) 2 or 3 credits

Curriculum principles as found in the historical, philosophical, sociological, and psychological foundations. Emphasis on methods and techniques that meet the needs of the child. Prerequisite: C I 640 or equivalent.

741 ADVANCED CURRICULUM DESIGN IN EARLY CHILDHOOD EDUCATION (3 + 0) 3 credits

Research and curriculum studies in content and procedures. Curriculum design projects undertaken. Prerequisite: EDFM 705.

742 FOUNDATIONS IN ELEMENTARY EDUCATION
(3 + 0) 3 credits

Philosophical, historical, sociological, and psychological foundations of elementary education. Includes integrated curriculum, unit teaching, inquiry and discovery, human relations in the classroom. Prerequisite: C I 740.

744 RESEARCH APPLICATIONS IN CURRICULUM AND INSTRUCTION (3 + 0) 3 credits

Analysis of methods of research appropriate to curriculum and instruction. Application of these methods to a specific problem. Prerequisite: minimum of 9 graduate credits in education.

746 SECONDARY SCHOOL CURRICULUM
(3 + 0) 3 credits

Study and discussion of the development and improvement of curriculum practices, with special stress upon working out pro-

cedures suited to this area. Prerequisite: C I 440 or other curriculum course.

748 ADVANCED CURRICULUM DESIGN FOR EXCEPTIONAL CHILDREN (3 + 0) 3 credits

Recent developments in curriculum design for exceptional children including consideration of programmed instruction and operant procedures. Prerequisite: C I 416, 417, or 418.

750 INTERNSHIP IN CURRICULUM AND INSTRUCTION (0 + 2 per credit) 3 to 6 credits

Application of course content included in C I 742 or 746 in the classroom under the supervision and direction of local school system personnel and university staff members. Prerequisite: C I 742 or 746.

753 SUPERVISION AND FIELD WORK WITH EXCEPTIONAL CHILDREN (3 + 0) 3 credits

Practicum in (a) mental retardation, (b) specific learning disabilities, (c) gifted, with emphasis on classroom instruction, curriculum design, administration of programs for exceptional children, and/or research and field experiences. Maximum of 6 credits. Prerequisite: C I 413, 453, 748.

770 SEMINAR IN EARLY CHILDHOOD EDUCATION (3 + 0) 3 credits

Observation, study, and research in early childhood education. Problems of organization, administration, and evaluation of programs. Prerequisite: C I 330 and EDFM 705.

771 SEMINAR IN ELEMENTARY EDUCATION 1 to 6 credits

Problems of organization, administration, curriculum, methodology, evaluation, public relations. Review of research procedures. (a) Curriculum, (b) advanced methods, (c) diagnosis and remedial, (d) evaluation, (e) administration and supervision, (f) research. Prerequisite: certification for teaching.

772 SEMINAR IN SPECIAL EDUCATION 1 to 6 credits

Consideration of special problems in organization, administration, curriculum, construction of materials, methodology, and evaluation: (a) severe mentally retarded, (b) physically handicapped, (c) gifted or rapid learner, (d) emotionally handicapped, (e) culturally deprived, (f) severe learning disabilities.

773 SEMINAR IN SECONDARY EDUCATION (1 + 0 per credit) 1 to 6 credits

Study of a topic or topics of current importance in secondary curriculum, methodology, evaluation, and materials. Maximum of 6 credits. Prerequisite: certification for teaching.

774 SEMINAR IN VOCATIONAL AND INDUSTRIAL EDUCATION (3 + 0) 3 credits

Analysis of a topic in vocational, technical, and industrial education pertaining to curriculum, methodology, or evaluation. Maximum of 6 credits. Prerequisite: C I 661.

775 SEMINAR IN DRIVER TRAINING AND TRAFFIC SAFETY EDUCATION (3 + 0) 3 credits

Analysis of a topic in driver training and traffic safety education pertaining to curriculum revision, driver education services, new concepts in instruction, and defensive driving. Maximum of 6 credits. Prerequisite: C I 658.

776 SEMINAR IN MULTICULTURAL EDUCATION (1 + 0 per credit) 1 to 6 credits

Detailed analysis of selected aspects of recent developments in methodology and pedagogical materials designed to instruct Black American, Native American, Spanish-speaking American, Asian American, and other minority culture students. Maximum of 6 credits. Prerequisite: C I 420, 620.

777 SEMINAR IN ADULT EDUCATION (3 + 0) 3 credits
Analysis of a topic in adult education pertaining to curriculum, methodology, development, and evaluation of adult education. Prerequisite: C I 460 or 660.

791 SPECIAL TOPICS (0 + 1) 1 credit

Selected problems related to curriculum and instruction: (a) teaching problems, (b) curriculum, (c) supervision, (d) programmed instruction, (e) elementary, (f) junior high school, (g) senior high school, (h) area problems, (j) research. Maximum of 6 credits. Prerequisite: C I 440 or equivalent.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

797 THESIS 1 to 6 credits

799 DISSERTATION 1 to 12 credits

Inactive Courses

371 UNDERSTANDING CHILD BEHAVIOR (1 + 0 per credit) 2 or 3 credits

374 HEALTH INSTRUCTION METHODS FOR SECONDARY TEACHERS (2 + 0) 2 credits

438, 638 LITERATURE FOR CLASSROOM USE (3 + 0) 3 credits

450, 650 TEACHING SKILL DEVELOPMENT TECHNIQUES (1 + 3) 2 credits

470, 670 ADVANCED STUDY OF PROBLEMS IN CHILD DEVELOPMENT (1 + 0 per credit) 2 or 3 credits

714 EDUCATION OF THE PHYSICALLY HANDICAPPED (1 + 0 per credit) 2 or 3 credits

ECONOMICS (EC)

101 PRINCIPLES OF MACROECONOMICS (3 + 0) 3 credits

Introduction to the theory of relative prices; the allocation of productive resources among alternative uses in the production of national output and its distribution.

102 PRINCIPLES OF MICROECONOMICS (3 + 0) 3 credits

Introduction to the study of the determination of levels of national income, employment, and prices, and the basic causes of fluctuations of these levels. Prerequisite: EC 101.

103 INTRODUCTION TO ECONOMIC EDUCATION (3 + 0) 3 credits

Introduction and survey of current issues and problems in both macro and micro economic areas. Economic tools, concepts, and terminology are developed as well as applications related to the teaching of economics. Primarily for education majors. May not substitute for either EC 101 or 102.

109 ECONOMIC GEOGRAPHY (3 + 0) 3 credits

World distribution of economic activities and their natural bases. Major occupations such as agriculture, mining, manufacturing, and trade are considered in relation to the natural environment. (Same as GEOG 109.)

200 ECONOMIC DEVELOPMENT OF WESTERN CIVILIZATION (3 + 0) 3 credits

Critical survey of the ideas and institutions underlying the economic transformation of Western civilization. Major emphasis on the development of capitalism.

208 ECONOMICS OF SOCIAL INCOME REPORTING (3 + 0) 3 credits

The topics covered include input-output analysis, flow of funds analysis, social accounting, national income accounting, cost benefit studies, and environmental impact analysis. Prerequisite: EC 102, sophomore standing.

261 PRINCIPLES OF STATISTICS I (3 + 0) 3 credits

Probability and major probability distributions; sampling theory; descriptive statistics; measures of central tendency and dispersion; index figures; time series. Prerequisite: MATH 110 or equivalent.

262 PRINCIPLES OF STATISTICS II (3 + 0) 3 credits

Statistical inference, estimation, hypothesis testing; simple linear regression and correlations; analysis of the variance. Prerequisite: EC 261.

UPPER DIVISION COURSES:

See section on *Upper Division Courses* in the College of Business Administration section.

301, 501 COMPARATIVE ECONOMIC SYSTEMS

(3 + 0) 3 credits

Analysis of the economic institutions of capitalism and other economic systems. Prerequisite: EC 102.

303, 503 MONEY AND BANKING (3 + 0) 3 credits

Nature and functions of money, functions and history of banks, Federal Reserve System; monetary theory and policy in relation to employment, growth, and price levels. Prerequisite: EC 102. Not applicable to an advanced degree in economics.

321, 521 INTERMEDIATE PRICE THEORY

(3 + 0) 3 credits

Analysis of the price mechanism and the determination of resource allocation, output composition, and income distribution in a market economy. Prerequisite: EC 102. Not applicable to an advanced degree in economics.

322, 522 INTERMEDIATE INCOME THEORY

(3 + 0) 3 credits

Analysis of income, output, employment, and price-level determination in a market economy. The role of fiscal and monetary policy in promoting stability and growth. Prerequisite: EC 102. Not applicable to an advanced degree in economics.

365, 565 LABOR ECONOMICS (3 + 0) 3 credits

Study of both the theoretical materials relating to the economic analysis of labor problems and the descriptive materials relating to unionism and collective bargaining. Prerequisite: EC 102.

403, 603 MONETARY INSTITUTIONS AND POLICY

(3 + 0) 3 credits

Detailed analysis of the role played by money and monetary institutions in the determination of the general levels of output, employment, and prices. Prerequisite: EC 303.

410, 610 SEMINAR IN SOCIAL ECONOMICS

(3 + 0) 3 credits

Advanced analysis of current economic problems. Maximum of 6 credits; no topic may be repeated for credit.

411, 611 THE ECONOMIC AND SOCIAL ASPECTS OF GAMING AND GAMBLING (3 + 0) 3 credits

Analysis of topics relevant to gambling, including game strategies and oddsmaking, gambling behavior, the economics of the gaming industry, compulsive gambling, and gambling and the law. Prerequisite: senior standing.

431, 631 INTRODUCTION TO MATHEMATICAL ECONOMICS (3 + 0) 3 credits

Mathematical formulation of economic theory, with principal consideration given to the construction of deterministic models of economic behavior. Prerequisite: MATH 265 and EC 321.

441, 641 INTRODUCTION TO ECONOMETRICS

(3 + 0) 3 credits

Application of statistical techniques for the purpose of testing

and explaining economic relationships; integration of economic theory with observed economic phenomena. Useful for economic and business forecasting. Prerequisite: EC 102, 262, or equivalent.

451, 651 PUBLIC FINANCE (3 + 0) 3 credits

Study and appraisal of the effects of government financial policies. Government expenditures, taxation, government borrowing and indebtedness, and fiscal policy are considered. Prerequisite: EC 102.

454, 654 INDUSTRIAL ORGANIZATION AND PUBLIC POLICY (3 + 0) 3 credits

Study of the interrelationships between industrial structure, conduct, and performance. Implications for public policy with an emphasis on antitrust law. Prerequisite: EC 102.

456, 656 ECONOMICS OF REGULATED INDUSTRIES

(3 + 0) 3 credits

Economic and legal bases of the public utility concept; rate base regulation, rate structures in electric, gas, and communication industries; public power; the transportation industry. Prerequisite: EC 102.

458, 658 INTERNATIONAL ECONOMICS

(3 + 0) 3 credits

Analysis of the theory of international trade, balance of payments, commercial policies; international institutions and the theory of international economic integration. Prerequisite: EC 102.

459, 659 FUTURE DEVELOPMENT (3 + 0) 3 credits

Introduction to the world's development problems such as population, food, scarcity of nonrenewable resources, growing inequality between nations and within nations, possible socioeconomic consequences of those problems. Prerequisite: EC 102.

463, 663 ECONOMIC HISTORY OF EUROPE

(3 + 0) 3 credits

Economic and social background of European national and international development with emphasis upon the period 1500 to present. Prerequisite: EC 102.

464, 664 ECONOMIC HISTORY OF THE UNITED STATES (3 + 0) 3 credits

Origin and development of economic institutions including industry, agriculture, commerce, transportation, labor, and finance. Analysis of the economic progress of the United States. Prerequisite: EC 102.

471, 671 URBAN ECONOMICS (3 + 0) 3 credits

Exploration of the foundation of urban economic theory and planning. Primary emphasis placed upon research into urban problems and policy formulation.

472, 672 REGIONAL ECONOMICS (3 + 0) 3 credits

Systematic analysis of the problems of economic growth and stability of subnational regions. Trade, location, interregional competition, and structural economic analyses are considered. Prerequisite: EC 102. (Same as AREC 472.)

481, 681 HISTORY OF ECONOMIC DOCTRINES

(3 + 0) 3 credits

Development of classical political economy; the orthodox tradition in political economy in the nineteenth century; and the foundation of economic doctrine in the twentieth century. Prerequisite: EC 102.

490, 690 INDEPENDENT STUDY 1 to 3 credits

Independent study in selected topics. Maximum of 6 credits.

703 MONETARY ANALYSIS (3 + 0) 3 credits

Comprehensive and critical examination of monetary theories. Major topics include the quantity theory, liquidity preference

theory, money markets, and money in macroeconomic markets. Prerequisite: EC 322.

708 PUBLIC POLICY AND BUSINESS PERFORMANCE (3 + 0) 3 credits

Analysis of the effects of various economic policies on the performance of business enterprise, and a general consideration of the social and political influences on business. Prerequisite: graduate standing and EC 102.

715-716 STATISTICS FOR BUSINESS DECISIONS (3 + 0) 3 credits

Probability, estimation, hypothesis testing, subjective probability, regression analysis, correlation, time series, index numbers, statistical and decision theory as applied to business problems. Prerequisite: EC 715 for EC 716. (Satisfies requirement for MBA first-year core.)

721 ADVANCED PRICE THEORY (3 + 0) 3 credits

Advanced analysis of production, pricing, resource allocation, and income distribution. Prerequisite: EC 321.

722 ADVANCED INCOME THEORY (3 + 0) 3 credits

Advanced analysis of the determinants of national income and the price level. Theories of growth and fluctuations in the economic system. Prerequisite: EC 322.

731 QUANTITATIVE METHODS IN ECONOMICS (3 + 0) 3 credits

Selected topics in the uses of math and statistics in economic analysis. Prerequisite: EC 262 and MATH 265.

740 RESEARCH METHODOLOGY (3 + 0) 3 credits

(See AREC 740 for description.) Students registering for EC 740 attend AREC 740.

751 ECONOMICS OF THE PUBLIC SECTOR (3 + 0) 3 credits

Theory of local, state, and federal expenditures and revenues. The economic effects of alternative policies and decision-making processes of the public sector are emphasized. Prerequisite: EC 451.

759 ECONOMIC GROWTH AND DEVELOPMENT (3 + 0) 3 credits

Economic, social, and political factors in economic development with special emphasis on low income countries. Programs for accelerated development and problems of financing are considered. Prerequisite: EC 458, 459.

764 SEMINAR IN AMERICAN ECONOMIC HISTORY (3 + 0) 3 credits

Advanced analysis of trends in U.S. economic history, including the industrialization process, economic factors influencing the Civil War, the Great Depression, and post-World War II economic growth. Prerequisite: EC 464.

765 SELECTED TOPICS IN LABOR ECONOMICS (3 + 0) 3 credits

Analysis of labor force concepts and measurements, labor markets and labor mobility, wage theory and collective bargaining, and macroeconomic behavior of employment and earnings. Prerequisite: EC 365.

781 SEMINAR IN ECONOMIC DOCTRINES (3 + 0) 3 credits

Development of the critical method in the study of economic doctrines. Prerequisite: EC 481.

793 INDEPENDENT STUDY 1 to 3 credits

Advanced study and research in selected topics. Maximum of 6 credits.

797 THESIS 1 to 6 credits

Inactive Courses

473, 673 BUSINESS FLUCTUATIONS AND FORECASTING (3 + 0) 3 credits

717 ECONOMIC ANALYSIS AND POLICY I (3 + 0) 3 credits

718 ECONOMIC ANALYSIS AND POLICY II (3 + 0) 3 credits

772 REGIONAL ECONOMICS (3 + 0) 3 credits

EDUCATION

(See separate listings for:)

Counseling and Guidance Personnel Services (CAPS)
Curriculum and Instruction (C I)
Educational Administration and Higher Education (EAHE)
Educational Foundations and Media (EDFM)

EDUCATIONAL ADMINISTRATION AND HIGHER EDUCATION (EAHE)

411, 611 THE TEACHER AND EDUCATIONAL ADMINISTRATION (3 + 0) 3 credits

Overview of professional relationships between teachers and administrators in the public school setting. Designed as a preservice course for the preparation of teachers or an in-service course for teachers. Prerequisite: supervised teaching.

700 BASIC PRINCIPLES OF EDUCATIONAL ADMINISTRATION (3 + 0) 3 credits

Foundational course for graduate students interested in school administration. Treatment of the major areas of school operations.

701 ADMINISTRATION OF SCHOOL STAFF PERSONNEL (3 + 0) 3 credits

Recruitment, selection, placement of teachers; orientation of new teachers; staff participation in salary scheduling and other aspects of economic welfare of teachers; administrator-teacher relations; codes of ethics; merit rating; certification, tenure. Prerequisite: EAHE 700 or equivalent.

702 THEORY AND PRACTICE IN EDUCATIONAL ADMINISTRATION (3 + 0) 3 credits

Advanced course with emphasis on the theory undergirding the principles and practices in school administration. Bases for decision-making are treated. Prerequisite: EAHE 700 or equivalent.

703 ADMINISTRATION AND CURRICULUM IMPROVEMENT (3 + 0) 3 credits

Clarifies the role of the administrator in improving curriculum and instruction in public schools.

704 ORGANIZATION AND ADMINISTRATION OF THE JUNIOR AND COMMUNITY COLLEGE (2 + 0) 2 credits

Presents the principles, policies, and procedures for organizing and administering the junior and community college.

705 SEMINAR IN ADMINISTRATIVE PROBLEMS (0 + 1 arranged per credit) 1 to 4 credits

Provides opportunity for advanced students to select and analyze current problems and issues, such as federal aid to education, integration, professional staff negotiations, use of new media in education. Maximum of 4 credits. Prerequisite: EAHE 700, 701, or 715.

706 ADMINISTRATION OF SPECIAL PROGRAMS

(3 + 0) 3 credits

Treatment is given to the administration and supervision of such special areas of the school program as vocational-technical, special education, transportation, library, food services, health services, and business management.

707 SEMINAR IN ORGANIZATION AND ADMINISTRATION OF COMMUNITY COLLEGES

(0 + 1 arranged per credit) 1 to 4 credits

Organization and administration of community colleges. Emphasis on differences in the nature of the program generally offered by community colleges and staffing procedures. Prerequisite: master's degree.

709 THE ADMINISTRATOR AND COMMUNITY COLLEGE CURRICULUM (3 + 0) 3 credits

Treatment is given to the unique nature of the curriculum of the community college and the justification of such offerings. Prerequisite: EAHE 707.

710 THE UNIT ADMINISTRATOR AND ADMINISTRATION (3 + 0) 3 credits

Gives specific treatment to the administration of the school unit on the elementary, middle school, junior high, and senior high levels. Prerequisite: EAHE 700 or equivalent.

711 ARTICULATION OF POSTSECONDARY EDUCATION CURRICULA (3 + 0) 3 credits

Emphasis is placed on the necessity for continuity of the curriculum of secondary education, the community college, and colleges and universities. Prerequisite: EAHE 704, 707.

715 SUPERVISION IN THE PUBLIC SCHOOLS

(3 + 0) 3 credits

Principles and procedures used by supervisors to improve the curriculum and instructional program in the public schools stressed.

716 SUPERVISION OF THE SCHOOL UNIT

(3 + 0) 3 credits

Emphasizes modern approaches in supervisory practices common to the various school units. Prerequisite: EAHE 715 or equivalent.

718 SUPERVISION OF STUDENT TEACHING

(2 + 0) 2 credits

Designed primarily for public school teachers who are functioning as cooperating teachers in the student teaching program.

725 PUBLIC SCHOOL FINANCE (3 + 0) 3 credits

Deals with such problems of business management as purchasing of supplies, budgeting, and bonding for school purposes.

726 PROBLEMS OF FINANCING PUBLIC EDUCATION (3 + 0) 3 credits

Philosophical as well as practical treatment given to state and federal involvement in public education, including budgetary and program procedures.

727 SEMINAR IN SCHOOL FINANCE

(0 + 1 arranged per credit) 1 to 4 credits

Specific problems related to financing public education on the local, state, and national levels. Prerequisite: EAHE 725 or 726.

730 SCHOOL SURVEY AND EDUCATION

FACILITIES (1 + 0 per credit) 2 or 3 credits

Master planning, involving the details of programming, site selecting, constructing, maintaining, and equipping the school plant.

731 THE EDUCATIONAL PLANT (3 + 0) 3 credits

Specialized treatment given to the theoretical and practical

procedures in developing written specifications for the school plant. Laboratory work. Prerequisite: EAHE 730.

735 PRINCIPLES AND PRACTICES IN SCHOOL

LAW (2 + 0) 2 credits

Deals with legal authority of school boards, administrators, and teachers as indicated by statutes, official opinions, and court decision.

740 ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES (1 + 0 per credit) 2 or 3 credits

Problems of organizing and administering guidance services in the public schools.

741 ADMINISTRATION OF PUPIL PERSONNEL PROGRAMS (2 + 0) 2 credits

Presents factors pertaining to the responsibility for policies and practices dealing with pupil personnel services.

742 ADMINISTRATION OF VOCATIONAL EDUCATION PROGRAMS (3 + 0) 3 credits

The responsibilities of the administrator and directors of vocational and technical programs in the public schools and community colleges are emphasized.

743 PUBLIC RELATIONS FOR SCHOOLS (2 + 0) 2 credits

Principles and practices pertaining to public relations, including the role of professional and classified personnel as well as the public.

744 PROBLEM AREAS IN EDUCATIONAL

ADMINISTRATION (1 + 0 per credit) 2 or 3 credits

Group work to select current problems pertaining to public school administration and to develop proposed solutions to such problems.

746 COORDINATION OF COOPERATIVE EDUCATION PROGRAMS (3 + 0) 3 credits

The administrator has leadership responsibilities in developing an understanding of the philosophy underlying cooperative education, which includes business and office education, distributive education, home economics, industrial education, etc. Prerequisite: EAHE 742.

791 SPECIAL TOPICS (0 + 1 per credit) 1 to 4 credits)

Literature review and analysis of assigned topics in (a) educational administration; (b) adult and teacher education. Maximum of 8 credits.

792 SPECIAL PROBLEMS (1 + 0 per credit) 1 to 4 credits

Research projects in the various areas of school administration in the public schools. Maximum of 4 credits.

793 INDEPENDENT STUDY (0 + 1 per credit) 1 to 4 credits

Supervised readings with conferences. Maximum of 4 credits.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only**797 THESIS 1 to 6 credits**

798 INTERNSHIP (0 + 2 per credit) 3 to 9 credits
Practical experience in the student's major field under close supervision and direction of local school system personnel and university staff members. Experience areas selected by student, adviser, and department chairman. Prerequisite: approval of student's advisory committee.

799 DISSERTATION 1 to 12 credits**EDUCATIONAL FOUNDATIONS AND MEDIA (EDFM)****101 EDUCATIONAL EXPERIENCE I (3 + 0) 3 credits**

Introduction to the basic philosophical, sociological, psychological, historical, legal, and anthropological founda-

tions of education. Prerequisite for upper-division courses in education. Meets state certification requirements in Nevada school law.

210 LEGAL FOUNDATIONS OF EDUCATION

(2 + 0) 2 credits

Historical development of paramount issues in contemporary education. Emphasizes legal aspects of emerging educational patterns. Nondegree course to meet state certification requirements in Nevada school law. (Offered by CE, Independent Study Department only.)

301 INTRODUCTION TO LIBRARY EDUCATION

(3 + 0) 3 credits

Acquaints student with philosophy and work of school librarian. Introduces bibliographic tools and information sources basic to librarianship, emphasizing those used in school library work.

402, 602 WORKSHOP IN SCHOOL LIBRARY PROBLEMS

(2 + 0) 2 credits

Problems pertaining to administration and operation of a school library. Discussed from point of view of the teacher-librarian. Prerequisite: EDFM 301, 403, 404, 406, or equivalents.

403, 603 LITERATURE SELECTION FOR CHILDREN

(3 + 0) 3 credits

Survey of the field of literature for children. Children's reading interests and needs as bases for evaluating and selecting library materials for the elementary school.

404, 604 BOOK SELECTION FOR ADOLESCENTS

(3 + 0) 3 credits

Prepares teachers, librarians and administrators for evaluation of books and other library materials for pupils in the secondary schools. Prerequisite: EDFM 301 or equivalent.

406, 606 ORGANIZATION OF LIBRARY MATERIALS

(3 + 0) 3 credits

Cataloging of books and other library materials. Includes practice in working with Dewey and Library of Congress subject headings, principles of entry and cross referencing, and organization of periodicals and pamphlet files. Prerequisite: EDFM 301 or equivalent.

407, 607 SUPERVISED LIBRARY PRACTICE

(0 + 2 per credit) 1 to 4 credits

Opportunities for supervised library practice under the direction of a professionally trained librarian in a school situation. Prerequisite: EDFM 301, 403, 404, 406, 408, or equivalents.

408, 608 ADMINISTRATION OF THE SCHOOL LIBRARY

(3 + 0) 3 credits

Includes functions of school library. Relationship of library to school's total instructional program. Preparation of library budget. Other problems of library administration. Prerequisite: EDFM 301, 403, 404, 406, or equivalents.

409, 609 NONPRINT MATERIALS IN THE SCHOOL

LIBRARY (3 + 0) 3 credits

Selection, acquisition, organization, storage, and maintenance of films, filmstrips, recordings, pictures, maps, charts, and realia in libraries and media centers. Prerequisite: EDFM 301 or equivalent.

410, 610 PRODUCTION AND DESIGN OF MEDIA

MATERIALS (3 + 0) 3 credits

Preparation and use of graphics in instruction. Design and presentation of materials for slides, transparencies, models, and exhibits. For teachers and librarians. Prerequisite: EDFM 101 or equivalent.

413, 613 EDUCATIONAL MEASUREMENTS AND

STATISTICS (3 + 0) 3 credits

Study and application of basic statistical methods in the field of education and related disciplines. Emphasis on role of statistics in behavioral research; meets certification requirements for those areas in education requiring a background in statistical understandings.

415, 615 PHOTOGRAPHY FOR TEACHERS

(2 + 3) 3 credits

Emphasizes fundamental photographic processes in education including film development, black and white enlarging, black and white and color slide development, lighting arrangements, portrait procedures, photographic displays, technical and operational lab aspects of the field. Prerequisite: EDFM 101 or equivalent.

420, 620 AUDIOVISUAL METHODS IN TEACHING

(3 + 0) 3 credits

For both elementary and secondary students; a study of the principles and application of both projected and nonprojected materials in audiovisual education. Prerequisite: EDFM 101 or equivalent.

421, 621 EDUCATION IN DEVELOPING NATIONS

(3 + 0) 3 credits

Interrelations of education with economic, political, and social development in selected Latin American, African, and Asian countries. Emphasis placed upon identifying the role that educational services, formal and informal, may play in upgrading human resources and preparing for modernization in the policies considered. A case-study approach is used.

422, 622 SEMINAR IN EDUCATION IN DEVELOPING

NATIONS (3 + 0) 3 credits

Intensive study of student-selected topics dealing with current policies for educational development in Latin America, Africa, and Asia. Prerequisite: EDFM 421, 621, or equivalent.

425, 625 EDUCATIONAL MOTION PICTURE

PRODUCTION (2 + 1) 3 credits

Idea development, research, planning, and production of instructional motion pictures. Script writing, filming, editing, sound systems and applications; supervision of budget, personnel, and content during film preparation. Prerequisite: EDFM 420 or equivalent.

426, 626 PRACTICUM IN EDUCATIONAL MEDIA

(0 + 2 per credit) 1 to 3 credits

Supervised experience in designing, developing and evaluating instructional media for specific teaching objectives. Involves working in the Learning and Resource Center. Prerequisite: EDFM 420 or equivalent.

460, 660 TEACHING FOR CRITICAL THINKING

(3 + 0) 3 credits

Emphasizes knowledge and understanding of the field of critical thinking; and methods and procedures required to teach critical thinking at various age levels. Prerequisite: PHIL 105 or equivalent.

475, 675 ANTHROPOLOGY AND EDUCATION

(3 + 0) 3 credits

Patterns of learning and transmission of culture in literate and nonliterate societies; the education process and cultural factors such as values, goals, world-view, language, and leadership. Recommended for teachers and others in multiethnic situations. Prerequisite: ANTH 100, 101 or equivalent.

499, 699 SPECIAL PROBLEMS IN EDUCATION

1 to 6 credits

Specialized instruction in general professional education designed to develop depth in understanding of a current educational problem of the in-service teacher and ad-

ministrator. A maximum of 6 semester credits is accepted in special problems in courses EDFM 499 and C I 481 for degree programs. However, the course may be repeated to a maximum of 12 credits, only 6 of which may be applied toward any degree.

700 INTRODUCTION TO EDUCATIONAL RESEARCH
(3 + 0) 3 credits

Introductory course required for all students preparing for an advanced degree. Emphasis on the purpose, general procedures, and types of educational research. Designed for research practitioners and consumers.

701 HISTORY OF EDUCATION (3 + 0) 3 credits
Development of educational thought and practice in Western civilization.

702 HISTORY OF EDUCATION IN THE UNITED STATES (3 + 0) 3 credits
Factors and conditions which have been influential in the shaping of educational thought, ideals, theories, and practices of current American education.

703 SOCIAL FOUNDATIONS OF EDUCATION
(3 + 0) 3 credits
Emphasizes the changing role of our educational system in meeting the demands of our post-industrial society.

705 ADVANCED STUDY OF HUMAN GROWTH AND DEVELOPMENT (3 + 0) 3 credits
Emphasis on implications of human growth and development for the curriculum. Application and examples will be directed to the teaching profession. Prerequisite: C I 270 or equivalent.

706 EDUCATIONAL USES OF TELEVISION
(3 + 0) 3 credits
Analysis of trends in utilization of television and video tape recordings. Includes program production, evaluation, and methods of teaching with these media.

707 MODERN TECHNOLOGY IN EDUCATION
(3 + 0) 3 credits
New and emerging technological advances in multimedia systems of instruction. Included are programmed instruction, audio and visual media, and communication laboratories. Emphasis on current research and experimentation in the area.

708 PROBLEMS IN AUDIOVISUAL EDUCATION
(1 + 2) 2 credits
Meets the needs of individual students primarily in production and utilization of audiovisual materials. Problems pertinent to production of educational materials.

709 PHILOSOPHY OF EDUCATION (3 + 0) 3 credits
Examination and analysis of philosophical issues in education with particular reference to noted traditional and contemporary philosophers. Importance of developing a consistent personal philosophy of education.

710 ADVANCED PHILOSOPHY OF EDUCATION
(3 + 0) 3 credits
Critical analysis and evaluation of philosophies of education. Implications for practice of pragmatism, logical empiricism, and existentialism. Prerequisite: EDFM 709 or equivalent.

711 COMPARATIVE EDUCATION (2 + 0) 2 credits
Comparative study of national ideologies and educational philosophies, and systems of education with emphasis upon Great Britain, France, the Union of Soviet Socialist Republics, Red China and Japan. Prerequisite: EDFM 421 or 621, 422 or 622 or in-depth cross-cultural experience.

712 FIELD EXPERIENCES IN EDUCATIONAL RESEARCH (1½ + 6) 1 to 4 credits
Directed experience in research in various areas in the public

schools and other educational agencies. Prerequisite: EDFM 700 or equivalent.

713 ADVANCED EDUCATIONAL MEASUREMENTS AND STATISTICS (3 + 0) 3 credits

Second course designed for the student planning to contribute research findings of his own design. Refinement of inferential statistical methods introduced in EDFM 413/613. Prerequisite: EDFM 413 or 613 or equivalent.

714 INDIVIDUAL RESEARCH 1 to 4 credits
Pursuance of selected basic problems from one of the areas listed under general professional education.

720 ADVANCED MEDIA DESIGN AND PRODUCTION
(3 + 0) 3 credits
Comprehensive multi-media modules designed around individually chosen topics and produced in class. Emphasis placed on quality production, organization, continuity and effective communication of topic. Prerequisite: EDFM 410/610 or the equivalent.

752 SEMINAR IN COLLEGE TEACHING
(1 + 0 per credit) 2 to 5 credits
Includes units on following topics: (1) methods of teaching; (2) theories of learning; (3) modern technology in teaching; (4) evaluation and measurements; (5) social foundations of higher education. Prerequisite: graduate standing and recommendation by chairman of student's major.

755 SUPERVISED TEACHING IN EDUCATION
(1 + 1 per credit) 2 or 3 credits
Directed experience in college teaching consisting of the preparation, presentation, and testing of material for undergraduate students in lectures, discussion sections, or laboratories. Prerequisite: undergraduate major in the subject or equivalent.

775 DOCTORAL RESEARCH SEMINAR (3 + 0) 3 credits
Advanced considerations relating to the materials, procedures, and write-up techniques involved in educational research. Special attention on analysis of various social science approaches to the study of educational problems. Doctoral research area should be identified before enrolling; concurrently, the student must be registered for at least three credits of 799 Dissertation. Prerequisite: doctoral candidacy plus EDFM 613 and 700 or equivalent courses.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

797 THESIS 1 to 6 credits

799 DISSERTATION 1 to 12 credits

ELECTRICAL ENGINEERING (E E)

131 COMPUTER TECHNIQUES I (2 + 0) 2 credits
Beginning computer programming using FORTRAN, designed to illustrate the fundamental principles of mathematics which use of the computer can display. Regular use of university computer is required. Corequisite: MATH 215.

132 COMPUTER TECHNIQUES (2 + 0) 2 credits
Continuation of E E 131 with introduction of time sharing, basic language, matrix algebra and a continuation of computer solutions of calculus problems. Prerequisite: E E 131.

198, 298, 398, 498 COOPERATIVE TRAINING REPORT
(1 + 0) 1 credit

Preparation of written reports based on cooperative program assignments. Required of all students in cooperative programs during the summer or other semesters when on work assignments with cooperative program employers.

202 MATERIALS IN ELECTRICAL ENGINEERING

(3 + 0) 3 credits

Properties, tests, and uses of materials in electrical engineering. Structural materials, conductors, insulators, semiconductors, magnetic materials. Prerequisite: CHEM 101. Corequisite: PHYS 101, M E 241.

212 INTRODUCTION TO ELECTRICAL ENGINEERING

(3 or 4 + 0) 3 or 4 credits

Includes the major areas of electrical and computer engineering—excluding materials. Prerequisite: PHYS 202.

231 COMPUTERIZED MATRIX ALGEBRA (1 + 0) 1 credit

Continuation of E E 132 with emphasis on vector space, its basis and transformations, and computer solutions of the eigenvalue problem. Introduction to Pascal. Prerequisite: E E 132.

291-292 ELECTRICAL PROJECTS LABORATORY

(0 + 3 or 6) 1 or 2 credits

Offers the opportunity to undertake an independent project of the student's own interest, upon individual arrangement with a staff member. Maximum of 4 credits.

301 PRINCIPLES OF ELECTRICAL MEASUREMENT

(1 + 3) 2 credits

Introduction to the theory and use of electrical instruments for measuring voltage, current, power, and element values. Use of the oscilloscope is emphasized. Prerequisite: E E 202 and 212.

302 ELECTRONICS/MACHINERY LABORATORY

(1 + 3) 2 credits

Design, construction, and testing of electronic circuits, integrated circuit measurements, motor, generator and transformer tests and characteristics. Experiments reflect course work in E E 311, 333, 350, and 372 which are prerequisites.

311 INTRODUCTION TO NETWORK ANALYSIS

(3 + 0) 3 credits

The analysis and design of linear networks, primarily in the frequency domain. Prerequisite: E E 212, MATH 320 or M E 300.

333, 533 COMPUTER LOGIC AND ARCHITECTURE

(3 + 0) 3 credits

Techniques for analysis and design of combinational and sequential switching networks; Boolean algebra, elements of code theory, function minimization, computer subsystems, arithmetic and logic algorithms, asynchronous sequential networks, simple computer operation. (Same as MATH 387.)

335, 535 COMPUTER PROGRAMMING AND ORGANIZATION (3 + 0) 3 credits

(See MATH 385/585 for description.)

336/536 COMPUTER PROGRAMMING LANGUAGES

(3 + 0) 3 credits

(See MATH 386, 586 for description.)

337 COMPUTER ACQUAINTANCE FOR THE HEALTH SCIENCES (3 + 3) 4 credits

Introduction to the computer and its application. Programming in various languages is included, plus applications in areas of interest to each student. Prerequisite: elementary algebra and junior standing. (Not open to engineering majors.)

339 COMPUTER ACQUAINTANCE (1 + 0) 1 credit

Beginning acquaintance with programming language and the digital computer. Intended for nontechnical students, particularly prospective teachers. Prerequisite: elementary algebra or junior standing. (Not open to engineering majors.)

340 ELECTRONICS FOR MEDICAL APPLICATIONS

(2 + 3) 3 credits

Electrical and electronic theory for life processes and functional substitute applications. Prerequisite: MATH 216 and college physics.

350, 550 ELECTRICAL SYSTEMS (3 + 0) 3 credits

Integration of energy conversion and electric machinery, including transformers, basic machines and an introduction to systems. Prerequisite: E E 212.

355, 555 ELECTRIC AND MAGNETIC FIELDS

(3 + 0) 3 credits

Vector analysis approach to the study of electric and magnetic fields and of Maxwell's equations. Prerequisite: E E 212, PHYS 202, MATH 310 and Differential Equations.

372, 572 INTRODUCTION TO ELECTRONICS

(3 + 0) 3 credits

Principles of electronics. A study of active devices and their behavior in analog and digital circuits. An introduction to integrated circuits as building blocks in digital and analog circuits. Corequisite: E E 311.

375 PRINCIPLES OF ELECTRIC CIRCUITS AND MACHINES (3 + 0 or 3) 3 or 4 credits

Characteristics of DC and AC circuits and machines, electric controls and instruments, measurements of electric power and energy. Prerequisite: PHYS 210 and MATH 310.

382, 582 ELECTRICAL COMMUNICATION

(3 + 0) 3 credits

Basic information and communication theory. Study of information measure, noise measure, pulse and continuous signal modulation and detection systems. Prerequisite: E E 311, MATH 251.

386, 586 FEEDBACK CONTROL SYSTEMS

(3 + 0) 3 credits

The theory, analysis, and design of closed-loop systems — primarily in the real and complex frequency domain. Prerequisite: E E 311, M E 342.

391-392 ELECTRICAL PROJECTS LABORATORY

(0 + 3 or 6) 1 or 2 credits

Offers the opportunity to undertake an independent project of the student's own interest, upon individual arrangement with a staff member. Maximum of 4 credits.

401 ELECTRICAL PROJECTS LABORATORY

(1 + 3) 2 credits

Theory and techniques of measurement on complex systems by electrical means. Prerequisite: E E 302 and senior standing.

404 DIGITAL ELECTRONICS LABORATORY

(0 + 3) 1 credit

Experiments and reports corresponding to logic circuit realization of digital hardware. Emphasis is placed on TTL and CMOS families for combinatorial and sequential circuits. Microprocessor experiments. Corequisite: E E 473.

412, 612 ADVANCED NETWORK THEORY

(3 + 0) 3 credits

Introduction to network synthesis procedures and computer aided design of networks. Prerequisite: E E 311 and 372.

424, 624 INTEGRATED CIRCUIT ENGINEERING

(2 + 3) 3 credits

Introduction to the design and fabrication of integrated circuits. Factors limiting integrated circuits specifications are considered and new technologies are studied. Prerequisite: E E 372.

430, 630 NUMERICAL METHODS IN ELECTRICAL ENGINEERING (2 + 3) 3 credits

Numerical analysis and digital computer applications. Prerequisite: MATH 320.

431, 631 DIGITAL COMPUTER DESIGN (3 + 0) 3 credits

Design of functional digital units—memory, arithmetic units, timing, and input/output devices. Topics include coding, error detection, data flow, register transfer language. Prerequisite: E E 333.

435, 635 MICROPROCESSORS (3 + 0) 3 credits

Elementary microprocessor principles founded in electrical engineering applications. Hardware, software, and interface areas analyzed. Prerequisite: E E 333.

436, 636 COMPUTING SYSTEMS AND SYSTEMS PROGRAMMING (3 + 0) 3 credits

(See MATH 486, 686 for description.)

451, 651 ELECTRICAL MACHINES (3 + 0) 3 credits

Theory of electrical machinery; factors affecting the design of electrical apparatus; schemes for protection and control of machines. Prerequisite: E E 350.

455, 655 DISTRIBUTED SYSTEMS AND ANTENNA DESIGN (3 + 0) 3 credits

Introduction to concept of distributed systems, wave propagation and antenna design. Prerequisite: E E 355 or 555.

460, 660 GENERATION OF ELECTRIC POWER (3 + 0) 3 credits

Operation of electric utilities. A survey of conventional and unconventional energy generation including magneto-hydrodynamic, thermionic, hydro-electric, fossil-fuel, and nuclear power plants. Prerequisite: E E 350.

461, 661 TRANSMISSION AND DISTRIBUTION OF ELECTRIC POWER (3 + 0) 3 credits

Design and construction of electric transmission lines and systems. Short circuit calculations using symmetrical components, stability, economic load control. Prerequisite: E E 350. Corequisite: E E 386.

462 ENGINEERING DESIGN/ANALYSIS (4 + 0) 4 credits

Proposal writing, design and fabrication of a suitable project selected by the student, following procedures used by industry for product design and development. Prerequisite: E E 372 and senior standing.

473, 673 DIGITAL ELECTRONICS (3 + 0) 3 credits

Hardware-related design considerations for combinatorial and sequential logic using integrated circuits. Includes TTL, CMOS, shift registers, arithmetic units, RAM, ROM, and edge-triggered devices. Prerequisite: E E 333 and 372.

481, 681 INTEGRATED ELECTRONICS (3 + 0) 3 credits

Examines circuit design and integrated circuit use with emphasis on operational amplifiers, active filters, and analog applications. Prerequisite: E E 372.

483, 683 STOCHASTIC SYSTEMS (3 + 0) 3 credits

Introduction to stochastic systems. Includes review of concepts of random variable theory, functions of two random variables, mean square estimation, nonstationary process applications. Prerequisite: MATH 251 and E E 382.

485, 685 MODERN SYSTEM THEORY (3 + 0) 3 credits

Modern techniques of system analysis and design, primarily in the time domain using state variable concepts. Prerequisite: E E 386.

486, 686 SAMPLED DATA CONTROL SYSTEMS (3 + 0) 3 credits

The analysis and control of feedback systems with discrete, digital and sampled data. Prerequisite: E E 386.

487, 687 SEMINAR 1 to 4 credits

Organized for advanced study and research under the direction of one or more staff members of the department. Maximum of 8 credits.

490, 690 ELECTRACOUSTICS (2 + 3) 3 credits

Theory of sonic and ultrasonic vibrations and acoustics, including electromechanical transducers. Prerequisite: E E 355.

492, 692 POWER ELECTRONICS (2 + 3) 3 credits

Control of electric machines and systems. Current and potential transformers, relays, load dispatch, starting, speed control, and paralleling of machines. Computerized control. Prerequisite: E E 386, 401.

495, 695 INDEPENDENT STUDY 1 to 3 credits

Special projects or studies in electrical engineering. Maximum of 6 credits each.

703 INFORMATION AND COMMUNICATION THEORY (3 + 0) 3 credits

a) Information theory and coding, b) continuous and pulsed communication systems, c) optimum transmission and propagation techniques. Each topic may be taken for 3 credits. Prerequisite: E E 382.

713 PASSIVE AND ACTIVE NETWORKS (3 + 0) 3 credits

(a) Linear passive network synthesis, (b) linear active network synthesis. (c) nonlinear active network analysis. These courses are sequential. Prerequisite: E E 386.

721 ADVANCED ELECTRONICS (3 + 0) 3 credits

(a) Low noise, wide band, and fast, amplifiers, active filters, (b) pulse, wave shaping, and computing circuits. These courses are not sequential. Prerequisite: E E 311 and 372.

731 ADVANCED SWITCHING THEORY (3 + 0) 3 credits

Shift register sequences, state assignments for edge-triggered circuits, logic decisions, multilevel logic, fault detecting and ripple design. Prerequisite: E E 333.

732 THEORY OF FINITE AUTOMATA (3 + 0) 3 credits

Finite-state automata: formal systems, functional decomposition, generators and acceptors, transition systems, algorithms, and unsolvable problems. Prerequisite: E E 333.

733 ADVANCED MICROPROCESSORS (3 + 0) 3 credits

Design techniques with emphasis on applications and software. Topics include arithmetic processing, 16-bit machines, and advanced 8-bit machines. Prerequisite: E E 435.

751 ELECTROMAGNETIC FIELD ANALYSIS I (1 + 0) 1 credit

Calculation of electromagnetic fields in two and three dimensions in air and in the presence of iron. Use of field analysis in high energy physics, electrodynamic forces, etc. Typical examples are solved using computer techniques. Prerequisite: E E 355.

752 ELECTROMAGNETIC FIELD ANALYSIS II (1 + 0) 1 credit

Continuation of E E 751. Prerequisite: E E 751.

753 DESIGN OF ELECTRICAL DEVICES (2 + 2) 3 credits

Industrial design of electric transformers and rotating machines. Complete examples of designs are worked through. Prerequisite: E E 451. Maximum of 9 credits.

of 3 credits. Home economics education and community service majors must enroll for 3 credits.

353 HISTORY OF FURNITURE (3 + 0) 3 credits

Furniture and interior design reflecting the culture of significant historical periods.

355 HOME FURNISHINGS (3 + 0) 3 credits

Application of design principles in the creation of an interior environment suited both to the individual and to exterior factors.

371 FAMILY ECONOMICS AND MANAGEMENT

(4 + 0) 4 credits

Managerial processes and decision-making in the utilization of human and nonhuman resources; values, goals, and standards. Societal, economic, and legislative influences on family management problems. Prerequisite: 3 credits each of economics, psychology, and sociology.

373 ISSUES IN CONSUMER COMPETENCE

(1 + 0) 1 credit

Integrates economics and management as they relate to family decision-making in food, clothing, shelter, and interpersonal relationships. Prerequisite: H EC 172, 271, 274, 275, and 371.

374 COMMUNICATIONS IN HOME ECONOMICS

(3 + 0) 3 credits

Communications process and current techniques in the effective transmission of home economics ideas, attitudes, and subject matter to individuals, families, groups, and mass audiences. Prerequisite: speech and junior standing in home economics.

376 ISSUES IN FAMILY HEALTH (1 + 0) 1 credit

Physical and mental health of families as influenced by physical and cultural environment. Prerequisite: H EC 172, 271, 274, 275.

400, 600 SPECIAL PROBLEMS 1 to 10 credits per semester
Individual study or research in fields of special interest. (Approval of dean required.) Field may be chosen from one or more of the following: (a) child development, (b) clothing, (c) family economics, (d) family relations, (e) foods, (f) general home economics, (g) home economics education, (h) home furnishings, (i) home management, (k) housing, (m) household equipment, (n) nutrition or (p) textiles. Maximum of 10 credits.

410, 610 EXPERIMENTAL CLOTHING (2 + 2) 3 credits

Experimental investigation and application of construction methods and techniques to problem textiles. Prerequisite: H EC 210.

412, 612 FASHION ANALYSIS (3 + 0) 3 credits

Factors affecting development and cycles of fashion trends; fashion promotion; production and distribution of fashion goods; factors involved in consumer acceptance of fashion. Prerequisite: H EC 271.

420, 620 BIONUTRITION (3 + 0) 3 credits

Physiological and biochemical aspects of nutrient roles within subsystems of the human biosystem. Prerequisite: H EC 223, approved biochemistry and physiology courses.

422, 622 NUTRITION IN THE LIFE CYCLE (1 + 0) 1 credit

Relationship between nutrient needs, development, and feeding practices throughout life cycle: (a) Pregnancy and lactation, (b) infancy, (c) childhood, (d) adolescence, (e) adults 20-40 years, (f) middle and later life. Prerequisite: introductory nutrition course. Maximum 1 credit per topic.

423, 623 EXPERIMENTAL FOODS (2 + 3) 3 credits

Experimental investigation of the chemical and physical reactions involved in food preparation. Prerequisite: organic chemistry and H EC 225.

426, 626 DIET THERAPY (2 + 3) 3 credits

Modifications of the normal diet for the prevention and treatment of diseases. Prerequisite: H EC 223 plus approved biochemistry or 15 credits of life science.

430, 630 HUMAN SEXUALITY (3 + 0) 3 credits

Exploration of masculine and feminine roles as they relate to human development, personal functioning, interpersonal relations, and family living in a complex, changing society. Prerequisite: 6 credits in psychology, sociology, or biological sciences.

431, 631 MIDDLE AND LATER LIFE

(2 + 0 or 3) 2 or 3 credits

Development, adjustment, and needs of people in our culture as they reach middle age and approach the advanced years. Prerequisite: 6 credits in psychology and sociology.

432, 632 PRESCHOOL FOR SPECIAL CHILDREN AND

THEIR FAMILIES (3 + 0 or 3) 3 or 4 credits

Preschool for children who are handicapped, retarded, emotionally disturbed, or gifted. Particular emphasis on involvement of the families. Optional credit is for work with special children in a pre-school setting. Prerequisite: 6 credits in child development.

434, 634 PARENT EDUCATION IN FAMILY LIFE

(3 + 0) 3 credits

Planning, organizing, and analyzing parent education programs for schools, churches, and other community agencies; methods of working with parent groups. Prerequisite: H EC 274 or SOC 275 or 380 or PSY 233 or C 1 270.

436, 636 FAMILY INTERACTION (2 + 2) 3 credits

Family theory and research, with laboratory experience to facilitate understanding of the dynamics of family interaction and its impact on family members.

**438, 638 CHILDREN AND FAMILIES IN A
MULTIETHNIC SOCIETY 1 to 3 credits**

Study of the life styles, values, and needs of children and their families from diverse ethnic groups; designed to assist those working with minority children to provide positive acculturation experiences.

439, 639 THEORETICAL PRESCHOOL MODELS

(3 + 0) 3 credits

Preschool programs including basic philosophies (traditional, Montessori, eclectic, etc.) curricula and procedures. Prerequisite: H EC 131 or equivalent.

441, 641 ADVANCED CHILD DEVELOPMENT

(3 + 0) 3 credits

Cognitive, psychomotor and affective models of behavior with implications for understanding and interacting with children. Prerequisite: H EC 131 and 231 or 274.

445, 645 CONSUMER ECONOMICS (3 + 0) 3 credits

Analysis of macro and micro aspects of consumption, critical review of consumer protection and consumer information. Prerequisite: H EC 371 or 341, or 6 credits of economics.

449 ORGANIZATION AND ADMINISTRATION OF

HOME ECONOMICS (1 + 0 per credit) 1 to 3 credits

The interrelationship of the vocational and nonvocational aspects of home economics in youth and adult programs. Evaluation as a technique for appraising progress. Home economics education and extension majors must enroll for 3 credits. Prerequisite: H EC 347.

453, 653 ECONOMIC ASPECTS OF THE HOUSING

ENVIRONMENT (3 + 0) 3 credits

Impact of the economy and of technological change on the

structure, operation, and function of housing submarkets. Government programs designed to alter market performance in relation to current societal goals. Prerequisite: EC 101 or its equivalent.

454, 654 INTERIOR DESIGN—MATERIALS AND TECHNIQUES (1 + 4) 3 credits

Exploration and application of rendering media and methods used in visual presentation of interior design ideas; practice in effective oral presentation and critique. Prerequisite: H EC 251 and 355. Undergraduate component may be repeated to a maximum of 5 credits but must be taken for 3 credits initially.

456, 656 INTERIOR DESIGN STUDIO (1 + 4) 3 credits

Special problems in interior design involving practice in client relations and presentation of design ideas. Prerequisite: H EC 454. Undergraduate component may be repeated to a maximum of 6 credits.

457 SUPERVISED TEACHING IN THE SECONDARY SCHOOL (0 + 2½ per credit) 1 to 8 credits

Major and/or minor teaching field. Provides opportunities in junior or senior high school. Prerequisite: Foundations for Secondary Teaching I, II, III completed, and IV completed or in progress, or equivalent. Arrangements are made by teacher—educator in home economics education.

458, 658 FAMILIES AND PUBLIC DECISION-MAKING (2 + 0 or 3) 2 or 3 credits

Role of the family in decision-making and management of public issues; analysis of legislation directly affecting the family. Laboratory includes experience with the legislature and other policymaking bodies. Prerequisite: H EC 371 or equivalent, 3 credits of political science or history.

470 FIELD EXPERIENCE 2 to 8 credits

Work with one or more community agencies or firms that utilize home economics subject matter as they work with clientele. Combines a seminar with supervised field experience. Prerequisite: approval of screening committee.

475 PHILOSOPHIES AND ISSUES IN HOME ECONOMICS (2 + 0) 2 credits

Seminar encompassing objective and critical thought, creativity, choice of life styles, current philosophies and issues, and professional responsibilities. Prerequisite: senior standing in home economics.

484, 684 WORKSHOP IN VOCATIONAL EDUCATION (1 + 0 per credit) 1 to 6 credits

(See C I 484 for description.)

494, 694 SEMINAR ON LIFE STYLES AND THE ENVIRONMENT (2 + 0) 2 credits

Systematic analysis and reconsideration of alternative individual life styles in the framework of society's impact on the environment. Prerequisite: senior or graduate standing. (Same as ENV 494.)

719 SOCIO-PSYCHOLOGICAL ASPECTS OF CLOTHING (3 + 0) 3 credits

Clothing in the context of its social and social-psychological significances. Prerequisite: 6 credits of work in psychology and sociology and 6 credits of work in clothing.

725 FOOD INTAKE AND NUTRITION (3 + 0) 3 credits

Critical review of research methods and findings relating to psychological, social, and economic factors affecting food intake and the subsequent impact on nutritional status. Prerequisite: 3 credits in nutrition and 6 credits in behavioral science.

730 SEMINAR IN CHILD DEVELOPMENT AND FAMILY LIFE (3 + 0) 3 credits

Critical analysis of recent research and theory in the area of

child development and family life. Prerequisite: 6 credits of course work in child development and family relations.

740 ISSUES IN FAMILY AND CONSUMPTION ECONOMICS (3 + 0) 3 credits

Critical review of research and theory in family and consumption economics. Special emphasis on theories of consumer behavior, concepts related to family welfare, and income adequacy and equivalence. Prerequisite 12 credits from the social science root discipline, to include 6 credits in economics.

750 EVALUATION IN HOME ECONOMICS (3 + 0) 3 credits

Selection and construction of evaluation devices; their use as a technique for guiding learning and appraising progress in home economics. Prerequisite: 18 credits in home economics.

771 RESEARCH METHODS IN HOME ECONOMICS (3 + 0) 3 credits

Systematic examination of the scope and methods of inquiry for graduate students in home economics; the present state of research in home economics. Presentation of thesis prospectus for criticism. Required of all graduate students during their first year of graduate study.

780 INTERSTATE DOCTORAL STUDY 1 to 3 credits

Extended registration for students participating in an inter-institutional doctoral program. May be repeated for credit.

790 SEMINAR (1 + 0) 1 credit

Clarifies the basic philosophy of home economics and the place of the home economist in present day society. Required for M.S. degree in home economics.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

796 PROFESSIONAL PAPER 1 to 3 credits S/U only

Required of all graduate students who wish to complete an M.S. degree in the School of Home Economics under Plan B.

797 THESIS 1 to 6 credits

798 DIRECTED TEACHING IN COLLEGE HOME ECONOMICS 3 credits

Teaching a college-level home economics course. Team planning, individual preparation, presentation of material, and testing undergraduate students in lectures, discussions, and laboratories. Undergraduate major in home economics or equivalent required. Prerequisite or corequisite: H EC 347.

Inactive Courses

421, 621 READINGS IN FOODS AND NUTRITION (2 + 0) 2 credits

443, 643 WORK SIMPLIFICATION (1 + 2) 2 credits

452, 652 DECISION-MAKING IN THE FAMILY ECOSYSTEM (3 + 0) 3 credits

700 GRADUATE STUDIES IN HOME ECONOMICS 1 to 3 credits in a field per semester

758 INDIVIDUAL INSTRUCTION (1 + 0 per credit) 1 to 3 credits

HONORS STUDY (HON)

Interdisciplinary Courses

(These courses are not required for graduation with honors.)

200 FRESHMAN-SOPHOMORE SEMINAR (3 + 0) 3 credits
Topic-oriented rather than discipline-oriented analysis of selected subjects consistent with the framework and goals of the Honors Program of upper-division seminars. (a) The city,

(b) the university, (c) communications. Maximum of 12 credits.

410 AREA STUDY 3 credits

View of a particular region of the world from the perspective of several academic disciplines. Maximum of 9 credits.

421 AGGRESSION: ROOTS AND MANIFESTATIONS
(3 + 0) 3 credits

Causes and consequences of a basic animal and human motive involving several points of view; genetic, biological, psychological, sociological, historical, political. Maximum of 6 credits.

435 BRIDGING INTELLECTUAL DISCIPLINES
(3 + 0) 3 credits

Study of methods, values, theories, and directions of two or more academic disciplines in search of their common ground, as well as differences in approaches; open to upper-class and graduate students. Maximum of 6 credits.

454 THE CREATIVE ARTS (3 + 0) 3 credits

Interaction of literature and fine arts. Investigation of creative arts including art history, involving printing, sculpture, music, architecture, and literature. Maximum of 6 credits.

465 AMERICA: INSTITUTIONS AND VALUES
(3 + 0) 3 credits

Study of one or more American institutions or values with a consideration of their evolution and contemporary significance. Maximum of 9 credits.

476 THE FUTURE (3 + 0) 3 credits

Investigation into future relations between man, his social structure, and his environment. Maximum of 9 credits.

498 DYNAMICS OF NATIONAL DEVELOPMENT
(3 + 0) 3 credits

Problems and processes involved in national efforts to achieve various developmental goals. Means and values are emphasized. Maximum of 6 credits.

Inactive Courses

210 GENERAL HUMANITIES (3 + 0) 3 credits

240 AMERICA AND THE FUTURE OF MAN 2 credits

432 RACE AND ETHNIC RELATIONS (3 + 0) 3 credits

443 SCIENCE AND CULTURE (3 + 0) 3 credits

487 REVOLUTION; SOURCES AND
MANIFESTATIONS (3 + 0) 3 credits

INFORMATION SYSTEMS (I S)

250 INTRODUCTION TO BUSINESS INFORMATION SYSTEMS (3 + 0) 3 credits

Introduction to the digital computer. Programming in the BASIC language. Use of time-sharing terminals. Survey of business systems and systems documentation. Not open to freshman students except by special permission.

251 COBOL (3 + 0) 3 credits

Programming in COBOL (Common Business Oriented Language). Parallel emphasis in analysis and documentation of management systems problems. Prerequisite: I S 250.

252 FORTRAN (3 + 0) 3 credits

A survey of the FORTRAN (FORMula TRANslation) programming language and an introduction to assembly languages. Prerequisite: I S 250.

UPPER DIVISION COURSES: See section on *Upper Division Courses* in the College of Business Administration section.

352 COMPUTER APPLICATIONS (3 + 0) 3 credits

Problems involving RPG programming, computer feasibility studies, computer center management, and information system security. Prerequisite: I S 250.

424, 624 ADVANCED COMPUTER USAGE FOR ACCOUNTANTS (3 + 0) 3 credits

Computer Auditing Techniques, Accounting controls in Computerized Systems and Accounting Systems Applications. Accounting majors only. Prerequisite: I S 250, 716 or equivalent.

450, 650 COMPUTER OPERATING SYSTEMS (3 + 0) 3 credits

A survey of computer operating systems and related technology. Prerequisite: I S 250 and 251.

451, 651 ADVANCED COMPUTER PROBLEMS
(3 + 0) 3 credits

Case studies and problems in administrative information systems using the COBOL language. Prerequisites: I S 250 and 251.

480, 680 ACCOUNTING SYSTEMS AND AUTOMATION
(3 + 0) 3 credits

Accounting information systems with an emphasis on the computer's role in these systems. Topics include data bases, computerized control systems, computer crime, and systems study work for a systems revision. Prerequisite: ACC 201, ACC 202, and I S 250.

484, 684 INFORMATION SYSTEMS ANALYSIS AND DESIGN (3 + 0) 3 credits

Case studies and problems relating to the analysis of business information systems and to the design and implementation of new systems. Prerequisite: I S 250, 251 and 451.

488, 688 SEMINAR IN INFORMATION SYSTEMS
(3 + 0) 3 credits

Research in selected information systems problems. Prerequisite: I S 250, 251 and 451.

490, 690 INDEPENDENT STUDY 1 to 3 credits

Independent study in selected topics. Maximum of 6 credits.

716 MANAGEMENT AND THE COMPUTER
(3 + 0) 3 credits

Using computer-based information systems in organizations. Computer hardware and programs, computer economics, system selection, staffing, budgeting, and implementation. (Satisfies requirement for M.B.A. first-year core.)

791 INDEPENDENT RESEARCH 1 to 3 credits

Advanced study and research in selected topics. Maximum of 6 credits.

Inactive Course

150 BASIC (1 + 0) 1 credit

INTEGRATED PEST MANAGEMENT (IPM)

100 INTRODUCTION TO INTEGRATED PEST MANAGEMENT (3 + 0) 3 credits

Principles and practices in pest management systems including disease, insect and weed management in production agriculture.

210 PRINCIPLES OF BEE MANAGEMENT
(2 + 0) 2 credits

Consideration of the basic principles of bee culture and the management of bees for honey production and pollination.

356, 556 WEEDS AND WEED CONTROL (2 + 3) 3 credits
Principles and practices of weed control. Recognition of important weed species. Prerequisite: BIOL 202 and CHEM 142.

391, 591 GENERAL ECONOMIC ENTOMOLOGY (2 + 3) 3 credits

Introduction to study and principles of control of insects and related organisms which affect production of animals, crops, and management of range and forests. Graduate credit not available for integrated pest management majors, entomology option. Prerequisite: BIOL 201 or 202.

400 UNDERGRADUATE SEMINAR (1 + 0) 1 credit

Research work and reports on topics of interest in the pest sciences, integrated pest management, and pesticide chemistry and toxicology. Prerequisite: senior standing.

412, 612 INSECT PESTS OF PLANTS (3 + 0) 3 credits
Detailed study including principles of control of more economic species of insects and related organisms which affect production of plants. Prerequisite: IPM 391 or BIOL 360.

422, 622 INSECT PESTS OF ANIMALS (3 + 0) 3 credits
Detailed study including principles of control of more economic species of insects and related organisms which affect the urban homeowner, and the health and well-being of man and domesticated animals. Prerequisite: IPM 391 or BIOL 360.

471, 671 PLANT PATHOLOGY (3 + 3) 4 credits
Nature, cause, and control of plant diseases. Prerequisite: BIOL 202.

480 INDEPENDENT STUDY 1 to 3 credits
Intensive study of a special problem in (a) integrated pest management, (b) entomology, (c) plant pathology.

712 ENVIRONMENT AND PLANT RESPONSE (2 + 3) 3 credits

Specific environmental factors which influence the growth and development of green plants. Emphasizes how to distinguish symptoms associated with mineral nutrients; air, soil and water pollution; and light. The cause and mechanisms by which symptoms develop and possible procedures to ameliorate these problems. Prerequisite: PSW 327, BIOL 355-356.

720 INSECT ECOLOGY (3 + 0) 3 credits
Principles governing activity and distribution of insects in relation to their environment. Prerequisite: IPM 391 or BIOL 360. (Same as BIOL 720.)

731 PESTICIDE RESIDUE ANALYSIS TECHNIQUES (2 + 3) 3 credits

Emphasizes proper sampling techniques, laboratory analysis, significance for pesticide residues in the environment. Designed for ecologists, agriculturalists, or chemists. Prerequisite: CHEM 142.

756 HERBICIDES AND PLANT GROWTH REGULATORS (3 + 0) 3 credits

Chemistry of herbicides and plant growth regulators, their entry, and movement; action in plants and their fate in the environment. Prerequisite: BIOL 355, 356; IPM 471, 671.

775 ADVANCED PLANT PATHOLOGY (3 + 3) 4 credits
Detailed study of plant diseases caused by viruses, nematodes, bacteria, and fungi with emphasis on the physiology of pathogenesis. Prerequisite: IPM 471.

790 GRADUATE SEMINAR (1 + 0) 1 credit
Reports on topics of interest in the pest sciences, integrated pest management and pesticide chemistry and toxicology.

791 SPECIAL TOPICS 1 to 3 credits
Selected topics dealing with current research and

developments in the pest sciences, integrated pest management, and pesticide chemistry and toxicology. Maximum of 6 credits.

792 SPECIAL PROBLEMS 1 to 3 credits
Individual study of a special problem in (a) integrated pest management, (b) entomology, (c) plant pathology, (d) weed science, (e) pesticide chemistry and toxicology.

797 THESIS 1 to 6 credits
Thesis may be written in area of (a) integrated pest management, (b) entomology, (c) plant pathology, (d) weed science, (e) pesticide chemistry and toxicology.

Inactive Courses

70 INSECT PESTS AND THEIR CONTROL (1 + 3) 2 credits

INTERNAL MEDICINE (IM)

402 CLINICAL-BIOMEDICAL INTEGRATION (9 + 6) 11 credits S/U only

Using eleven major organ system failures as clinical models, medical students utilize, in an integrated fashion, the basic biomedical concepts from Anatomy, Biochemistry, Physiology, Microbiology, Pharmacology and Laboratory Medicine and Pathology, in developing solutions to the most common and important clinical problems presented.

451 CLERKSHIP (2 + 30) 12 credits
Hospital and ambulatory clinical experience with preceptorial supervision to develop knowledge (practical, theoretical, basic science), technical and interpersonal skills basic to practicing internal medicine.

461 ADVANCED CLINICAL EXPERIENCES (0 + 96) 2 to 32 credits

Selected practical experience with patients, with faculty advisement and supervision.

490 INDEPENDENT STUDY 1 to 3 credits

491 THEORY AND PRACTICE OF ECG INTERPRETATION (1 + 3) 2 credits

Physiology of the cardiac action potential and general theory of the electrical field created by the heart. The different lead systems in relation to spatial vectorcardiogram. Analysis of simple and complex arrhythmias. Classical patterns of contour alterations.

JOURNALISM (JOUR)

101-102 INTERPRETING THE DAY'S NEWS (3 + 0) 3 credits

Study of the news of the day and the function of the newspaper, the news magazine, and news broadcasts in American life. History of journalism also is emphasized. Course may be started with JOUR 101 or 102.

221 INTRODUCTION TO NEWS WRITING (1 + 6) 3 credits

News writing fundamentals, with emphasis on journalistic problems and practices of grammar, word usage, spelling, punctuation, and style. Discussion and laboratory. Ability to type essential. Prerequisite: JOUR 101.

222 NEWS GATHERING AND WRITING (1 + 6) 3 credits
The gathering of news and preparation of stories for publication in newspapers; the nature and ethics of news gathering and reporting. Prerequisite: JOUR 101 and a grade of C or better in JOUR 221.

280 INTRODUCTION TO BROADCASTING
(2 + 0) 2 credits

Radio and television as news media in the U.S. and abroad, including history, relationship to press and governments, and varieties and effectiveness as news media.

281-282, 381-382 ON-THE-AIR BROADCASTING
(0 + 3) 1 credit each

Participation in radio and television production, preparation of programs for on-air broadcast. Prerequisite: JOUR 280. Not applicable to Sequence II.

301 PUBLIC RELATIONS PRINCIPLES AND PRACTICE (2 + 0) 2 credits

Public relations in social welfare, business, education, government, industry, labor, politics, and civic organizations, with stress on journalistic media.

302 PUBLIC RELATIONS PROBLEMS (2 + 0) 2 credits

Application of the principles and techniques of public relations to the solving of representative problems. Prerequisite: JOUR 301.

311-312 RADIO AND TELEVISION NEWS WRITING AND EDITING (1 + 4) 3 credits each

Principles of writing and editing news copy for radio and television, practice in writing, organizing, and broadcasting. Prerequisite: JOUR 222 and 280.

314 RADIO AND TELEVISION PRODUCTIONS
(1 + 6) 3 credits

Production techniques as applied to major program types, critical evaluation of programs, program patterns, audience analysis. Prerequisite: JOUR 280.

315 RADIO AND TELEVISION DIRECTION
(1 + 6) 3 credits

Methods of radio and television direction. Problems of time, film, audience, music, casting, acoustics, space, etc. Prerequisite: JOUR 314.

316 BROADCAST STATION OPERATION
(2 + 6) 4 credits

Survey of broadcast station personnel, station organization, broadcast sales, operation of broadcast stations, and station relations with agencies, representatives, and other businesses. Prerequisite: JOUR 280.

320 PUBLICITY METHODS (2 + 0) 2 credits

For officers and publicity chairmen, present and prospective, of civic, social, religious, professional, recreational, and fraternal organizations in the handling of news of their groups for newspapers and radio stations. Not acceptable toward the requirements for the major in journalism.

51-352 NEWS EDITING (1 + 2) 2 credits each

Copy reading, rewriting, headline writing, news evaluation, makeup, and similar duties of the copy editor. Prerequisite: A grade of C or better in JOUR 222.

354 ADVANCED REPORTING (1 + 3) 2 credits

In-depth reporting of news in such areas as medicine, law, science, the arts, human relations, agriculture, economics, ecology, and community activities. Coverage of off-campus beats. Prerequisite: a grade of C or better in JOUR 222.

356 PRINCIPLES OF ADVERTISING (2 + 0) 2 credits
Elements which go into successful advertising, including basic principles, types, planning, media, copy, production, and social responsibility.

358 ADVERTISING MEDIA (2 + 0) 2 credits

Relations of advertising to media; characteristics, evaluation, and use of media, rates, mechanics of purchasing, scheduling, and appropriations. Prerequisite: JOUR 356.

359 ADVERTISING COPY WRITING (2 + 0) 2 credits

Application of the basic principles of advertising in the writing of copy for newspapers, magazines, and radio and television stations. Prerequisite: JOUR 356.

370 TECHNICAL JOURNALISM (2 + 0) 2 credits

Writing of news stories and feature articles on agriculture, home economics, engineering, mining, and science subjects for newspapers and magazines. Not acceptable toward the requirements for the major in journalism.

372, 572 THE LAW OF THE PRESS (3 + 0) 3 credits

State and Federal laws affecting the reporting of news, the expression of opinion, advertising, the publication of newspapers and magazines, and radio and television broadcasting.

373 TYPOGRAPHY AND LAYOUT (1 + 2) 2 credits

Study and practice in the use of type, illustrations, color, and similar typographic elements in the display of news, advertisements, and other printed journalistic materials. Prerequisite: JOUR 222 or 356.

375 PHOTOJOURNALISM (1 + 6) 3 credits

Principles of reporting news through photography and the application of these principles in practice work for various publications. Prerequisite: JOUR 222.

387 JOURNALISM IN THE HIGH SCHOOL
(2 + 0) 2 credits

Introduction to the teaching of journalism in high school and to the supervision of high school newspapers, magazines, and yearbooks. Not acceptable toward the requirements for the major in journalism.

388 WORKSHOP IN HIGH SCHOOL JOURNALISM
(0 + 6) 2 credits

Practical application of journalistic theory and technique to teaching of high school journalism, supervision of school newspapers, magazines, and yearbooks. Maximum of 4 credits. Prerequisite: JOUR 221-222.

404, 604 HISTORY AND ETHICS OF JOURNALISM
(3 + 0) 3 credits

Development of journalism in America. Analysis of ethical problems and the relationship to other institutions, historically and in contemporary times. Prerequisite: 3 credits in journalism for 400-level registration; 6 credits in journalism for 600-level registration.

414, 614 TELEVISION SCRIPT WRITING (3 + 0) 3 credits

Television writing techniques including theory and practice in the writing of all major continuity types. Prerequisite: JOUR 222 and 280.

415, 615 EDUCATIONAL TELEVISION PRODUCTION
(3 + 0) 3 credits

Study of current trends in the uses of public broadcasting for educational and instructional purposes, including studio exercises, demonstration, and critical evaluation.

421, 621 THE AMERICAN MAGAZINE (3 + 0) 3 credits

Designed to introduce students to the reading, enjoyment, and understanding of various types of primarily journalistic magazines.

454, 654 PUBLIC AFFAIRS REPORTING (1 + 3) 2 credits

Background and materials of the news of public affairs, together with the actual reporting from such sources as courts, city hall, Federal building, and the State Capitol. Prerequisite: JOUR 354.

465-466, 665-666 COMMUNITY NEWSPAPER**MANAGEMENT (2 + 0) 2 credits each**

Principles of journalism peculiar to the country weekly and small city daily, especially in Nevada. Editorial, circulation, and advertising management. Prerequisite: JOUR 222 and 351.

467, 667 EDITORIAL WRITING (3 + 0) 3 credits

Interpretation of contemporary events through the newspaper and magazine editorial, coupled with extensive practice in writing. Prerequisite: JOUR 222.

468, 668 THE FEATURE ARTICLE (2 + 0) 2 credits

Study, writing, and marketing of the feature article for magazines and newspapers. Prerequisite: JOUR 222. Maximum of 4 credits.

480, 680 PUBLICATION PRODUCTION AND MANAGEMENT (1 + 2) 2 credits

Principles, problems of journalism involved in the management of publications including editorial, circulation, production. Prerequisite: JOUR 373.

481-482 JOURNALISM INTERNSHIP**(1 + 6) 3 credits each**

Professional work as staff members of daily and weekly newspapers, radio and television stations, advertising, and public relations agencies. Prerequisite: JOUR 222, 351, 454.

485, 685 JOURNALISTIC EVALUATION (3 + 0) 3 credits

Study and practice in the standard methods of testing journalistic media, as content analysis, readership, readability, habits and response, reader attitudes, copy effectiveness, media selection, and media coverage. Prerequisite: JOUR 222.

490, 690 SPECIAL PROBLEMS IN JOURNALISM**1 to 3 credits**

Students can pursue further some special interests in their education for journalism not adequately covered by other courses. Prerequisite: JOUR 222.

493 INDEPENDENT STUDY 1 credit

Aspects of journalism not covered by other courses. Open only to juniors and seniors in journalism who have attained an average grade of B. Maximum of 4 credits.

790 SEMINAR 1 or 2 credits

Maximum of 6 credits.

791 SPECIAL TOPICS 1 or 2 credits**793 INDEPENDENT STUDY 1 or 2 credits**

Advanced study and investigation into problems in journalism. Maximum of 8 credits.

795 COMPREHENSIVE EXAMINATION**0 credit S/U only****797 THESIS 1 to 6 credits***Inactive Courses*

231-232, 361-362

491-492, 691-692 ADVANCED INTERPRETATION OF**THE DAY'S NEWS (1 or 2 + 0) 1 or 2 credits each****410, 610 ON-THE-SCENE REPORTING FOR RADIO AND TELEVISION (1 + 2) 2 credits****LABORATORY MEDICINE AND PATHOLOGY (PATH)****401 GENERAL HUMAN PATHOLOGY (3 + 3) 4 credits**

Basic pathology including reactions to disease, i.e., inflamma-

tion, repair, neoplasia, circulatory disturbances, cytogenetics, and forensic principles, demonstrated by gross and microscopic laboratory exercises. Prerequisite: ANAT 401 and PHSY 401.

402 SYSTEMIC HUMAN PATHOLOGY (4 + 6) 6 credits

General pathophysiological principles applied to diseases of organ systems. Laboratory consists of seminars, autopsies, CPC's and in-depth study of gross and microscopic appearances of diseased organs. Prerequisite: PATH 401.

403 LABORATORY MEDICINE (3 + 3) 4 credits

Theory and practical applications for ordering and interpreting laboratory tests. Special emphasis on clinical chemistry and microbiology. Involves performing certain simple laboratory tests.

472, 672 MEDICAL PHOTOGRAPHY AND PHOTOMICROGRAPHY (2 + 3) 3 credits

Application of sophisticated macroscopic and microscopic photographic techniques and methods to depict normal and abnormal gross and microscopic features. Primarily for medical students.

490 INDEPENDENT STUDY 4 credits

Research in subject of interest to pathology with approval of departmental committee. Medical students only. May be repeated to a maximum of 8 credits.

LIBRARY SCIENCE (L SC)**135 USE OF THE LIBRARY (1 + 0) 1 credit**

Introduction to UNR Libraries: general reference sources useful in preparing research papers; use of the card catalogs and arrangement of books; and the resources of special library departments and branch libraries. Self-paced workbook.

303 BIBLIOGRAPHY AND GENERAL REFERENCE**(3 + 0) 3 credits***

Introduction to basic reference materials, national and trade bibliography, general reference works (encyclopedias, handbooks, etc.), special bibliographies.

305 HISTORY AND ORGANIZATION OF LIBRARIES**(3 + 0) 3 credits***

Evolution of libraries and description of principal fields of library service, their organization, and special problems.

309 SELECTION AND ACQUISITION OF LIBRARY**MATERIALS (3 + 0) 3 credits***

Theories, principles, and practice of selecting books and other library materials with particular emphasis on public and special libraries.

381 PRACTICE AND HISTORY OF PRINTING**(0 + 6) 3 credits**

Survey of the history of graphic communication in conjunction with actual practice of printing; typographic design, block making, typesetting, press work. (Same as ART 381.)

407 ORAL HISTORY, METHODS, AND TECHNIQUES**(1 + 6) 3 credits**

Introduction to oral history as research method; practice in interviewing, transcription, editing of oral history materials.

*Offered successively, usually in the Summer Session. Contact Director of Libraries for information.

490 SPECIAL TOPICS IN LIBRARIANSHIP 1 to 3 credits
Exploration of a particular aspect of librarianship, e.g., a special subject area, an administrative or service function, or a technical system or process. May be repeated to a maximum of 9 credits when content differs.

Inactive Courses

313 HISTORY OF BOOKS AND PRINTING (3 + 0) 3 credits

MANAGERIAL SCIENCES (MGRS)

101 INTRODUCTION TO BUSINESS (3 + 0) 3 credits
The character of enterprise in the United States. Organization and administration, production, human resources, information for control of management decision, marketing, finance, business, and society. Not open to Business Administration upper-division students.

270 PRINCIPLES OF REAL ESTATE (3 + 0) 3 credits
Economic, legal, financial, marketing, managerial, and operational aspects of real estate.

UPPER DIVISION COURSES: See section on *Upper Division Courses* in the College of Business Administration section.

301 INSTITUTIONAL MANAGEMENT I (3 + 0) 3 credits
Principles of operation and administration of industries providing direct services to the public, such as hotels, motels, food and recreational establishments, resorts, and hospitals.

302 INSTITUTIONAL MANAGEMENT II (3 + 0) 3 credits
Continuation of MGRS 301. Prerequisite: MGRS 301.

310 MARKETING PRINCIPLES (3 + 0) 3 credits
Objectives and policies of marketing managers as influenced by marketing institutions, the functions performed, and consumer wants and needs. Prerequisite: completion of lower division business core.

312 CONSUMER BEHAVIOR (3 + 0) 3 credits
Study of the nature and determinants of consumer behavior. Attention focused on the influence of socio-psychological factors (such as personality, small groups, demographic variables, social class, and culture) on the formation of consumer's attributes, consumption, and purchasing behavior.

314 MARKET STRUCTURE AND CHANNELS
(3 + 0) 3 credits
Theory, principles, and channel implications of wholesale and retail distribution; factors affecting channels; and physical distribution. Prerequisite: MGRS 310.

323 ORGANIZATION AND INTERPERSONAL BEHAVIOR (3 + 0) 3 credits
Analysis of the internal organization structure and of executive roles and functions in the business enterprise and other goal-directed institutions. Theory and design of organizational structure, impact of work-flow plans, leadership patterns, and control systems upon human behavior. Prerequisite: completion of lower division business core.

325 LEGAL ENVIRONMENT (3 + 0) 3 credits
Nature and function of law: contracts and private property as basic concepts in free enterprise; the legal system and evolution of legal attitudes. Prerequisite: completion of lower division business core.

351 TRANSPORTATION (3 + 0) 3 credits
Development of various means of transportation and accompanying regulations; rate, traffic, service, and coordination problems of our transportation system. Prerequisite: junior standing.

352 OPERATIONS MANAGEMENT (3 + 0) 3 credits
Application of basic quantitative methods to decision processes. Topics include linear programming, inventory control, queuing theory, PERT, calculus applications, and decision trees. Prerequisite: completion of lower division business core.

353 RISK AND INSURANCE (3 + 0) 3 credits
Theory of risk, introduction to risk management, principles and legal aspects of insurance, survey of all areas of insurance as a risk treating device for firms and consumers, insurance and society. Prerequisite: EC 101.

362 PRODUCTION MANAGEMENT (3 + 0) 3 credits
Application to manufacturing and service organizations. Includes capital investment analysis; capacity planning; plant layout; production processes; research and development; cost calculations; production inventory and quality control and simulation. Prerequisite: statistics.

365 CORPORATION FINANCE (3 + 0) 3 credits
Financial management of the business enterprise. Topics include financial analysis, planning and forecasting, management of working capital, decisions involving long-term assets, sources and forms of long-term capital, financial structure, and the cost of capital. Prerequisite: completion of lower division business core.

367, 567 PERSONNEL ADMINISTRATION
(3 + 0) 3 credits
Management of human resource as a primary function of all managers. Emphasis on personnel processes significant in improving labor utilization and productivity. Review of pertinent legislation dealing with manpower and labor-management relations. Not applicable toward an advanced degree in managerial sciences.

370 INVESTMENTS (3 + 0) 3 credits
Analysis of investment risks, media and investment portfolios with relation to requirements and policies of individual investors. Prerequisite: MGRS 365.

373 BUSINESS LAW I (3 + 0) 3 credits
Nature, origin and philosophy of law and procedures. Law of contracts, agency, partnerships and sales. Prerequisite: completion of lower division business core.

374 BUSINESS LAW II (3 + 0) 3 credits
Continuation of MGRS 373. Law of corporations, secured transactions, property, negotiable instruments, insurance, and bankruptcy. Prerequisite: junior standing and MGRS 373.

375, 575 LAND RESOURCES: VALUE AND ALLOCATION (3 + 0) 3 credits
Use of land resources: physical, economic, and institutional factors that affect, condition, and control man's use of these resources. Prerequisite: MGRS 270. Not applicable toward an advanced degree in managerial sciences.

378 REAL ESTATE LAW (3 + 0) 3 credits
Law of real property: transfers, deeds, leases, title insurance, escrows, land contracts, foreclosures, recordings. Law as it affects brokers and salesmen. Prerequisite: MGRS 270.

401, 601 LIFE INSURANCE (3 + 0) 3 credits
Analysis and treatment of personal risks, use of life, health, and annuity contracts in realm of estate planning, actuarial concepts, purchase decisions, regulatory problems. Prerequisite: MGRS 353.

402, 602 PROPERTY LIABILITY INSURANCE
(3 + 0) 3 credits
Essentials of risk management, principles of property and liability insurance contracts pertaining to pure risks of the firm. Some emphasis on managerial problems faced by in-

insurance companies within socio-economic and legal constraints. Prerequisite: MGRS 353.

403, 603 RISK MANAGEMENT SEMINAR (3 + 0) 3 credits
Selected topics covering the management of static business risks. Emphasis on choosing among alternative risk handling techniques. Includes employee benefit programs, risk retention and financing, business continuation uses of life insurance, and estate planning for the entrepreneur.

404, 604 PROBLEMS IN BUSINESS FINANCE (3 + 0) 3 credits
Case analysis and application of financial concepts to organization and operations of business enterprises. Prerequisite: MGRS 365.

415, 615 COMMERCIAL BANK MANAGEMENT (3 + 0) 3 credits
Administration and operation of commercial banks. Topics include internal organization; loan and investment administration, regulation, and supervision; earnings, expense and dividend policies; capital structure and financing policies; new business development. Prerequisite: MGRS 365.

420, 620 INTERNATIONAL FINANCE (3 + 0) 3 credits
Financing international business operations and investments, financial decision making in the multinational firm, the international monetary system, balance of payments, foreign exchange rates, international financial institutions. Prerequisite: MGRS 365.

422, 622 PROMOTIONAL MANAGEMENT (3 + 0) 3 credits
Strategic communication problems faced by marketing management; allocation of resources to promotional mix, evaluation of communication effectiveness, and coordination with other marketing strategies. Emphasizes relevancy of consumer motivation and behavior to promotional strategies. Prerequisite: MGRS 310.

430, 630 REAL ESTATE EVALUATION (3 + 0) 3 credits
Process and techniques of evaluation. Function of the appraiser. Actual practice in appraising. Prerequisite: MGRS 270 and one additional course in real estate.

431, 631 REAL ESTATE APPRAISAL PROBLEMS (3 + 0) 3 credits
Problems of urban real estate appraisal. The income approach to value, derivation of capitalization rates, annuity capitalization, and the residual techniques of capitalization. Prerequisite: MGRS 430.

452, 652 COMPARATIVE MANAGEMENT (3 + 0) 3 credits
Analysis of international similarities and differences in managerial functions, processes, and effectiveness and consideration of the changes evolving in management systems in various countries. Prerequisite: MGRS 323, 352

453, 653 ORGANIZATIONAL CHANGE AND DEVELOPMENT (3 + 0) 3 credits
Analysis of strategies to bring about change in organizational structure; tasks; individual behavior; interpersonal relationships; and relationships of groups. Prerequisite: MGRS 323.

455, 655 BUSINESS LOGISTICS (3 + 0) 3 credits
Physical supply and physical distribution systems from the point of view of the user of business firms. Logistics systems topics include transportation systems and inventory control systems, design and management in both the preproduction and post-production channels. Prerequisite: MGRS 310.

460, 660 MANAGEMENT: THEORY AND PRACTICE (3 + 0) 3 credits
Analysis of the nature and problems of and approaches to

management planning, organizing, decision-making, and controlling through a study of recent relevant literature and selected cases. Prerequisite: MGRS 323 and senior standing.

461, 661 ADVANCED OPERATIONS MANAGEMENT (3 + 0) 3 credits
Theory and application to business systems of advanced quantitative decision models such as: linear programming and sensitivity analysis, network models and algorithms, dynamic programming, probabilistic-dynamic programming, integer programming, and computer simulation. Prerequisite: MGRS 352 and 362.

462, 662 BUSINESS AND SOCIETY (3 + 0) 3 credits
Social responsibilities of business executives; ethics; government relations; literature; role of the enterprise as subsystem of societal system; responsibilities to owners, work force, customers, suppliers, and government. Prerequisite: senior standing.

470, 670 INTERNATIONAL MARKETING (3 + 0) 3 credits
Marketing structure and policies employed in export and import trade. Consideration of legal, cultural, and economic factors in marketing abroad. Prerequisite: MGRS 310.

471, 671 MARKETING RESEARCH (3 + 0) 3 credits
Basic research techniques, survey techniques, sources of marketing information, criteria for evaluation of research studies, and practical experience in making marketing research studies. Prerequisite: MGRS 310, EC 262.

481, 681 INTERCOLLEGIATE BUSINESS GAMES (2 + 3) 3 credits
Business decision-making in a competitive environment involving policy-making; economic, sales and production forecasting; financial analysis; production scheduling; capital budgeting; marketing; research and development planning; pricing; advertising and inventory management. Prerequisite: MGRS 365.

482 INTERNSHIP (1 + 3 to 6) 2 to 3 credits S/U only
An internship with local firms, providing exposure to the real world environment in student's major. Prerequisite: senior standing.

488 POLICY FORMULATION AND ADMINISTRATION (3 + 0) 3 credits
Policy formulation and administration by top management. An overall view of company objectives, policies, organization, operation, and the coordination and integration thereof. Prerequisite: MGRS 310, 323, 352, 365 and senior standing.

489, 689 MARKETING MANAGEMENT (3 + 0) 3 credits
Application of marketing principles and methods to case problems in merchandising, distribution channels, brand policy, planning and administering sales programs, and the like. Prerequisite: MGRS 310, senior standing.

490 INDEPENDENT STUDY 1 to 3 credits
Study and research in business administration. Maximum of 6 credits.

491, 691 ADVANCED SEMINAR IN MANAGEMENT (3 + 0) 3 credits
Advanced study of selected topics in management. Maximum of 6 credits.

492, 692 ADVANCED SEMINAR IN MARKETING (3 + 0) 3 credits
Advanced study of selected topics in marketing. Maximum of 6 credits.

493, 693 ADVANCED SEMINAR IN FINANCE

(3 + 0) 3 credits

Advanced study of selected topics in finance. Maximum of 6 credits.

714 LEGAL ENVIRONMENT OF BUSINESS

(3 + 0) 3 credits

Nature and function of law, contracts and private property as basic concepts in free enterprise; the legal system and evolution of legal attitudes. (Satisfies requirement for M.B.A. first-year core.)

715 BUSINESS FINANCE (3 + 0) 3 credits

Managerial finance oriented from the decision-making viewpoint with emphasis on financial planning, investment decisions, sources of financing, capital structure, cost of capital, and dividend policy. (Satisfies requirement for M.B.A. first-year core.) Prerequisite: ACC 715.

716 ADVANCED MANAGEMENT (3 + 0) 3 credits

Evolution of management theory; efficiency school, classical school, human relations school. Two central forces influencing management thinking today: (1) behavioral school: motivation, leadership communication, group relationships, conflict; and (2) quantitative school: linear programming, dynamic programming, simulation, decision theory. (Satisfies requirements for M.B.A. first-year core.)

717 MARKETING ANALYSIS AND STRATEGIES

(3 + 0) 3 credits

Objectives and policies of marketing managers as influenced by marketing institutions, functions performed, and consumer wants and needs. (Satisfies requirement for M.B.A. first-year core.)

732 FINANCIAL MANAGEMENT (3 + 0) 3 credits

Analysis and discussion of case problems in the area of corporation finance; emphasis on the viewpoint of financial managers and top management. Topics include budgets, short-term and long-term planning, sources of capital, organization and legal aspects. Prerequisite: MGRS 365 or 715.

733 SEMINAR IN FINANCE (3 + 0) 3 credits

Advanced study of selected topics in finance. Prerequisite: graduate standing. Maximum of 6 credits.

741 SEMINAR IN RESEARCH METHODOLOGY

(3 + 0) 3 credits

Analysis of topics in the philosophy of scientific investigation, causality and predictability, theory of models, and measurement. Problems in designing, conducting, and reporting research.

742 ADVANCED MARKETING (3 + 0) 3 credits

Problem-solving and decision-making from the viewpoint of the marketing executive. Prerequisite: graduate standing, MGRS 310 or 717.

743 MARKETING SEMINAR (3 + 0) 3 credits

Contemporary trends and theory in marketing developed through reports and discussion.

752 SEMINAR IN GENERAL MANAGEMENT

(3 + 0) 3 credits

Analysis of the functions and problems of industrial managers with emphasis on underlying principles and analytical tools, via study of recent management and management science literature and individual research projects. Prerequisite: MGRS 716.

753 SEMINAR IN OPERATIONS MANAGEMENT

(3 + 0) 3 credits

Advanced topics in production management, operations

research, or quantitative methods applied to management problems.

758 BUSINESS POLICY (3 + 0) 3 credits

Integrating course with a general management point of view. Evaluation determination, implementation, and administration of policies of the business enterprise. Case studies with supporting readings. Prerequisite: second-year M.B.A.

793 INDEPENDENT STUDY 1-3 credits

Requires selection of topic, design of experimental approach, and derivation of specific conclusions. Maximum 6 credits.

797 THESIS 1 to 6 credits*Inactive Courses***345 INDUSTRIAL PURCHASING (3 + 0) 3 credits****361 RETAILING (3 + 0) 3 credits****387 WAGE AND SALARY ADMINISTRATION (3 + 0) 3 credits****427, 627 PROBLEMS IN LABOR RELATIONS AND****PERSONNEL ADMINISTRATION (3 + 0) 3 credits****477, 677 SEMINAR IN INSTITUTIONAL****MANAGEMENT (3 + 0) 3 credits****MATHEMATICS (MATH)***Each student is required to present to the Mathematics Department an ACT STANDARD MATHEMATICS SCORE and a copy of the Admission Evaluation form prior to the first registration. Students with previous college mathematics experience should contact the department chairman for proper placement before enrolling.***101 INTERMEDIATE ALGEBRA (2 + 0) 2 credits**

Second course in algebra for students who have had one year of algebra in high school. Prerequisite: 1 unit of high school algebra.

102 PLANE TRIGONOMETRY (2 + 0) 2 credits

Study of the trigonometric functions and their identities; solution of triangles. Prerequisite: plane geometry and either MATH 101 or 1½ units of high school algebra.

110 COLLEGE ALGEBRA (3 + 0) 3 credits

Relations, functions, graphing; equations; linear, quadratic, polynomial systems; matrices and determinants; sequences, mathematical induction, compound interest and amortization, binomial theorem; the complex numbers; logarithms; combinatorics. Designed as preparation for MATH 183, 265 or as a terminal course. Prerequisite: satisfactory score on qualifying examination or MATH 101.

140 ANALYTIC GEOMETRY (3 + 0) 3 credits

Coordinatization of the plane; linear, quadratic, polynomial, rational, exponential, and logarithmic functions; lines, slope, parallelism, perpendicularity; vectors; parabolas, ellipses, hyperbolas; translation and rotation; the complex numbers. Prerequisite: (1) satisfactory score in algebra on the qualifying examination; and (2) satisfactory score in trigonometry on the qualifying examination, or Math. 102, or concurrent registration in MATH 102.

173 ELEMENTARY SCHOOL MATHEMATICS I

(3 + 0) 3 credits

Mathematics needed by those teaching new-content mathematics courses at the elementary school level with emphasis on the structure of the real number system and its subsystems. Designed for students seeking a teaching certificate in elementary education. Open to others only with approval of department chairman.

174 ELEMENTARY SCHOOL MATHEMATICS II

(3 + 0) 3 credits

Continuation of MATH 173. Prerequisite: MATH 173.

183 INTRODUCTION TO COMPUTER SCIENCE

(2 + 2) 3 credits

Computer organization, algorithms, data representation, history, elementary machine language. Exposure to computer applications from word processing to numerical problems. Emphasis on structured programming using PASCAL. Prerequisite: MATH 110 or satisfactory score on qualifying examination.

200 DIRECTED STUDY 1 to 3 credits

Individual study conducted under the direction of a faculty member. Limited to 6 credits except under special circumstances.

201 MATHEMATICS FOR LIBERAL ARTS (2 + 0) 2 credits

A survey of important mathematical concepts illustrating the spirit of mathematics. Materials covered include topics from number theory, graph theory, topology and geometry. Prerequisite: 3 units of high school mathematics, MATH 110 or satisfactory score on qualifying examination.

213 CALCULUS FOR SCIENCE I (3 + 0) 3 credits

Calculus in the plane with emphasis on applications in the sciences, including curve sketching, optimization, related rates, and vectors in the plane. Prerequisite: two years of high school mathematics or equivalent and satisfactory score on qualifying examination or MATH 110.

215 CALCULUS I (4 + 0) 4 credits

Fundamental concepts of analytic geometry and calculus; functions, graphs, limits, derivatives, and integrals. Prerequisite: satisfactory score on qualifying examination and a course in plane trigonometry, or MATH 140 or equivalent; a student deficient in plane trigonometry must take MATH 102 prior to or concurrently with MATH 215.*

216 CALCULUS II (4 + 0) 4 credits

Continuation of MATH 215; transcendental functions, methods of integration, conics, vectors. Prerequisite: MATH 215.*

251 PROBABILITY AND STATISTICS (3 + 0) 3 credits

Finite probability, random variables, distributions, sampling theory, and hypotheses testing. Designed to show the dependence of statistical theory on probability. Prerequisite: MATH 110 or satisfactory score on qualifying examination.

265 ELEMENTS OF CALCULUS I (3 + 0) 3 credits

Fundamental ideas of analytic geometry and calculus, plane coordinates, graphs, functions, limits, derivatives, integrals, the fundamental theorem of calculus, rates, extrema, and the applications thereof. Prerequisite: two years of high school mathematics or equivalent and satisfactory score on qualifying examination or MATH 110.

283 COMPUTER MATHEMATICS (3 + 0) 3 credits

Structured program design using PASCAL. Applications drawn from elementary numerical methods, data structures, and non-numerical algorithms such as searching, sorting, and Polish notation conversion. Prerequisite: MATH 183.

301, 501 STUDIES IN THE HISTORY OF MATHEMATICS

(2 + 0) 2 credits

Survey of mathematical developments from ancient times to present. Emphasis on originators, origins, and consequences of significant mathematical contributions.

307 SYMBOLIC LOGIC (3 + 0) 3 credits

(See PHIL 326 for description.)

308, 508 INTRODUCTION TO FOUNDATIONS OF MATHEMATICS (3 + 0) 3 credits

Primitive terms, concepts, axioms, axiomatic method, proof, dependence, completeness, consistency, validity, models; set theory, cardinality, real numbers and other structures; formalism, intuitionism, cultural and scientific settings. Prerequisite: MATH 310, for those majoring in the physical sciences. (Same as PHIL 308.)

310 CALCULUS III (4 + 0) 4 credits

Continuation of MATH 216; *infinite series, three-dimensional calculus.* Prerequisite: MATH 216.

311, 511 MULTIVARIABLE CALCULUS (3 + 0) 3 credits

Mappings between Euclidean spaces, their differentials and partial derivatives; the chain rule; extremalization computations; line and surface integrals; the theorems of Gauss, Green, and Stokes. Prerequisite: MATH 310 and 330.

313 CALCULUS FOR SCIENCE II (3 + 0) 3 credits

Multivariable calculus, including partial differentiation, multiple integration, calculus of vector-valued functions, optimization of functions of several variables, and Lagrange multipliers. Prerequisite: one semester of calculus.

320 DIFFERENTIAL EQUATIONS (2 + 0) 2 credits

Scalar-valued differential equations; linear theory, differential operators, in-homogenous constant coefficient linear initial-value problems. Green's functions, Wronskians; non-linear first order initial-value problems. Prerequisite: MATH 310 or both MATH 216 and coregistration in MATH 310.

321, 521 DIFFERENTIAL AND DIFFERENCE**EQUATIONS I (3 + 0) 3 credits**

Vector-valued linear differential equations, power series solutions, asymptotic behavior; the Legendre, Euler, and Bessel equations; Sturm-Liouville eigenvalue problems; autonomous systems, stability; finite difference methods; introduction to second order partial differential equation boundary-value problems. Prerequisite: MATH 310 and 320.

330 MATRIX AND VECTOR ALGEBRA (3 + 0) 3 credits

Vector space structure of one-, two-, and three-dimensional Euclidean space; linear mappings, and their matrix representations; solution of systems of linear equations; the concepts of orthogonalization, rank, and diagonalization. Prerequisite: MATH 216.

331, 531 GROUPS, RINGS, AND FIELDS (3 + 0) 3 credits

Study of the elementary structure of groups, rings, and fields, including homomorphisms, automorphisms, normal subgroups, ideals and Galois theory. Prerequisite: MATH 310.

341, 541 METRIC TOPOLOGY (3 + 0) 3 credits

Topological structures induced by metrics; topological concepts versus metric concepts; continuity, compactness, local compactness, connectedness; boundedness, total boundedness, completeness, uniform continuity; separation and countability conditions. Prerequisite: MATH 310.

351, 551 STATISTICS (3 + 0) 3 credits

Estimation; choice of estimator, confidence intervals, stratified sampling. Hypothesis testing: power, comparative experiments, chi-square. Student's distribution and non-parametric methods. *Linear regression.* Prerequisite: MATH 251.

353, 553 PROBABILITY THEORY (3 + 0) 3 credits

Finite, discrete, and continuous probability spaces, random variables and their distributions, the law of large numbers, the central limit theorem. Prerequisite: MATH 251 and 310.

*A student whose current progress is unsatisfactory in the opinion of the instructor may be required to attend supervised study sessions.

371, 571 CONCEPTS OF SCHOOL MATHEMATICS I

(3 + 0) 3 credits

Theoretical development of the ideas underlying school mathematics. Emphasis on sets, algebra, and ordering. Designed for students seeking a teaching certificate. Open to others only with the approval of department chairman.

372, 572 CONCEPTS OF SCHOOL MATHEMATICS II

(3 + 0) 3 credits

Continuation of MATH 371. Emphasis on geometry mensuration, and coordinate systems. Prerequisite: MATH 371.

373, 573 FUNDAMENTALS OF SECONDARY SCHOOL MATHEMATICS (3 + 0) 3 credits

Axiomatic theory of the positive integers; elementary number theory, including induction, g.c.d., l.c.m., primes, the fundamental theorem of arithmetic. The elementary properties of rational and real numbers derived axiomatically. Emphasis on formulating and proving theorems.

374, 574 THE NUMBER SYSTEMS (3 + 0) 3 credits

Set theory; discussion of the natural numbers, integers, rational numbers, real numbers, and complex numbers from a constructive standpoint. Counting, decimal expansions, completeness of the real number system and its consequences, fundamental theorem of algebra. Prerequisite: MATH 215 and 373.

375, 575 FOUNDATIONS OF GEOMETRY (3 + 0) 3 credits

Elements of Euclidean, non-Euclidean, affine and projective geometries, and their interrelations. Prerequisite: MATH 215 and 373.

385, 585 COMPUTER PROGRAMMING AND ORGANIZATION (3 + 0) 3 credits

Computer structure, machine language, representation of data. Microprogramming and interpreters. Assembly systems, macrodefinition, programming techniques. Basic concepts of data structures, symbol tables, searching and sorting techniques. Prerequisite: MATH 183. (Same as E E 335, 535)

386, 586 COMPUTER PROGRAMMING LANGUAGES (3 + 0) 3 credits

Syntax and semantics of programming languages. Algorithmic simulation, list processing and string manipulation languages. Run-time representation of program and data structures. Formal specification of data structures. Prerequisite: MATH 385. (Same as E E 336, 536.)

387, 587 COMPUTER LOGIC AND ARCHITECTURE (3 + 0) 3 credits

(See E E 333 for description.)

400, 600 INDEPENDENT STUDY 1 to 3 credits

Library work and reports on topics of mathematical interest. Limited to 6 credits except under special circumstances.

401, 601 SET THEORY (3 + 0) 3 credits

Formalism, inference, axiomatic set theory, unicity, pairs, relations, functions, ordinals, recursive definition, maximality, well ordering, choice, regularity, equinumerosity, cardinal arithmetic.

410, 610 COMPLEX ANALYSIS (3 + 0) 3 credits

Complex numbers, analytic and harmonic functions. Cauchy-Reimann equations, complex integration, the Cauchy integral formula, elementary conformal mappings. Laurent series, calculus of residues. Prerequisite: MATH 311.

411, 611 REAL ANALYSIS (3 + 0) 3 credits

Continuity, monotonicity, differentiability; uniform convergence and continuity and differentiability; Stone-Wierstrass Theorem; multivariable functions, linear transformations, differentiation, inverse and implicit functions, Jaco-

bians and change of variable; Lebesgue measure and integration. Prerequisite: MATH 311, 341, and 330.

412, 612 FUNCTIONAL ANALYSIS (3 + 0) 3 credits

Normed vector spaces, Banach and Hilbert spaces, linear functionals and operators, the Hahn-Banach, closed graph, and uniform boundedness theorems with applications, dual spaces, self adjoint operators, compact operators. Prerequisite: MATH 311, 341, and 330.

419, 619 TOPICS IN ANALYSIS (1 + 0 per credit) 1-3 credits

Variable content chosen from such topics as differential forms, analytic functions, distribution theory, measure and integration, constructive analysis. Maximum of 6 credits.

422, 622 OPTIMAL ANALYSIS (3 + 0) 3 credits

Analysis of extrema of real-valued functions and functionals, with applications. Introduction to calculus of variations and optimal control. Prerequisite: MATH 311 and 321.

423, 623 DIFFERENTIAL AND DIFFERENCE EQUATIONS II (3 + 0) 3 credits

Partial differential equations; first order equations, initial and mixed boundary-value problems for the second order Laplace, heat, and wave equations; finite difference approximation. Prerequisite: MATH 311 and 321.

429, 629 TOPICS IN APPLIED ANALYSIS (1 + 0 per credit) 1-3 credits

Variable content chosen from such topics as: integral transforms, approximation of functions, nonlinear mathematics, stability theory. Maximum of 6 credits.

432, 632 LINEAR ALGEBRA (3 + 0) 3 credits

Vector space structure; linear mappings and their matrix representation; rank, determinants, eigenvalues and eigenvectors, diagonalization; scalar products and orthogonality. Prerequisite: MATH 330.

435, 635 COMBINATORICS (3 + 0) 3 credits

Graph theory and enumeration. Searching, arrangement, selection, and network flow problems. Emphasis on algorithms useful for computers. Prerequisite: MATH 330.

439, 639 TOPICS IN ALGEBRA (1 + 0) 1-3 credits

Variable content chosen from such topics as Galois theory, number theory, topological groups, combinatorial analysis, theory of graphs. Maximum of 6 credits.

441, 641 TOPOLOGY (3 + 0) 3 credits

Concepts of continuity, compactness, local compactness, and connectedness in a general topological setting; separation and countability conditions; product and quotient topologies; homotopy, the fundamental group and covering spaces. Prerequisite: MATH 341.

442, 642 DIFFERENTIAL GEOMETRY (3 + 0) 3 credits

Geometry of curves and surfaces in space; Frenet's formulas; Cartan's frame fields, Gaussian curvature; intrinsic geometry of surface; congruence of surfaces; the Gauss-Bonnet theorem. Prerequisite: MATH 311.

443, 643 DIFFERENTIAL GEOMETRY AND RELATIVITY I (3 + 0) 3 credits

Manifolds, the tangent bundle, differential forms, exterior differentiation, Lie differentiation, Koszul connections, curvature, torsion, Cartan's structural equations, integration of differential forms. Prerequisite: MATH 311 or equivalent.

444, 644 DIFFERENTIAL GEOMETRY AND RELATIVITY II (3 + 0) 3 credits

Spacetimes, the Fermi-Walker connection, reference frames, particles and particle flows, electromagnetic fields, stress-energy tensors, matter models, black holes, gravitational waves, cosmological models. Prerequisite: MATH 443.

449, 649 TOPICS IN GEOMETRY AND TOPOLOGY

(1 + 0 per credit) 1-3 credits

Variable content chosen from such topics as projective geometry, algebraic topology, convexity, topological vector spaces. Maximum of 6 credits.

453, 653 MATHEMATICAL STATISTICS (3 + 0) 3 credits

Univariate and multivariate normal distributions, point and interval estimation, tests of hypotheses including multivariate and nonparametric techniques. Prerequisite: MATH 353.

454, 654 APPLIED PROBABILITY THEORY (3 + 0) 3 credits

Introduction to stochastic processes, including random walks and Markov chains with applications. Prerequisite: MATH 353.

469, 669 MATHEMATICAL TOPICS IN THE BIOLOGICAL, MANAGEMENT, AND SOCIAL SCIENCES

(1 + 0) 1-3 credits

Variable content chosen from such topics as linear and integer programming, nonlinear programming, game theory, and optimization problems. Maximum of 6 credits.

480, 680 COMPUTER APPLICATIONS IN EDUCATION

(1 + 0 per credit) 1 to 3 credits

Microcomputer technology, computer science instruction, and computer based instruction in the classroom. Evaluation of software packages. Practical experience with microcomputer systems. Not applicable for mathematics majors. Prerequisite: MATH 173 or 174.

483, 683 NUMERICAL METHODS I (3 + 0) 3 credits

Numerical solution of linear systems, including linear programming; iterative solutions of non-linear equations; computation of eigenvalues and eigenvectors, matrix diagonalization. Prerequisite: MATH 330 or equivalent.

484, 684 NUMERICAL METHODS II (3 + 0) 3 credits

Numerical differentiation and integration; numerical solution of ordinary differential equations, two-point boundary value problems; difference methods for partial differential equations. Prerequisite: MATH 320 or equivalent.

485, 685 COMPUTER DATA STRUCTURES (3 + 0) 3 credits

Mathematical models and algorithms of data structures including sets, strings, lists, trees, digraphs. Illustration of the above topics by a nonnumerical language. Prerequisite: MATH 283, 385.

486, 686 PRINCIPLES OF COMPUTER OPERATING SYSTEMS (3 + 0) 3 credits

Overall structure of multiprogramming systems on multiprocessor hardware configurations. Addressing techniques, core management, file system design and management, system accounting, traffic control, interprocess communication, design of system modules. Prerequisite: MATH 386, 387. (Same as E E 436.)

487, 687 COMPUTER DATABASE MANAGEMENT SYSTEMS (3 + 0) 3 credits

An overview of existing systems; physical data organization; relational, network, and hierarchical models; data manipulation languages; data definition languages; database protection; database applications using INGRES. Prerequisite: MATH 386.

489, 689 TOPICS IN COMPUTER SCIENCE

(1 + 0) 1-3 credits

Variable content chosen from such topics as numerical methods of integration and of differential and integral equations, optimization, computability, applied formal systems. Maximum of 6 credits.

701-702 NUMERICAL ANALYSIS AND APPROXIMATION (3 + 0) 3 credits each

Norms of vectors and matrices, computation of eigenvalues and eigenvectors, matrix transformations, Weierstrass'; approximation theorem, Chebyshev polynomials, best and uniform approximation, splines, approximation in abstract spaces.

703 COMPUTABILITY AND COMPLEXITY (3 + 0) 3 credits

Turing machines, Markov algorithms, recursive functions, noncomputable functions, complexity of computation.

709 TOPICS ADVANCED COMPUTER SCIENCE

(3 + 0) 3 credits

(a) Compilers and translators, (b) software project management and development, (c) operating systems design and implementation, (d) discrete systems formulation. Includes practical applications. Maximum 12 credits - 3 in each topic. Prerequisite: MATH 486, 686 or equivalent.

713-714 ABSTRACT AND REAL ANALYSIS

(3 + 0) 3 credits each

Metric spaces, abstract measures, measurable functions, integration, product measures, Fubini Theorem, topological measures, Haar measure, differentiation. Radon-Nikodym Theorem, linear spaces, Hahn-Banach Theorem, Riesz Representation.

715-716 COMPLEX FUNCTION THEORY

(3 + 0) 3 credits each

Analytic functions, conformal mappings, Cauchy's theorem, power series, Laurent series, the Riemann mapping theorem, harmonic functions, subharmonic functions, canonical mappings of multiply connected regions, analytical continuation.

731-732 MODERN ALGEBRA (3 + 0) 3 credits each

Groups, fields, linear dependence, linear transformations, Galois theory.

741-742 TOPOLOGY (3 + 0) 3 credits each

Topological structures, uniform spaces, metric spaces, compact and locally compact spaces, connectivity, function spaces, topological algebra, elementary homological algebra, singular homology theory, cell complexes, homotopy groups.

751 MATHEMATICAL METHODS IN OPERATIONS RESEARCH I (3 + 0) 3 credits

Application of pertinent mathematical theories to deterministic models, including linear, nonlinear, dynamic and integer programming; duality theory; network analysis. Prerequisite: MATH 251, 311, 330.

752 MATHEMATICAL METHODS IN OPERATIONS RESEARCH II (3 + 0) 3 credits

Application of pertinent mathematical theories to probabilistic models, including queueing theory; inventory theory; reliability; decision analysis; simulation. Prerequisite: MATH 251, 311, 330.

753 STOCHASTIC MODELS (3 + 0) 3 credits

Stochastic models of system noise, Brownian motion, parameter estimation, and time series. Applications and mathematical characterizations of Gaussian, Poisson, Markov, and stationary random processes. Prerequisite: MATH 251, 311, 330.

780 TOPICS IN ADVANCED MATHEMATICS 1 to 3 credits

Probability, topology, statistics or other fields of mathematics at advanced level. Maximum of 9 credits.

793 INDEPENDENT STUDY 1 to 3 credits

Library work and reports on topics of mathematical interest. Limited to 6 credits except under special circumstances.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

797 THESIS 1 to 6 credits

Inactive Courses

163 INTRODUCTION TO PROBABILITY (2 + 0) 2 credits
210 MATHEMATICS OF FINANCE (3 + 0) 3 credits

MATHEMATICS—TECHNICAL (M T)

111 TECHNICAL MATHEMATICS I (5 + 0) 5 credits
Review of basic algebra, advanced algebra, and a complete course in trigonometry.

121 TECHNICAL MATHEMATICS II (3 + 0) 3 credits
Elements of analytic geometry and calculus with applications to technical problems.

MECHANICAL ENGINEERING (M E)

120 ENGINEERING ANALYSIS I - COMPUTERS
(2 + 2) 1 credit

Five week session covering introduction to Fortran programming and applications to problems. Corequisites for M E majors: M E 121, 122.

121 ENGINEERING ANALYSIS I - GRAPHICS
(2 + 2) 1 credit

Five week session covering introduction to engineering graphics, the principles of drafting, and orthographic projection. Corequisites for M E majors: M E 120, 122.

122 ENGINEERING ANALYSIS I - SHOP
(2 + 2) 1 credit

Five week session covering introduction to machine shop principles. Corequisites for M E majors: M E 120, 121.

130 ENGINEERING ANALYSIS II - COMPUTERS
(2 + 2) 1 credit

A continuation of M E 120 with lectures and laboratories emphasizing advanced computer programming. Prerequisite: M E 120. Corequisite for M E majors: M E 131, 132.

131 ENGINEERING ANALYSIS II - GRAPHICS
(2 + 2) 1 credit

A continuation of M E 121 with lectures and laboratories emphasizing advanced graphics. Prerequisite: M E 121. Corequisite for M E majors: M E 130, 132.

132 ENGINEERING ANALYSIS II - SHOP
(2 + 2) 1 credit

A continuation of M E 122 with lectures and laboratories emphasizing advanced machine processes. Prerequisite: M E 122. Corequisite for M E majors: M E 130, 131.

98, 298, 398, 498 COOPERATIVE TRAINING
REPORT (1 + 0) 1 credit

Preparation of written reports based on cooperative program assignments. Required of all students in cooperative programs during the summer or other semesters when on work assignments with cooperative program employers.

241 ANALYTIC MECHANICS FOR ENGINEERS I
(3 + 0) 3 credits

Study of static force systems. Topics include resolution and composition of forces, equilibrium of force systems, friction, centroids, moments of inertia, cables, beams, fluid statics, work. Corequisite: MATH 216, PHYS 201.

250 ENGINEERING ANALYSIS III (2 + 2) 3 credits
Continuation of M E 130, 131, and 132 with emphasis on principles of kinematics including velocity and acceleration polygons, cam design, gear trains and detailed drawing. Prerequisite: M E 130, 131, 132.

300 INTRODUCTION TO ENGINEERING
MATHEMATICS (2 + 0) 2 credits

Methods of solving ordinary differential equations are investigated and applied. Both mathematical formulation of physical problems and solution of the resulting differential equations are stressed. Prerequisite: MATH 310.

301 COMPUTER PROGRAMMING (2 + 3) 3 credits

Basic theory and techniques used in programming problems for the digital computer and micro-processor. Prerequisite: M E 300 and M E 130 or equivalent in programming experience.

342 ANALYTIC MECHANICS FOR ENGINEERS II
(3 + 0) 3 credits

Study of particles and rigid bodies in translation, rotation in planes and space, work and energy, impulse, momentum, impact, periodic motion. Prerequisite: M E 241.

343 DYNAMICS OF MACHINERY (2 + 0) 2 credits

Study of the dynamical behavior of machine elements and mechanisms, inertia forces on linkages, two degrees of freedom vibrations, gyroscopic effects, selected special problems. Prerequisite: M E 342.

371 THERMODYNAMICS I (3 + 0) 3 credits

Principles of engineering thermodynamics. A study of the first and second laws, entropy, ideal gases, and power cycles. Prerequisite: completion of physics requirements.

372 THERMODYNAMICS II (3 + 0) 3 credits

Continuation of M E 371 covering availability, nozzles, thermodynamics relations, combustion, and equilibrium. Prerequisite: M E 371.

391 INSTRUMENTATION (2 + 2) 3 credits

Theory and practice of instrumentation and experimentation including both static and dynamic measurement. Prerequisite: M E 342, Corequisite: C E 367.

402, 602 NUMERICAL METHODS IN ENGINEERING
(3 + 0) 3 credits

Numerical methods for curve fitting, differentiating, and integrating are introduced and applied to physical problems. Prerequisite: M E 300.

403, 603 PARTIAL DIFFERENTIAL EQUATIONS IN
ENGINEERING (3 + 0) 3 credits

Techniques of solving and application of partial differential equations are investigated. Bessel, Legendre, and Mathieu functions are introduced. Prerequisite: M E 300.

410, 610 INTRODUCTION TO SYSTEM CONTROL
(3 + 0) 3 credits

Mathematics of linear systems and their control. Prerequisite: M E 300, 342.

430, 630 MATERIALS (2 + 0) 2 credits

Properties of materials as they affect selection and design. Prerequisite: METE 350.

444, 644 SPACE MECHANICS (3 + 0) 3 credits

Reference frames, Euler Angles, orbital mechanics, mechanics of powered flight, satellite dynamics, and lunar trajectories. Prerequisite: M E 342.

445, 645 ADVANCED MECHANICS (3 + 0) 3 credits

Unsymmetrical bending, shear center, strain energy, complementary energy with applications, continuous elastically supported beams, beam columns, buckling of bars, electric resistance strain gauging. Prerequisite: C E 372.

451, 651 MECHANICAL DESIGN I (2 + 3) 3 credits

A study of materials and their properties; design of machine elements; principles and philosophy of good mechanical design. Prerequisite: C E 372.

452, 652 MECHANICAL DESIGN II (2 + 3) 3 credits

Continuation of M E 451 with more advanced integrated design problems on machines and systems. Consideration of functional, creative, economic, and optimum design. Prerequisite: M E 451.

453, 653 MECHANICAL VIBRATIONS (3 + 0) 3 credits

Theory of mechanical vibrations with applications to machinery. Includes critical speeds, torsional vibrations, isolation, damping, absorbers, uniform beams, etc. Lectures, experiments, problems. Prerequisite: M E 300, 342.

461, 661 HEAT TRANSFER (3 + 0) 3 credits

Study of the basic laws of heat transfer by conduction, convection, and radiation; the application of heat transfer principles to engineering problems. Analytical, numerical, and graphical solutions of problems are studied. Prerequisite: M E 371.

464 HEAT TRANSFER LAB (0 + 3) 1 credits

Laboratory covering conduction, convection, and radiation areas. Prerequisite or corequisite: M E 461.

471, 671 PRINCIPLES OF FLUID MACHINERY

(3 + 0) 3 credits

Development of the principles of momentum transfer and discussion of machines to utilize such transfer. Prerequisite: C E 367, M E 372.

472, 672 AIR CONDITIONING (2 + 0) 2 credits

Design of buildings and their heating and cooling systems for health and comfort with energy conservation, solar applications. Prerequisite: M E 371.

473, 673 REFRIGERATION (2 + 0) 2 credits

Principles of refrigeration, both normal temperature and cryogenic. Prerequisite: M E 372.

474 SOLAR ENGINEERING I (2 + 3) 3 credits

Nature and availability of solar energy. Technology of collection and use. Design construction and testing of solar collectors and systems. Prerequisite: M E 461.

477, 677 PASSIVE SOLAR ENGINEERING (2 + 3) 3 credits

The design of buildings which interact with climate and solar energy to maintain comfort conditions. Includes computer modeling. Prerequisite: M E 371, Corequisite: M E 461.

480, 680 GAS DYNAMICS I (3 + 0) 3 credits

Fundamentals of compressible flow; one dimensional flow, shock waves, area change, heat transfer, friction in subsonic and supersonic flow. Prerequisite: C E 367, M E 372.

481, 681 GAS DYNAMICS II (3 + 0) 3 credits

Continuation of M E 480, applications to ducts, nozzles, diffusers, wind tunnels, flow measurements; oblique shock waves, method of characteristics. Prerequisite: M E 480.

482, 682 AERODYNAMICS (3 + 0) 3 credits

Lift and drag characteristics of bodies and aerodynamics characteristics of the complete airplane. Prerequisite: M E 480.

492 SEMINAR IN ENGINEERING ECONOMY

(2 + 0) 2 credits

Instruction and individual studies in engineering economy with special application to mechanical engineering. Prerequisite: senior standing in engineering.

493 SENIOR LABORATORY (0 + 2) 1 credit

Projects related to courses. Prerequisite: senior standing in mechanical engineering.

494 PROJECTS LABORATORY (0 + 2) 1 credit

Group and/or individual projects related to student's area of concentration. Prerequisite: M E 493.

499 SPECIAL PROJECTS I, II 1 to 4 credits each

Study and/or experimentation in areas of special interest to

mechanical engineers. Maximum of 6 credits. Advance department approval is required.

700 MATHEMATICAL METHODS IN ENGINEERING

(3 + 0) 3 credits each

Use of advanced mathematical methods in solving engineering problems (a) General advanced mathematical methods, (b) operational methods, (c) numerical methods. Prerequisite: M E 300.

740 DYNAMIC ANALYSIS IN ENGINEERING

(3 + 0) 3 credits each

(a) Kinematics and kinetics of rigid bodies, central force motion, Lagrange's equations. (b) matrix methods in vibrations, continuum vibrations. Single degree of freedom systems with nonlinear characteristics. These courses are sequential.

750 ADVANCED MACHINE DESIGN (1 + 6) 3 credits each

(a) Creative design of machines and systems, including advanced analysis and synthesis, (b) continuation of 750a with emphasis on theory and application of photoelastic strain analysis. Prerequisite: M E 452.

760 HEAT TRANSFER (3 + 0) 3 credits each

Advanced study of steady-state, transient, and periodic problems of heat transfer using analytical, graphical, and numerical methods. (a) Conduction, (b) convection. Prerequisite: M E 461, M E 700a. (May be taken concurrently with M E 700a)

770 ADVANCED PROBLEMS IN THERMODYNAMICS

(3 + 0) 3 credits each

Introduction to the statistical thermodynamics of the pure component and of mixtures. An introduction to the kinetic theory of gases, the thermodynamics of irreversible phenomena. (a) Classical thermodynamics. (b) statistical thermodynamics. Prerequisite: M E 372 and M E 700a.

780 MECHANICS AND THERMODYNAMICS OF FLUID

FLOW (3 + 0) 3 credits each

Systematic development of laws of mechanics and thermodynamics as applied to problems of fluid flow to include two-dimensional steady and unsteady flow. Eulerian equations of motion, compressible flow, and boundary layer theory. (a) mechanics of ideal fluids, (b) mechanics of real fluids. Prerequisite: M E 480 and 700a.

791 SPECIAL TOPICS 1 to 4 credits

Literature search and analytical study of special problems. Maximum of 6 credits.

792 SPECIAL PROBLEMS 1 to 4 credits

Study and experimentation in areas of special interest.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only**797 THESIS 1 to 6 credits****799 DISSERTATION 1 to 24 credits***Inactive Courses***100 PRODUCTION PROCESSES I (0 + 6) 2 credits****200 PRODUCTION ENGINEERING (1 + 3) 2 credits****462, 662 SPECIAL TOPICS IN HEAT TRANSFER**

(2 + 0) 2 credits

475, 675 POWER SYSTEM DESIGN (1 + 3) 2 credits**476, 676 COMBUSTION POWER (2 + 0) 2 credits****483, 683 PROPULSION SYSTEMS (3 + 0) 3 credits****710 CONTROL SYSTEM DESIGN AND ANALYSIS**

(3 + 0) 3 credits

720 HUMAN ENGINEERING (3 + 0) 3 credits**721 ENGINEERING STATISTICS (3 + 0) 3 credits**

MECHANICAL ENGINEERING TECHNOLOGY (MET)

Inactive Courses

- 112 TECHNICAL DRAFTING (1 + 6) 3 credits
 114 INTRODUCTION TO TECHNOLOGY (3 + 0) 3 credits
 123 TECHNICAL DRAFTING II (1 + 6) 3 credits
 251 GRAPHIC ANALYSIS (1 + 3) 2 credits
 252 ELEMENTARY THERMODYNAMICS AND HEAT TRANSFER (3 + 0) 3 credits
 253 MACHINE LAYOUT AND GRAPHICAL ANALYSIS (1 + 6) 3 credits
 256 ELEMENTARY FLUID FLOW (2 + 0) 2 credits
 257 DYNAMICS (3 + 0) 3 credits
 261 MACHINE DRAFTING DESIGN I (1 + 6) 3 credits
 262 AIR CONDITIONING, HEATING AND VENTILATION (3 + 3) 4 credits
 263 POWER AND TRANSMISSION SYSTEMS (3 + 0) 3 credits
 265 MACHINE DRAFTING-DESIGN II (1 + 6) 3 credits
 267 MANUFACTURING PROCESSES (2 + 0) 2 credits
 268 MACHINERY DYNAMICS
 269 ELECTRICAL DRAFTING DESIGN (1 + 6) 3 credits

MEDICAL TECHNOLOGY (MEDT)

- 111 MEDICAL TERMINOLOGY (1 + 0) 1 credit
 A self-learning approach to terminology used in the medical professions. Emphasis on understanding of word roots and building vocabulary.
- 301 BIOMETRY (1 + 0 per credit) 1 or 2 credits
 Discussion on quality control and biostatistical principles useful to health professionals. A nontheoretical approach to descriptive and inferential techniques for solving and illustrating statistical problems. Prerequisite: MATH 110.
- 311 HEMATOLOGY, CLINICAL MICROSCOPY & BODY FLUIDS (3 + 0) 3 credits
 Structure and function of blood, coagulation mechanism, and pathogenesis of diseases affecting blood and bone marrow, renal microanatomy, morphology of urine sediment and other body fluids, and disease correlation. Prerequisites: BIOL 262, 263. Corequisite: MEDT 312.
- 312 HEMATOLOGY, CLINICAL MICROSCOPY & BODY FLUIDS LAB (0 + 6) 2 credits
 The coagulation mechanism, enumerative procedures, cellular morphology, and microscopic analysis of urinary sediment and body fluids by clinical laboratory techniques. Corequisite: MEDT 311.
- 21 IMMUNOHEMATOLOGY (2 + 0) 2 credits
 Immunologic principles as applied to human blood group systems. Criteria for donor selection and the use of blood and blood components in therapy are presented. Prerequisites: BIOL 101, 303. Corequisite: MEDT 322.
- 322 IMMUNOHEMATOLOGY LABORATORY (0 + 3) 1 credit
 Laboratory techniques used in blood grouping, antibody identification, and compatibility testing as applied to clinical diagnosis and therapy. Corequisite: MEDT 321.
- 331 CLINICAL MICROBIOLOGY I (3 + 0) 3 credits
 Characteristics, transmission, and medical significance of pathogenic bacteria isolated from humans to include evaluation of culture results. Prerequisite: BIOL 306. Corequisite: MEDT 332.

332 CLINICAL MICROBIOLOGY I LABORATORY

(0 + 6) 2 credits

Normal flora and pathogenic bacteria found in human specimens are studied, isolated, and identified by clinical laboratory techniques. Corequisite: MEDT 331.

333 CLINICAL MICROBIOLOGY II (3 + 0) 3 credits

Characteristics, transmission, and medical significance of fungi, parasites, higher bacteria, and viruses isolated from human specimens. Prerequisite: BIOL 306. Corequisite: MEDT 334.

334 CLINICAL MICROBIOLOGY II LABORATORY

(0 + 6) 2 credits

Fungi, parasites, higher bacteria, and viruses are studied and identified by clinical laboratory techniques. Corequisite: MEDT 333.

390 INDEPENDENT STUDY 1 to 3 credits

Individualized in-depth study of a specific area of medical technology, e.g. clinical chemistry, hematology, immunology, immunohematology, microbiology, urinalysis, laboratory administration, and education. Maximum of 6 credits.

411 ADVANCED HEMATOLOGY (1 + 0) 1 credit

Advanced study of hemoglobinopathies, cell morphology in disease, hemorrhagic and thrombotic disorders, leukocyte and erythrocyte cytochemistry, and cytogenetics. Prerequisites: MEDT 412.

412 ADVANCED HEMATOLOGY LABORATORY

(0 + 3) 1 credit

Specialized hematologic procedures applied to diagnosis of blood dyscrasias, genetic studies, and hemostatic disorders. Corequisite: MEDT 411.

421 CLINICAL CHEMISTRY I (3 + 0) 3 credits

Fundamental principles of electronics and instrumentation. Critical examination of metabolism and correlation with methodology and clinical significance for carbohydrates, proteins, nonprotein nitrogen compounds and vitamins. Prerequisite: PHYS 151, 152; BIOL 262, 263; CHEM 101, 102, 243, 244, 330; B CH 302; and MEDT 301. Corequisite: MEDT 422.

422 CLINICAL CHEMISTRY I LABORATORY

(0 + 6) 2 credits

Qualitative and quantitative analysis of blood, urine and body fluids with emphasis on manual methods, instrumentation and quality control. Corequisite: MEDT 421.

423 CLINICAL CHEMISTRY II (3 + 0) 3 credits

Biophysiological regulation, methodology, and clinical significance of electrolytes, enzymes, lipids, hormones and drugs in blood, urine and body fluids. Prerequisite: MEDT 421 and 422. Corequisite: MEDT 424.

424 CLINICAL CHEMISTRY II LABORATORY

(0 + 3) 1 credit

Qualitative and quantitative analysis of blood gases and pH, titrations, enzyme kinetics and toxicological techniques. Corequisite: MEDT 423.

431, 631 IMMUNOLOGY (3 + 0) 3 credits

Principles of cellular and humoral mechanism of immunity including host-parasite interrelationships, antibody structure and function, hypersensitivity, tolerance, transplantation, immunity, and diseases of immune origins. Prerequisite or corequisite: B CH 302 and knowledge of basic immunologic principles.

432, 632 SEROLOGY LABORATORY (0 + 3) 1 credit

Practical application of fundamentals in cellular and humoral immunity using laboratory techniques commonly performed in detection of disease states. Corequisite: MEDT 431.

441 PATHOPHYSIOLOGY FOR MEDICAL TECHNOLOGISTS (1 + 3) 2 credits

Correlation of clinical laboratory results with disease mechanisms. Literature review and seminar presentations of specified disease syndromes. For medical technology majors in the pre-clinical semester.

451 CLINICAL PRACTICUM

(1 + 3 per credit) 3 or 12 credits. *S/U only.*

Supervised clinical experience in all hospital laboratory departments: clinical chemistry, clinical microbiology, hematology, immunology, and urinalysis and body fluids. 26 weeks work experience, including elective, with emphasis on interpretation of laboratory results and clinical correlation. Prerequisites: MEDT 301, 311, 312, 321, 322, 331, 332, 333, 334, 411, 412, 421, 422, 423, 424, 431, 432 and 441. For Med Tech majors only.

490 INDEPENDENT STUDY 1 to 3 credits

Individualized in-depth study of a specific area of medical technology, e.g. clinical chemistry, hematology, immunology, immunohematology, microbiology, urinalysis, laboratory administration and education. Maximum of 6 credits.

METALLURGICAL ENGINEERING (METE)**101 INDUSTRY ORIENTATION LECTURES**

(1 + 0) 1 credit

(See MINE 101 for description.)

102 INTRODUCTION TO METALLURGICAL AND CHEMICAL PROCESSES (2 + 0) 2 credits

(See CH E 102 for description.)

151 INTRODUCTION TO MATERIALS (3 + 0) 3 credits

Basic concepts of material science. Structure and properties of all solid materials. Testing and processing of materials.

203 SURVEY OF EXTRACTION METALLURGY

(3 + 0) 3 credits

Overall view of the art and science of extraction metallurgy including the concentration of ores, the extraction of metals from ores, the refining of metals, and environmental implications of these processes.

232 PRINCIPLES OF METALLURGICAL AND CHEMICAL ENGINEERING (3 + 0) 3 credits

Scientific bases for process engineering stoichiometry, gas behavior combustion and mass and energy balances. Problem solving is emphasized. Field trip. Corequisite: MATH 215. (Same as CH E 232.)

301 CHEMICAL OR METALLURGICAL INDUSTRY SEMINAR 1 credit

(See CH E 301 for description.)

311 METALLURGICAL ANALYSIS (0 + 3) 1 credit

Special methods not ordinarily included in chemical analysis as applied to metallurgical products.

322 MINERAL PROCESSING I (3 + 3) 4 credits

Principles and practices of mineral preparation and concentration. Field trip. Prerequisite: GEOL 211.

332 UNIT PROCESSES OF CHEMICAL METALLURGY I (3 + 0) 3 credits

Quantitative and descriptive treatment of the unit processes used in the recovery and refining of metals by high temperature methods. Field trip.

350 ELEMENTS OF MATERIALS SCIENCE

(3 + 0 or 3) 3 or 4 credits

Study of the internal structure of materials, the dependence of properties upon these structures, and the behavior of materials in service.

416, 616 X-RAY METALLOGRAPHY (2 + 3) 3 credits

Generation and properties of X-rays; radiography; diffraction techniques; structure determination; spectroscopy and microscopy.

421, 621 MINERAL PROCESSING II (3 + 0) 3 credits

Continuation of Met.E. 322 with emphasis on flotation. Prerequisite: CHEM 353.

423, 623 SURFACE CHEMISTRY OF MINERALS

(3 + 0) 3 credits

Thermodynamics of surfaces, electrostatic and electrokinetic phenomena, adsorption at interfaces, and properties of monolayers as applied to processing of minerals. Prerequisite: CHEM 354.

425, 625 HYDROMETALLURGICAL REACTIONS

(3 + 0) 3 credits

Systematic treatment embracing dissolution of minerals, leaching, precipitation, and complex formation in aqueous systems. Prerequisite: CHEM 354.

431, 631 UNIT PROCESSES OF CHEMICAL METALLURGY II (3 + 0 or 3) 3 or 4 credits

Continuation of METE 332, covering low-temperature unit processes such as leaching, precipitation, electrolysis, and both liquid and resin ion exchange. Laboratory exercises for illustrations. Field trip. Prerequisite: METE 332. Laboratory optional.

433-434, 633-634 ADVANCED METALLURGY

1 to 4 credits each

Advanced studies in mineral dressing or chemical metallurgy (including laboratory investigations.)

451, 651 PHYSICAL METALLURGY (2 + 3) 3 credits

Supplementary and advanced treatment of topics introduced in METE 350.

462, 662 THERMODYNAMICS OF IRREVERSIBLE PROCESSES (3 + 0) 3 credits

Thermodynamic treatment of irreversible metallurgical, chemical, and electrochemical processes, transport processes, coupling phenomena, etc. Prerequisite: Ch E 361 or M E 371 and CHEM 353. (Same as CH E 462.)

482 METALLURGICAL ENGINEERING DESIGN

(1 + 6) 3 credits

(See CH E 482 for description.)

495, 695 SPECIAL PROBLEMS 1 to 3 credits

Individual research problems in metallurgy. Maximum of 6 credits.

701-702 ADVANCED METALLURGY 1 to 5 credits each

(a) General metallurgy, (b) metallurgical analysis, (c) mineral dressing, (d) pyrometallurgy, (e) hydrometallurgy, (f) electro-metallurgy, (g) nonferrous metallurgy, (h) ferrous metallurgy, (j) physical metallurgy, (k) metallography, (m) heat treatment, (n) mechanical metallurgy, (p) history of metallurgy. These courses consist of either lectures, periodic conferences, supervised reading, laboratory or field work. May be elected more than once to pursue different studies.

762 STATISTICAL THERMODYNAMICS (3 + 0) 3 credits

Introduction to statistical thermodynamics with applications to metallurgy and chemical engineering. Prerequisite: CH E 361.

790 MINERAL INDUSTRY SEMINAR 1 to 3 credits
Review and discussion by staff members and graduate students of individual research or important new publications concerning the mineral industry and related sciences. Maximum of 6 credits. Prerequisite: graduate or faculty standing. (Same as GEOL 790 and MINE 790.)

795 COMPREHENSIVE EXAMINATION
0 credit *S/U only*

797 THESIS 1 to 6 credits

Inactive Courses

441, 641 **METALLURGY OF REACTIVE METALS**
(2 + 0) 2 credits

452, 652 **INTRODUCTION TO THE STRUCTURE AND PROPERTIES OF SOLIDS** (3 + 0) 3 credits

715 **X-RAY DIFFRACTION** (1 + 6) 3 credits

738 **METALLURGY OF REFRACTORY METALS**
(2 + 0) 2 credits

751 **PHYSICS OF METALS** (3 + 0) 3 credits

752 **MAGNETIC PROPERTIES OF SOLIDS** (3 + 0) 3 credits

MICROBIOLOGY (MICR)

401 MEDICAL MICROBIOLOGY (7 + 6) 9 credits
Fundamental concepts of immunochemistry, cellular immunology, clinical immunology, medical bacteriology, virology, medical mycology and parasitology as they apply to medicine and infectious diseases.

482, 682 MEDICAL BACTERIOLOGY (2 + 3) 3 credits
Cellular and molecular mechanisms of bacterial pathogenesis. Prerequisite: BIOL 306-506 or B CH 301-501 or equivalent.

483, 683 MEDICAL MYCOLOGY (1 + 6) 3 credits
Application of mycological techniques to clinical specimens in the identification of disease-causing fungi. Prerequisite: BIOL 306-506 or B CH 301-501 or equivalent.

484, 684 MEDICAL VIROLOGY (2 + 3) 3 credits
Systematic treatment of the major groups of viruses involved in human disease. Emphasis on principles of virus pathogenesis, replication, culture and laboratory identification. Prerequisite: CHEM 104 or equivalent.

485, 685 EXPERIMENTAL IMMUNOCHEMISTRY
(1 + 3) 2 credits
Emphases encompass the qualitative and quantitative methods for measurement of immunoglobulins. Both *in vivo* and *in vitro* methods of antigen and antibody interaction are considered. Prerequisite: B CH 301-501 or equivalent.

486, 686 CELLULAR IMMUNOLOGY (1 + 3) 2 credits
Mechanisms of antigen processing and antigen stimulation at the cellular levels. Prerequisite: B CH 301-501 or equivalent.

487, 687 PROBLEMS IN INFECTION AND IMMUNITY
(1 + 0 per credit) 1 to 3 credits
Research and/or seminar-oriented elective in either bacteriology, immunology, mycology, or virology.

490 INDEPENDENT STUDY 1 to 3 credits

MILITARY SCIENCE (MIL)

101 INTRODUCTION TO MILITARY SCIENCE
(2 + 0) 2 credits
The mission, organization, and function of the Armed Services; the role of the military in relation to national objectives and security; the evolution of weapons and warfare.

102 BASIC LEADERSHIP AND ORGANIZATION
(2 + 0) 2 credits
Study of the fundamentals of good leadership to include different theories; fundamental organization and operation of the Army.

201 MILITARY TOPOGRAPHY AND ORIENTEERING
(2 + 0) 2 credits
Study of the proper use and appreciation of military maps, photos, and compasses and the development of orienteering skills to include cross-country navigation over unfamiliar terrain.

202 STUDY OF THE ART OF WAR (2 + 0) 2 credits
An analysis of the art of warfare, reviewing the doctrine and philosophy of Clausewitz, Jomini, Sun Tzu, Moltke. A review of U.S. military history from 1776 to the present.

203 BASIC TOPICS IN LEADERSHIP SKILLS
(1 or 2 + 0) 1 or 2 credits
Presentation of basic military leadership skills in such areas as land navigation, first aid, desert survival, winter survival, and marksmanship. May be repeated to a maximum of 4 credits provided different subject areas are studied for each period of enrollment. Corequisite: MIL 102, 201 or 202.

204 BASIC SUMMER CAMP 2 credits
A six-week camp designed to substitute for the first two years of ROTC. Includes map reading, national security, military history, and various other military subjects. Course conducted at a military reservation designated by the Army.

301 LEADERSHIP IN SMALL UNIT OPERATIONS
(3 + 0) 3 credits
Introduction to the principles and techniques of combat tactics and management at the platoon level. Emphasis is placed on considered factors in the decision-making process; techniques of command and control of troops; introduction to the missions, roles, and contributions of the several branches of the Army. Prerequisite: completion of basic program.

302 ADVANCED LEADERSHIP DEVELOPMENT
(3 + 0) 3 credits
Enhances student understanding of the planning and coordinating steps in the decision-making process and the principles and techniques of command, control, and management at all levels. Emphasizes clarity of written and oral expression and the need for deliberate analysis of problems to produce logical solutions. Prerequisite: completion of basic program.

303 ADVANCED SUMMER CAMP 2 credits
Advanced cadets spend six weeks at an Army installation to learn practical skills in tactics, field living, leadership, weaponry, technical military equipment, military customs and traditions, physical fitness, confidence building, and personnel management. Prerequisite: MIL 301 and 302.

304 ADVANCED TOPICS IN LEADERSHIP
(1 or 2 + 0) 1 or 2 credits
Includes student research and presentation of leadership styles, leadership characteristics, staff procedures, planning, and organization. May be repeated to a maximum of 4 credits provided different subject areas are studied for each period of enrollment.

401 SEMINAR ON THEORY AND DYNAMICS OF THE MILITARY TEAM (3 + 0) 3 credits
Explores core values governing officer behavior; the concepts for military organizations; the theory of military organizations; and tactical employment of forces emphasizing company-sized operations. Prerequisite: completion of basic program.

402 SEMINAR IN LEADERSHIP AND MANAGEMENT

(3 + 0) 3 credits

Stresses administrative and logical matters which confront the commander at platoon and company levels. Introduction to principles of personnel, fiscal, and supply management, and the philosophy and purpose of military law. Prerequisite: completion of basic program.

MINING ENGINEERING (MINE)**A. MINERAL INDUSTRY EMPLOYMENT 0 credits**

Work for a mining company at least one summer vacation and prepare an acceptable report on the experience. Required for Mining Engineering majors.

101 INTRODUCTION TO MINING (1 + 0) 1 credit

Introduction to techniques, practices and problems in modern mining. Field trip required.

102 MINERAL MAP MAKING (1 + 3) 2 credits

Introduction to the basic principles of modern drawing and cartography as used in mineral engineering reports.

210 MINING METHODS (3 + 0) 3 credits

Introduction to mining systems with emphasis on methods, equipment and terminology of surface and underground mine operations. Prerequisite: MINE 101, 102 or equivalent.

213 COMPUTER PROGRAMMING (1 + 3) 2 credits

Development of procedures to solve numerical and non-numerical earth science problems by digital computer, using flow charts and FORTRAN IV.

301 COAL MINING (2 + 0) 2 credits

Geology of coal, its constitution and uses. Underground and surface mining of coal including mining methods and equipment. Prerequisite: MINE 241 and 246.

310, 510 MATERIALS HANDLING (3 + 0) 3 credits

Design and evaluation of materials handling systems in surface and underground mines. Hoisting, conveyors, track and rubber-tired haulage, load-haul systems. Prerequisite: M E 241, 342, MINE 210.

324 COMPUTER APPLICATIONS (1 + 3 or 6) 2 or 3 credits

Use of digital computers in the earth sciences, with emphasis on developing student's ability to use computers in industry or research. Field trip required. Prerequisite: MINE 213.

343 APPLIED MINE SURVEYING (0 + 6) 2 credits

Surface and underground surveying techniques in exploration and mining operations. A charge is made for field expenses. Prerequisite: MINE 342.

344, 544 MINE ENVIRONMENTAL CONTROL

(2 + 3) 3 credits

Theory and practice of creating safe, healthy, and efficient working environments underground. Mine ventilation techniques. Prerequisite: M E 371, C E 367.

351, 551 MINING LAW (2 + 0) 2 credits

U.S. and foreign, Federal and State laws affecting the mineral industry and pertaining to mineral land acquisition, corporations, ethics, mining, taxation, water, environment, labor, safety, and welfare.

361, 561 OPERATIONS RESEARCH METHOD

(3 + 0) 3 credits

Introduction to the theory of Operations Research and its application in the mining industry. Prerequisite: AG 270 or equivalent.

400 MINING COMMUNICATION (1 + 0) 1 credit

Study of written and verbal skills in engineering and management communication. Video taped technical talk given to class. Report required on senior field trip. Prerequisite: senior standing.

406 SENIOR REPORT 1 to 3 credits

Formal, comprehensive report on a subject approved by the student's adviser and department chairman. Prerequisite: senior standing.

411, 611 MINE ECONOMICS (2 + 0) 2 credits

Introduction to management accounting principles, balance sheet and income statement, depreciation, depletion and cash flow. Financial evaluation using present value theory, equipment evaluation and replacement. Risk and sensitivity analysis. Prerequisite: MINE 210, 310; AG 270; MINE 361 or equivalent.

413, 613 MINERAL INVENTORY ESTIMATION

(2 + 0) 2 credits

Principles of sampling and the study of the major methods for mineral reserve estimation including polygonal, inverse distance squared and geostatistical. Grade tonnage curves for normal and log normal distribution. Variograms and kriging of mineral reserves. Prerequisite: MINE 213, AG 270 or equivalent.

418, 618 MINE FEASIBILITY (1 + 3) 2 credits

Data, techniques, and layout required for a formal mine feasibility report to be prepared on a given mineral deposit. Prerequisite: MINE 411, 413.

425, 625 MINE POWER AND DRAINAGE

(3 + 0) 3 credits

Electrical and compressed air power in the design of underground mining and mine water drainage systems. Prerequisite: C E 367, M E 371, E E 212, 291.

445, 645 DRILLING AND BLASTING (3 + 0) 3 credits

Current theory and practice in drilling and blasting. Prerequisite: MINE 448.

446, 646 THEORY OF EXPLOSIVES (2 + 3) 3 credits

Thermodynamic theory and the blasting action of explosives.

448, 648 ROCK MECHANICS I (2 + 3) 3 credits

Uniaxial and triaxial stress-strain analysis and structural analysis of rocks in the design of underground openings. Prerequisite: M E 241, GEOL 332.

449, 649 ROCK MECHANICS II (2 + 3) 3 credits

Application of Rock Mechanics in underground and open-pit mining. Includes excavation, rock burst, and slope stability. Prerequisite: MINE 448, 648.

454, 654 MINING AND SURFACE ENVIRONMENT

(2 + 0) 2 credits

Effects of mining, milling, and smelting on the surface environment, and their control to allow maximum conservation and minimum waste of natural resources. Field trip.

472, 672 WORLD MINERAL ECONOMICS (3 + 0) 3 credits

Minerals in World Affairs. Interdependence of nations on minerals and the economic and political problems caused by their unequal geographic distribution and divided political control. (Same as GEOG 462).

495, 695 SPECIAL PROBLEMS 1 to 3 credits each

Individual research problems in mining engineering. Maximum of 6 credits.

701-702 ADVANCED MINING ENGINEERING

1 to 5 credits

(a) General mining, (b) excavation, (c) drilling, (d) blasting, (e) equipment, (f) transportation, (g) design, (h) surface

mining, (j) underground mining, (k) safety, (m) ventilation, (n) mining economics, (p) mine administration, (r) mining law, (s) mineral economics, (t) history of mining, (u) mineral explorations, (v) rock mechanics, (w) mining conservation, (x) nonmetallic mining. These courses consist of either lectures, periodic conferences, supervised reading, laboratory or fieldwork. May be elected more than once to pursue different studies.

729 ADVANCED COMPUTER APPLICATIONS

1 to 3 credits

Study of computer systems, languages, and economics. Major individual earth science project on computer. Prerequisite: MINE 213 or 324.

745 ADVANCED ROCK MECHANICS (2 + 3) 3 credits

Field and laboratory studies of applied rock mechanics. Prerequisite: MINE 448, 449.

749 ADVANCED BLASTING METHODS DESIGN

1 to 3 credits

Modern theories in the use of explosives and the design of blasting systems. Prerequisite: MINE 446.

790 MINERAL INDUSTRY SEMINAR 1 to 3 credits

Review and discussion by staff members and graduate students of individual research or important new publications concerning the mineral industry and related sciences. Maximum of 6 credits. Prerequisite: graduate or faculty standing. (Same as GEOL 790 and METE 790).

795 COMPREHENSIVE EXAMINATION 0 credit *S/U only*

797 THESIS 1 to 6 credits

Inactive Courses

316 STATISTICAL ANALYSIS IN THE EARTH SCIENCES

(2 + 0) 2 credits

342 MINE SURVEYING (0 + 3) 1 credit

405 SENIOR REPORT 1 to 3 credits

482, 682 ECONOMICS OF THE BASE METALS

(3 + 0) 3 credits

MUSIC (MUS)

INDIVIDUAL INSTRUCTION: Special fee of \$75.00 per half hour lesson.

Prerequisite: Any UNR student may be accepted for private applied music study, on the basis of ability and space available. Students receive one-half period individual applied lesson for one credit and one full period lesson for two, three or four credits. One hour of daily preparation is required for each credit. A maximum of eight credits of applied instruction at each level may be applied to the B.A. A maximum of four credits of applied instruction in the major area at the 700 level may apply toward a Graduate degree.

Each student registered for undergraduate applied lessons is required to participate in an appropriate major ensemble and attend a weekly master class in the performing area. A maximum of 13 credits earned through participation in any and all authorized ensembles is allowed any student toward graduation.

Students enrolled for private instruction should consult the *Music Department Faculty/Student Handbook* for information on entrance auditions and jury examinations. An individual audition is required for all upper division individual instruction.

101 MUSIC FUNDAMENTALS AND EAR TRAINING

(3 + 0) 3 credits

Notation, terminology, intervals, and scales. Learning to read music. Designed to furnish a foundation for musicianship and recommended for teachers in public schools.

102 SOLFEGE (SOLFEGGIO) (2 + 0) 2 credits

Course devoted to developing and mastering sight-reading as a tool for the vocal student and classroom teacher.

103 CLASS BRASS INSTRUCTION (2 + 0) 2 credits

Fundamental instruction in each of the instruments and in class teaching procedures. Simple selections, employing various keys and rhythms.

104 CLASS WOODWIND INSTRUCTION (2 + 0) 2 credits

Fundamental instruction in each of the instruments and in class teaching procedures. Simple selections, employing various keys and rhythms.

106, 206, 306 PEP BAND (0 + 3) 1 credit

A performing group for university events.

111, 311 CONCERT CHOIR (0 + 3) 1 credit each

Study and performance of representative choral music of all periods. Assists in the presentations of the symphonic choir and is featured in local concerts and on tour. Corequisite: MUS 119 or 319. Maximum of 4 credits each.

113 CLASS VOCAL INSTRUCTION (1 + 0) 1 credit

Fundamentals of tone production, breath control, and practical techniques involved in reading and interpreting songs. Maximum of 4 credits.

117, 317 UNIVERSITY BAND (0 + 3) 1 credit each

Fall semester, Marching Band, performing at football games. Spring semester, Concert Band (by audition); Pep Band, performing at basketball games. Prerequisite: previous band experience. Maximum of 4 credits each.

119, 319 SYMPHONIC CHOIR (0 + 3) 1 credit each

Study and presentation of large-scale choral works. Maximum of 4 credits each.

121 MUSIC APPRECIATION (3 + 0) 3 credits

Historical and cultural background of music. A general course in music appreciation open to all students. Representative works are heard and analyzed.

123 CLASS STRING INSTRUCTION (2 + 0) 2 credits

Elementary instruction in violin, viola, cello, and bass.

124 CLASS PERCUSSION INSTRUCTION (2 + 0) 2 credits

Elementary instruction in the various percussion instruments.

125, 325 UNIVERSITY ORCHESTRA

(0 + 3) 1 credit each

One or more concerts of representative orchestra literature are given each semester. Maximum of 4 credits each.

151, 351, 751 PIANO

(½ or 1 + 0) 1 to 4 credits each

Maximum of 16 lower division credits, 16 upper division credits, 4 graduate credits.

153, 353, 753 VOICE (½ or 1 + 0) 1 to 3 credits each

MUS 218 is a corequisite for MUS 153 for students enrolling for 3 credits. Maximum of 12 lower division credits, 16 upper division credits, 4 graduate credits.

155, 355, 755 BRASS INSTRUMENTS

(½ or 1 + 0) 1 to 4 credits each

Maximum of 16 lower division credits, 16 upper division credits, 4 graduate credits.

157, 357, 757 WOODWIND INSTRUMENTS

(½ or 1 + 0) 1 to 4 credits each

Maximum of 16 lower division credits, 16 upper division credits, 4 graduate credits.

159, 359, 759 STRINGS

(½ or 1+0) 1 to 4 credits each

Maximum of 16 lower division credits, 16 upper division credits, 4 graduate credits.

161, 361, 761 PERCUSSION

(½ or 1+0) 1 to 4 credits each

Maximum of 16 lower division credits, 16 upper division credits, 4 graduate credits.

163, 363, 763 ORGAN

(½ or 1+0) 1 to 4 credits each

Maximum of 16 lower division credits, 16 upper division credits, 4 graduate credits.

181 BEGINNING CLASS PIANO INSTRUCTION I

(0 + 2) 1 credit

For students with limited or no keyboard experience.

182 BEGINNING CLASS PIANO INSTRUCTION II

(0 + 2) 1 credit

For students with limited or no keyboard experience. Prerequisite: MUS 181.

201-202 MUSIC HISTORY (3 + 0) 3 credits each

Chronological study of the composers and their works, using lecture demonstration and directed listening. Begins with Greek music and continues through contemporary music.

205, 405, 605 UNIVERSITY CHAMBER MUSIC ENSEMBLE

(0 + 2) 1 credit each

Performance of chamber music literature. Prerequisite: membership in corresponding large group. For example, stage band members must audition and participate in marching and symphonic band. Each number may be repeated to a maximum of 4 credits.

207-208 THEORY I-II (3 + 0) 3 credits

Music theory by means of harmony (written and keyboard). 207 is prerequisite for 208.

209-210 SIGHTSINGING AND DICTATION I

(0 + 2) 1 credit each

Solfege and dictation, rhythmic and melodic.

215, 415, 615 BRASS QUINTET (0 + 2) 1 credit

Performing ensemble specializing in brass quintet literature. Maximum of 4 credits each.

218 VOCAL REPERTORY COACHING (1 + 0) 1 credit

Study and performance of simpler songs from the Italian, English, French, and German art song literature. Study of singing diction practices in the above languages. Open to vocalists and pianists. Maximum of 4 credits.

220, 420, 620 BRASS ENSEMBLE (0 + 2) 1 credit

A performance organization specializing in brass ensemble literature from the Renaissance to the present. Maximum of 4 credits each.

221 SPECIAL STUDIES IN MUSIC LITERATURE

(2 or 3 + 0) 2 or 3 credits

Special topics to include: Jazz in America; the Classical Style; the American Musical Theatre. May be repeated to a maximum of 6 credits.

230, 430, 630 UNR CONCERT JAZZ BAND (0 + 2) 1 credit

A performing ensemble specializing in jazz and rock literature and performance practices. Maximum of 4 credits each.

270 OPERA THEATRE I (0 + 2) 1 credit

Beginning music theatre techniques for singers, pianist-coaches, stage directors, including production and performance. Maximum of 4 credits.

281 ELEMENTARY CLASS PIANO INSTRUCTION I

(0 + 2) 1 credit

For students with minimal keyboard experience or as a continuation of MUS 181, 182.

282 ELEMENTARY CLASS PIANO INSTRUCTION II

(0 + 2) 1 credit

For students with minimal keyboard experience or as a continuation of MUS 281.

301-302 ADVANCED HARMONY (3 + 0) 3 credits each

Continuation of MUS 207-208, including study of diatonic and chromatic harmony and counterpoint. Prerequisite: MUS 207-208 or equivalent.

303 KEYBOARD HARMONY (2 + 0) 2 credits

Keyboard approach to the study of chords, the realization of figured basses, and the harmonization of melodies and basses. Designed for piano and organ majors.

307-308 SIGHTSINGING AND DICTATION II (0 + 2) 1 credit

Advanced solfege and dictation, rhythmic and melodic. Prerequisite: MUS 210.

310 ORCHESTRATION (3 + 0) 3 credits

Arranging music for full orchestra, band and chorus. Transposition, voicing, transcriptions from piano score. Prerequisite: MUS 301, 302.

321 CHORAL CONDUCTING (2 + 0) 2 credits

Skill in adapting standard conducting patterns to musical interpretation of representative choral music. Practical leadership experience may be gained by directing the University Singers.

322 INSTRUMENTAL CONDUCTING (2 + 0) 2 credits

Technique of the baton and score reading. Practical leadership experience may be gained by directing the band, orchestra, or ensembles.

324 TEACHING OF ELEMENTARY MUSIC (2 + 0) 2 credits

For the elementary teachers who teach their own music. Methods of presenting rote songs to primary grades and note songs and singing games, listening to music, rhythmic expression or creative effort, and the use of rhythm instruments. Prerequisite: MUS 101 or equivalent.

337 STAGE BAND ARRANGING (2 + 0) 2 credits

Study and analysis of the jazz harmonic idiom as applied to the instrumentation of the modern dance orchestra in which arrangements are written and played. Prerequisite: MUS 207-208.

349 TEACHING OF SECONDARY MUSIC (2 + 0) 2 credits

Organization of public school bands and choruses, techniques and problems of teaching music in junior and senior high schools. Prerequisite: MUS 101, 113, and active participation in University Band or University Singers. (Same as C I 349.)

350 KEYBOARD LITERATURE (2 + 0) 2 credits

Literature for harpsichord, organ, and piano, with particular reference to the historical and musical characteristics of the works. Recordings and student performances are utilized. Prerequisite: functional keyboard reading ability.

401 ADVANCED STAGE BAND ARRANGING

(2 + 0) 2 credits

Further study and analysis of materials and techniques developed in MUS 337. Writing and performance of arrangements on professional level are required. Prerequisite: MUS 337 or equivalent.

403 COUNTERPOINT (3 + 0) 3 credits

Counterpoint in the five species, creative application of strict

and free counterpoint based upon models of the eighteenth and twentieth centuries. Prerequisite: MUS 207-208.

406, 606 PERFORMANCE PRACTICE (2 + 0) 2 credits
Performance practices of various eras and effect on presentation of representative works during the present and in their own time. May be repeated up to 6 credits. Prerequisite: MUS 201-202.

407, 607 SYMPHONIC LITERATURE (2 + 0) 2 credits
Detailed study and analysis of the development of the symphony. Prerequisite: MUS 201-202.

408 FORM AND ANALYSIS (3 + 0) 3 credits
Analysis of song forms, variations, rondo, and sonata forms. Prerequisite: MUS 301-302.

409-410, 609-610 COMPOSITION (2 + 0) 2 credits each
Original writing in the smaller forms for a variety of media, with preparation for and presentation in public performance. Prerequisite: MUS 301-302.

414, 614 CHORAL LITERATURE (2 + 0) 2 credits
History and analysis of representative choral works from 1600 to the present. Prerequisite: MUS 201-202.

418 INTERMEDIATE VOCAL REPERTORY COACHING (1 + 0) 1 credit
Study and performance of more difficult art song literature including major song cycles of Schubert, Brahms, Wolf, etc. Also study and performance of art songs of other national schools such as Russian, Spanish, etc. Open to vocalists and pianists. Prerequisite: MUS 218.

422, 622 MUSIC OF TODAY (2 + 0) 2 credits
Recent trends in music and their relationship with the past. Analysis of special harmonic, melodic, and structural features of twentieth century music. Prerequisite: MUS 201-202.

423, 623 CHAMBER MUSIC LITERATURE (2 + 0) 2 credits
Music written for small groups in Baroque, Classical, nineteenth century, and twentieth century periods. Prerequisite: MUS 201-202.

424, 624 AMERICAN MUSIC (2 + 0) 2 credits
Detailed examination of the music of the United States from the Revolutionary War to the present. Prerequisite: MUS 201-202.

426, 626 VOCAL LITERATURE (2 + 0) 2 credits
Solo and chamber vocal music from the Renaissance to the present. Prerequisite: MUS 201-202.

427 MARCHING BAND PROBLEMS (2 + 0) 2 credits
Organization, development and rehearsal techniques used in the marching band, including pageantry and precision drill. Prerequisite: prior experience and approval of instructor.

428, 628 OPERA LITERATURE (2 + 0) 2 credits
Detailed consideration of selected operas of the various nationalities and periods in music history. Prerequisite: MUS 201-202.

447, 647 DIRECTORS' WORKSHOP (1 + 0) 1 credit
Scheduled during Tahoe Music Camp; designed to use band, choral, and orchestral groups for demonstration. Special attention to new repertoire, program planning, and supervised conducting. Individual conferences are scheduled with guest and resident music camp faculty. Maximum of 3 credits.

448, 648 ADVANCED BAND ADMINISTRATION AND RELATED PROBLEMS (2 + 0) 2 credits
Organizing the program, administering the physical plant and equipment, establishing favorable teacher-pupil relations, directing the musical program, and reviewing recent developments in the field. Prerequisite: teaching experience or exceptional background in the area.

449, 649 CHORUS PROBLEMS (2 + 0) 2 credits
Demonstration and lecture on aspects of vocal technique and organization involved in directing high school and college choruses.

450, 650 PIANO MATERIALS AND METHODS (2 + 0) 2 credits
Mechanics of piano teaching; technical and pedagogical literature, typical problems and solutions, the historical development of piano pedagogy.

470 OPERA THEATRE II 1 to 3 credits
More advanced music theatre techniques, including major roles for singers in UNR Opera Theater productions and one-act opera projects for directors and pianist-coaches. Maximum of 8 credits.

483, 683 PIANO SEMINAR (0 + 2) 1 credit
Special problems in performance, literature, and pedagogy. Maximum of 4 credits.

484, 684 WORKSHOP/CONFERENCE IN MUSIC (0 + 2) 1 to 3 credits
Topics in music and music education. Maximum of 6 credits

495, 695 INDEPENDENT STUDY 1 to 2 credits
Open to students specializing in music. Maximum of 4 credits.

705 ADVANCED OPERA PERFORMANCE 1 or 2 credits
Performance of major roles in University Opera productions. Maximum of 4 credits.

709-710 CONTEMPORARY THEORY AND PRACTICE (3 + 0) 3 credits each
Advanced harmonic practice and contemporary analytical procedures concentrating on music since 1900. Prerequisite: MUS 301-302. MUS 709 is required of all graduate music majors.

711 ADVANCED CHORAL PERFORMANCE (0 + 3) 1 credit
Study and performance of representative choral music of all periods, including major choral works. Appearance in concerts locally and on tour required, as well as work beyond ensemble participation, such as that of assistant conductor, section leader, or soloist. Maximum of 4 credits.

717 ADVANCED INSTRUMENTAL PERFORMANCE (0 + 3) 1 credit
Study, rehearsal, and performance of orchestral and band music. Includes responsibilities as section leader and assistant conductor. Prerequisite: prior college orchestra or band experience and superior ability as a performer. Maximum of 4 credits.

718 ADVANCED VOCAL REPERTORY COACHING (2 + 0) 2 credits
Study and performance of art song literature of all styles and periods. Emphasis on performance of complete cycles and on contemporary song literature. Open to vocalists and pianists. Maximum of 4 credits.

721 ADVANCED CHORAL CONDUCTING (2 + 0) 2 credits
Continued study of skills required for effective direction of choral groups. Prerequisite: MUS 321 or equivalent. Maximum of 4 credits.

722 ADVANCED INSTRUMENTAL CONDUCTING (2 + 0) 2 credits
Advanced techniques of instrumental conducting. The techniques of interpretation and study of band and orchestra scores. Prerequisite: MUS 322 or equivalent. Maximum of 4 credits.

730 INTRODUCTION TO GRADUATE STUDY (2 + 0) 2 credits
Bibliography and research methods in music; required of all graduate music majors.

731 ADVANCED MUSIC HISTORY (3 + 0) 3 credits
Intensive study of western music from the Medieval, Renaissance, and Baroque periods; required of all graduate music majors. Prerequisite: MUS 201-202.

732 ADVANCED MUSIC HISTORY (3 + 0) 3 credits
Intensive study of western music from the Classical, Romantic and Modern periods; required of all graduate music majors. Prerequisite: MUS 201-202.

740 MUSIC EDUCATION RESEARCH MATERIALS & TECHNIQUES (3 + 0) 3 credits
Introduction to music education research literature, techniques, interpretation of research findings, research design in descriptive, experimental, and philosophical studies; use of computer searches. Prerequisite: MUS 349.

741 NEW DEVELOPMENTS IN MUSIC EDUCATION (3 + 0) 3 credits
Study of significant new directions in elementary and secondary music curricula; impact of Orff, Kodaly, Suzuki, and other arts education approaches. Prerequisite: MUS 349.

749 SECONDARY INSTRUMENT OR VOICE (½ + 0) 1 credit
Individual instruction. Maximum of 2 credits.

790 SEMINAR IN MUSIC 1 to 3 credits
Special problems in music history or theory with their professional implications. Maximum of 6 credits.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

796 PROFESSIONAL PAPER 3 credits
For master of music (Plan B) students.

797 THESIS 1 to 6 credits
(a) Research, master of arts, (b) performance, master of music. With approval of the student's committee a professional paper may meet 2 of the 6 performance credits.

Inactive Courses

- 348 ADVANCED INSTRUMENTAL TECHNIQUES (2 + 0) 2 credits**
446 PRECISION DRILL WORKSHOP (1 + 3) 1 credit
700-701 ADVANCED COMPOSITION (2 + 0) 2 credits each
702 THE AESTHETICS AND PHILOSOPHY OF MUSIC (2 + 0) 2 credits
715 STUDIES IN ELIZABETHAN AND TUDOR MUSIC (2 + 0) 2 credits
724 PHILOSOPHY OF MUSIC EDUCATION (2 + 0) 2 credits

NURSING (NURS)

300 SPECIAL TOPICS IN NURSING 1 to 3 credits S/U only
Selected topics in nursing, may be chosen from one or more of the following: a) Adult Nursing, b) Maternal-Child Nursing, c) Psychiatric/Mental Health Nursing, d) Issues in Nursing, e) Foundations of Nursing, f) Levels of Health Care Needs. 1 credit for each topic may be earned for a maximum of 6 credits, but these credits may not be applied toward a nursing degree at UNR. Open to graduate nurses needing content in special areas but who are not candidates for an undergraduate nursing degree.

301 HEALTH ASSESSMENT (2 + 3) 1 to 3 credits
Theory of and practice in nursing assessment skills required to provide primary health care.

302 SKILLS AND SELF-LEARNING LABORATORY (0 + 3 per credit) 1 to 2 credits S/U only
Principles, practice, and implementation of technical skills congruent with care of infants, developing families, maternal-newborn, children, and adolescents. Prerequisite: NURS 301.

314 NURSING THEORY I (1 to 5 + 0) 1 to 5 credits
Nursing process applied to health assessment of individuals/families. Principles and concepts of nursing, behavioral and natural sciences provide basis for content. Prerequisite: approval for progression to upper-division nursing. May be taken concurrent with or prior to NURS 315.

315 NURSING PRACTICE I (0 + 3 per credit) 1 to 6 credits
Application of the nursing process in the health assessment of clients/families in a variety of primary care settings. The clinical practicum for Nursing Theory I. Prerequisite: approval for progression to upper division nursing; NURS 314 completed or taken concurrently.

324 FOUNDATIONS OF NURSING (1 + 0 per credit) 1 or 2 credits
Core concepts derived from applied sciences utilized in professional nursing. Prerequisite: NURS 301, 314, 315.

325 NURSING THEORY II (1 + 0 per credit) 1 to 3 credits
Nursing process applied to the care of developing families; maternal-newborn, infants, children, adolescents. Prerequisite: NURS 301, 314, 315.

326 NURSING PRACTICE II (0 + 3 per credit) 1 to 6 credits
Application of the nursing process as it relates to the care of mothers and newborns, infants, children, adolescents. Correlated clinical practicum of Nursing Theory II. Prerequisite: NURS 301, 314, 315, 325. 325 may be taken concurrently.

391 INDEPENDENT STUDY 1 to 6 credits
Opportunity for students to master areas of knowledge through independent organization and assimilation of materials under guidance of faculty advisers.

401 SKILLS AND SELF-LEARNING LABORATORY (0 + 3 per credit) 1 or 2 credits S/U only
Principles, practice, and implementation of technical skills necessary for providing care to the acutely ill adult. Prerequisite: NURS 301, 314, 315.

402 SKILLS AND SELF-LEARNING LABORATORY (0 + 3 per credit) 1 or 2 credits S/U only
Development and practice of nursing skills necessary to implement tertiary care with patients/clients; development of nursing leadership. Prerequisite: senior standing.

414 ISSUES IN NURSING (1 + 0 per credit) 1 or 2 credits
Core concepts utilized in health care delivery. Prerequisite: NURS 301, 314, 315.

415 NURSING THEORY III (1 + 0 per credit) 1 to 3 credits
Examination of the nursing process as it relates to the care of the acutely ill adult and his family. Prerequisite: NURS 301, 314, 315.

416 NURSING PRACTICE III (0 + 3 per credit) 1 to 6 credits
Application of the nursing process as it relates to the secondary health care needs of adults and their families. Correlated clinical practicum with Nursing Theory III. Prerequisite: NURS 301, 314; 315, 415. 415 may be taken concurrently.

424 NURSING THEORY IV (1 + 0 per credit) 1 to 5 credits
Focus on nursing process as applied to nursing management of the chronically ill client/family, and for groups of clients/families. Prerequisite: Senior standing.

425 NURSING PRACTICE IV (0 + 3 per credit) 1 to 6 credits
Application of the nursing process in the nursing management of clients/families with tertiary health care needs in a variety of settings. Includes nursing leadership experience in a clinical practice area of interest. Prerequisite: Senior standing, NURS 424 completed (or may be taken concurrently).

444 FUNDAMENTALS OF NURSING RESEARCH

(2 + 3) 3 credits

Research methodology with specific emphasis on its application to nursing practice, trends, and current issues. Prerequisite: completion of junior year nursing sequence, statistics completed or taken concurrently.

490, 690 SPECIAL PROBLEMS AND PRACTICES IN NURSING 1 to 6 credits

Laboratory or investigative group work in areas not specifically provided for in other courses. Maximum of 6 credits.

491 INDEPENDENT STUDY 1 to 6 credits

(See NURS 391-392 for description.)

700 HEALTH CARE DELIVERY SYSTEMS (3 + 0) 3 credits

Current systems for health care delivery. Nursing functions and relationships with other health professionals and consumers in such systems.

701 ROLE OF THE NURSE ADMINISTRATOR

(3 + 0) 3 credits

Functions of the nurse administrator in any health care organization are analyzed and appraised for predicted application. Prerequisite: NURS 700.

702 PRACTICUM: NURSING LEADERSHIP IN HEALTH CARE ORGANIZATION (1 + 6) 3 credits

Identification and testing of a theory of organization within a health care setting. Analysis and discussion of questions and problems generated during field testing. Prerequisite: NURS 700, 701.

703 TEACHING OF NURSING (3 + 0) 3 credits

Curriculum theory and development as applied to nursing education. Teaching strategies are explored for relevancy to curriculum implementation. Evaluation process is studied. Prerequisite: NURS 700, 710, 790.

704 PRACTICUM: TEACHING OF NURSING

(1 + 6) 3 credits

Clinical and classroom teaching experience in a baccalaureate or associate degree program in nursing. Evaluation as an inherent component of the teaching-learning process is addressed. Prerequisite: NURS 703, 711.

705 ADVANCED PSYCHOPHYSIOLOGIC NURSING

(3 + 0) 3 credits

The holistic concept in family nursing.

710 ADVANCED NURSING PRACTICE I (2 + 9) 5 credits

Introduction to role of family nurse clinician. Theory and interdisciplinary clinical practice in the delivery of primary health care to the family as a unit. Prerequisite or corequisite: NURS 700, 790.

711 ADVANCED NURSING PRACTICE II (2 + 9) 5 credits

Study of the nursing process as it relates to the delivery of tertiary health care for individuals and families. Skill development through clinical practicum. Prerequisite: NURS 710.

720 NURSING RESEARCH (2 + 3) 3 credits

Overview of research process applied to nursing. Identification and delineation of researchable problems, selection of appropriate methodology, data collection, analysis, and reporting.

791 SPECIAL TOPICS 1-3 credits

Guided literature review and analysis.

793 INDEPENDENT STUDY 1-6 credits

Independent research or project in an area of special interest.

794 COLLOQUIA 3 credits

Discussion of advanced selected topics by students and faculty.

795 COMPREHENSIVE EXAMINATION 0 credit *S/U only***796 PROFESSIONAL PAPER** 2 credits

Required of all students who wish to complete a master of science degree in nursing under Plan B.

797 THESIS 1 to 6 credits

Required of all students who wish to complete a master of science degree in nursing under Plan A.

798 INTERNSHIP OR INSERVICE TRAINING

(0 + 9) 3 credits

Advanced clinical practice with an assigned preceptor. Required for clinician option.

OBSTETRICS AND GYNECOLOGY (OBY)**451 CLERKSHIP** (1 + 21) 8 credits

Hospital and ambulatory clinical experience with preceptorial supervision, lectures, seminars, and self-instruction programs to develop knowledge (practical, theoretical, basic science), technical and interpersonal skills basic to practicing obstetrics and gynecology.

461 ADVANCED CLINICAL EXPERIENCES

(0 + 96) 2 to 32 credits

Selected practical experiences with patients, with faculty advisement and supervision.

490 INDEPENDENT STUDY 1 to 3 credits**OFFICE ADMINISTRATION (O A)****101 ELEMENTARY TYPEWRITING** (1 + 2) 2 credits

Keyboard presentation. Touch system of operation. Skill development, speed building, business letters.

102 INTERMEDIATE TYPEWRITING (1 + 2) 2 credits

Skill development. Emphasis on production typing. Business letters, manuscript, tabulation, business forms. Prerequisite: O A 101 or ability to type thirty words per minute.

103 ADVANCED TYPEWRITING (1 + 2) 2 credits

Skill development. Specialized office typewriting problems. Prerequisite: O A 102 or equivalent.

111 ELEMENTARY STENOGRAPHY (3 + 0) 3 credits

Fundamentals of shorthand theory. Emphasis on fluency in reading, writing, transcribing and vocabulary development. Prerequisite: Training in typewriting is recommended.

112 INTERMEDIATE STENOGRAPHY (3 + 0) 3 credits

Theory, review, speed development, dictation. Prerequisite: O A 111 or equivalent.

202 BUSINESS MACHINES (3 + 0) 3 credits

Theory of solving basic business mathematical problems by means of machine operation.

211 ADVANCED STENOGRAPHY (3 + 0) 3 credits

Speed dictation and transcription with stress on fluency and accuracy. Prerequisite: O A 112 or the ability to write from dictation at not less than sixty words per minute.

212 ADVANCED STENOGRAPHY (3 + 0) 3 credits

Rapid dictation and transcription. Prerequisite: O A 211 or the ability to write from dictation at not less than eighty words per minute.

300 OFFICE ORGANIZATION AND MANAGEMENT

(3 + 0) 3 credits

Scientific management principles applicable to office organization.

302 SECRETARIAL PROCEDURES (3 + 0) 3 credits
 Secretarial duties and responsibilities on the administrative level, including theory and practice. Prerequisite: O A 102 or equivalent.

404, 604 BUSINESS COMMUNICATIONS 3 credits
 Problems and processes of business communication, verbal and nonverbal, and the conventions of business writing.

425 METHODS AND MATERIALS IN TEACHING BUSINESS EDUCATION SUBJECTS (3 + 0) 3 credits
 Learning processes and their applications to the teaching of business subjects. Techniques and media for effective teaching of skill and nonskill areas. (Same as C I 425.)

490, 690 INDEPENDENT STUDY 1 to 3 credits
 Independent study in selected topics. Maximum of 6 credits.

Inactive Courses

793 INDEPENDENT STUDY 1 to 3 credits

LABORATORY MEDICINE AND PATHOLOGY (PATH)

401 GENERAL HUMAN PATHOLOGY (3 + 3) 4 credits
 Basic pathology including reactions to disease, i.e., inflammation, repair, neoplasia, circulatory disturbances, cytogenetics, and forensic principles, demonstrated by gross and microscopic laboratory exercises. Prerequisite: ANAT 401 and PHSY 401.

402 SYSTEMIC HUMAN PATHOLOGY (4 + 6) 6 credits
 General pathophysiological principles applied to diseases of organ systems. Laboratory consists of seminars, autopsies, CPC's and in-depth study of gross and microscopic appearances of diseased organs. Prerequisite: PATH 401.

403 LABORATORY MEDICINE (3 + 3) 4 credits
 Theory and practical applications for ordering and interpreting laboratory tests. Special emphasis on clinical chemistry and microbiology. Involves performing certain simple laboratory tests.

472, 672 MEDICAL PHOTOGRAPHY AND PHOTOMICROGRAPHY (2 + 3) 3 credits
 Application of sophisticated macroscopic and microscopic photographic techniques and methods to depict normal and abnormal gross and microscopic features. Primarily for medical students.

490 INDEPENDENT STUDY 4 credits
 Research in subject of interest to pathology with approval of departmental committee. Medical students only. May be repeated to a maximum of 8 credits.

PEDIATRICS (PEDI)

451 CLERKSHIP (1 + 21) 8 credits
 Hospital and ambulatory clinical experience with preceptorial supervision to develop knowledge (practical, theoretical, basic science), technical and interpersonal skills basic to practicing pediatrics.

461 ADVANCED CLINICAL EXPERIENCES (0 + 96) 2 to 32 credits
 Selected practical experiences with patients, with faculty advisement and supervision.

490 INDEPENDENT STUDY 1 to 3 credits

491 CARE OF THE HANDICAPPED CHILD (3 + 25) 2 credits

Participation in the care of children with handicapping conditions for one week in July at Camp Galilee in Glenbrook, Nevada. For any student enrolled in the School of Medicine.

PHARMACOLOGY (PHAR)

301 GENERAL PHARMACOLOGY (3 + 0) 3 credits
 Introduction to the study and science of pharmacology. Biological effects on living systems of chemical substances. Includes terminology, metabolism, effects and side effects. Prerequisite: CHEM 101 and a beginning biology course.

401 MEDICAL PHARMACOLOGY I (6 + 3) 7 credits
 Principles, mechanisms of action, therapeutic indications, contraindications, side-effects and toxic manifestations of pharmacological agents. Prerequisite: B CH 401 and PHYS 402 or equivalent.

402 MEDICAL PHARMACOLOGY II (3 + 3) 4 credits
 Principles, mechanisms of action, therapeutic indications, contraindications, side-effects and toxic manifestations of pharmacological agents. Prerequisite: PHAR 401.

492 PROBLEMS IN CLINICAL PHARMACOLOGY AND THERAPEUTICS (1 + 0 per credit) 1 to 3 credits
 Discussion and literature search of therapeutic problems in specific case histories; indications and contraindications of drug therapy in relation to basic pharmacologic properties; expected beneficial results, possible side effects, adverse reactions, and drug interactions.

495, 695 SEMINAR (1 + 0) 1 credit
 Presentation on special topics in pharmacology. May be repeated to a maximum of 2 credits.

497, 697 SELECTED TOPICS (1 to 3 + 0) 1 to 3 credits
 Emphasizes current literature of pharmacologic interest. May be repeated to a maximum of 6 credits. Prerequisite: background course in pharmacology.

498, 698 INDEPENDENT STUDY (1 to 3 + 0) 1 to 3 credits
 Library research in selected topics of pharmacology and discussions with the faculty. May include preparation and submission of paper. May be repeated to a maximum of 6 credits.

499, 699 DIRECTED RESEARCH (0 + 3 per credit) 1 to 3 credits
 Guided research in any of the areas of mutual interest to the student and faculty. May be repeated to a maximum of 6 credits.

711 PRINCIPLES OF PHARMACOLOGY (4 + 0) 4 credits
 Principles of drug action in animals and man, and an overview of the entire field of pharmacology. It is intended to prepare majors for advanced courses or to familiarize non-majors with the major classes of drugs and their proposed mechanism of action. Prerequisite: B CH 301, 302, and BIOL 385, 386 or equivalent.

PHILOSOPHY (PHIL)

100 CRITICAL THINKING AND REASONING (3 + 0) 3 credits

Nonsymbolic introduction to logical thinking in everyday life, law, politics, science, advertising; common fallacies; the uses of language, including techniques of persuasion.

110 INTRODUCTION TO PHILOSOPHY (3 + 0) 3 credits
Basic problems in different areas of philosophy such as ethics, political theory, metaphysics, and epistemology.

112 WORLD RELIGIONS (3 + 0) 3 credits
Main moral and religious doctrines of Hinduism, Buddhism, Confucianism, Taoism, Islam, Judaism, and Christianity.

114 INTRODUCTION TO SYMBOLIC LOGIC (3 + 0) 3 credits
A study of principles of correct reasoning, using modern symbolic techniques of the propositional calculus and simple quantification theory.

125 INTRODUCTION TO ETHICAL THEORY (3 + 0) 3 credits
Representative classical ethical theories, e.g., Aristotle, Hume, Kant, utilitarianism, emotive ethics.

130 INTRODUCTION TO METAPHYSICS (3 + 0) 3 credits
Selected problems concerning human nature and reality, e.g., the mind-body problem, freedom and determinism, the existence of God, space and time.

202 INTRODUCTION TO THE PHILOSOPHY OF THE ARTS (3 + 0) 3 credits
Topics include aesthetic standards, artistic creativity, and the nature of art and its role in society.

203 INTRODUCTION TO EXISTENTIALISM (3 + 0) 3 credits
Readings from Kierkegaard, Nietzsche, Jaspers, Sartre, Heidegger. An examination of the existentialist concepts "being" and "nonbeing," "estrangement," "dread," "anxiety," and "freedom."

207 INTRODUCTION TO SOCIAL AND POLITICAL PHILOSOPHY (3 + 0) 3 credits
Theories concerning the nature of society and political structure. Readings from classical and contemporary philosophers.

211 ANCIENT PHILOSOPHY (3 + 0) 3 credits
Major figures in history of philosophy from the pre-Socratics through the early medieval thinkers.

213 MODERN PHILOSOPHY (3 + 0) 3 credits
Philosophy from the Renaissance through the eighteenth century. Readings from Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant.

224 INTRODUCTION TO PHILOSOPHY OF SCIENCE (3 + 0) 3 credits
Study of philosophical problems and implications of scientific inquiry, such as the nature of laws, theories, explanations, scientific revolutions, limits of knowledge, space and time.

308 INTRODUCTION TO FOUNDATIONS OF MATHEMATICS (3 + 0) 3 credits
(See MATH 308 for description.)

314 NINETEENTH CENTURY PHILOSOPHY (3 + 0) 3 credits
Readings from Hegel, Schopenhauer, Marx, Nietzsche, Bentham, Mill, Bradley, and others. Prerequisite: 3 credits in philosophy.

315 TWENTIETH CENTURY PHILOSOPHY (3 + 0) 3 credits
Significant movements in twentieth century philosophy such as phenomenology, pragmatism, logical positivism. British analytic philosophy, and the later Wittgenstein and his followers. Prerequisite: 3 credits in philosophy.

316 AMERICAN PHILOSOPHY (3 + 0) 3 credits
Development of philosophical thought in America with particular emphasis on pragmatism. Prerequisite: 3 credits in philosophy.

321 PHILOSOPHY OF EDUCATION (3 + 0) 3 credits
Consideration of basic philosophical issues relating to the values and aims of education. Prerequisite: 3 credits in philosophy.

323 PHILOSOPHY OF RELIGION (3 + 0) 3 credits
Nature and validity of religious experience. Topics include various conceptions of the nature of God, His existence, the problems of immortality and evil, and the possibility of religious knowledge. Prerequisite: 3 credits in philosophy.

325 PHILOSOPHY OF HISTORY (3 + 0) 3 credits
Discussion of historical methods, the idea of progress and meaning in history. Prerequisite: 3 credits in philosophy.

326 SYMBOLIC LOGIC (3 + 0) 3 credits
Developments in modern logic, including characteristics of deductive systems, analysis of propositions, and techniques of deduction. Prerequisite: PHIL 114. (Same as MATH 307.)

401, 601 ETHICS (3 + 0) 3 credits
Detailed discussion of major ethical theories. Prerequisite: 6 credits in philosophy.

402, 602 AESTHETICS (3 + 0) 3 credits
Investigation of modern trends in aesthetics. Prerequisite: 6 credits in philosophy.

403, 603 THEORY OF KNOWLEDGE (3 + 0) 3 credits
Examination of the nature of knowledge emphasizing the problem of our knowledge of the external world. Prerequisite: 6 credits in philosophy.

404, 604 METAPHYSICS (3 + 0) 3 credits
Theories concerning the nature of reality. Prerequisite: 6 credits in philosophy.

405, 605 PHILOSOPHY OF MIND (3 + 0) 3 credits
Various theories concerning the relation between mind and body. Other topics may include an analysis of thinking, intending, and a discussion of the possibility of private languages, etc. Prerequisite: 6 credits in philosophy.

406, 606 PHILOSOPHY OF LANGUAGE (3 + 0) 3 credits
Examination of selected problems in the philosophy of language such as meaning, reference, truth, and analyticity. Prerequisite: 6 credits in philosophy.

407, 607 SOCIAL AND POLITICAL PHILOSOPHY (3 + 0) 3 credits
Detailed discussion of theories of society and the nature of political obligation. Prerequisite: 6 credits in philosophy.

410, 610 PLATO (3 + 0) 3 credits
Development of Plato's thought, focusing upon the dialogues of his middle and late period. Prerequisite: 6 credits in philosophy.

411, 611 ARISTOTLE (3 + 0) 3 credits
Detailed study of selected major works in Aristotle. Prerequisite: 6 credits in philosophy.

413, 613 BRITISH EMPIRICISTS (3 + 0) 3 credits
Detailed study of the major writings of Locke, Berkeley, and Hume. Prerequisite: 6 credits in philosophy.

414, 614 CONTINENTAL RATIONALISTS (3 + 0) 3 credits
Detailed study of the major writings of Descartes, Spinoza, and Leibniz. Prerequisite: 6 credits in philosophy.

415, 615 KANT (3 + 0) 3 credits
Intensive study of the *Critique of Pure Reason* and related works. Prerequisite: 6 credits in philosophy.

465, 665 PHILOSOPHY AND METHOD OF THE PHYSICAL SCIENCES (3 + 0) 3 credits
Interdepartmental course examining the basic presuppositions and procedures in the physical sciences. (Same as PHYS 465.)

- 481, 681 PROBLEMS IN THE HISTORY AND PHILOSOPHY OF SCIENCE** (3 + 0) 3 credits
(See HIST 481 for description.)
- 494, 694 SELECTED TOPIC IN PHILOSOPHY**
(3 + 0) 3 credits
Major topic or issue in philosophy. May be repeated to a maximum of 9 credits when content differs. Prerequisite: 6 credits in philosophy.
- 499, 699 INDIVIDUAL RESEARCH** 1 to 6 credits
Pursuit by the advanced student of special interests in philosophy. Maximum of 12 credits.
- 708 SEMINAR IN PHILOSOPHICAL PSYCHOLOGY**
(3 + 0) 3 credits
(See PSY 708 for description.)
- 711 SEMINAR IN MAJOR FIGURES IN THE HISTORY OF PHILOSOPHY** (3 + 0) 3 credits
Maximum of 9 credits when content differs.
- 712 SEMINAR IN MAJOR MOVEMENTS IN THE HISTORY OF PHILOSOPHY** (3 + 0) 3 credits
Maximum of 9 credits when content differs.
- 713 SEMINAR IN PHILOSOPHICAL PROBLEMS**
(3 + 0) 3 credits
Intensive analysis of major topic or issue in philosophy. Maximum of 9 credits when content differs.
- 737 TEACHING METHODS IN PHILOSOPHY**
(1 + 0) 1 credit
Effective procedures of teaching philosophy on the college or university level. Maximum of 4 credits.
- 793 INDEPENDENT STUDY** 1 to 6 credits
Maximum of 6 credits.
- 795 COMPREHENSIVE EXAMINATION** 0 credit *S/U only*
- 797 THESIS** 1 to 6 credits
Maximum of 6 credits.

Inactive Courses

- 212 MEDIEVAL PHILOSOPHY** (3 + 0) 3 credits
- 794 COLLOQUIA** (3 + 0) 3 credits

PHYSICS (PHYS)

Stated course prerequisites must be observed unless an equivalent preparation is approved by the department.

- 101 INTRODUCTORY PHYSICS** (3 + 0) 3 credits
Elementary course designed to give the student an understanding of some of the basic principles of physics. A knowledge of elementary high school algebra and geometry is desirable.
- 103-104 PHYSICS FOR ENGINEERING TECHNOLOGY**
(3 + 0) 3 credits each
Introduction of basic principles of physics. For engineering technology majors. Corequisite: PHYS 153-154.
- 106 ENVIRONMENTAL SCIENCE** (3 + 0) 3 credits
Introduction for the nonspecialist to the principles which control the behavior of atmosphere and oceans; circulation of atmosphere and oceans; weather and climate; weather prediction and its economic implications; clouds and precipitation; pollution of the atmosphere; application to urban problems.
- 108 INTRODUCTION TO SPACE SCIENCE** (3 + 0) 3 credits
Description of recent discoveries and techniques in geophysics and space science. The geomagnetic field, properties of atmosphere and ionosphere, aurora, radiation belts, solar-terrestrial relationships. Prerequisite: elementary algebra is used as needed.

- 109 PLANETARY ASTRONOMY** (3 + 0) 3 credits
Descriptive introduction to current concepts of the solar system. Modern observational techniques and their results. Supplementary use of telescopes and planetarium facilities. Elementary algebra is occasionally used.

- 110 STELLAR ASTRONOMY** (3 + 0) 3 credits
Descriptive introduction to stellar and galactic systems. The life cycle of stars. Theories of the universe and its formation. Supplementary use of telescopes and planetarium facilities. Elementary algebra is occasionally used.

- 117 METEOROLOGY** (3 + 0) 3 credits
A description of the behavior of the atmosphere with special emphasis on the physical processes involved in the weather.

- 151-152 GENERAL PHYSICS** (3 + 0) 3 credits each
General physics primarily for students in arts and science, medicine, and agriculture. Lectures and recitations with experimental demonstrations and problem work. Prerequisite: elementary algebra and geometry. A knowledge of trigonometry is desirable.

- 153-154 GENERAL PHYSICS LABORATORY**
(0 + 2) 1 credit each

To accompany PHYS 151-152. Experimental work, largely quantitative in character, designed to illustrate fundamental physical principles and to develop skill and accuracy in methods of physical measurement. Prerequisite: elementary algebra and geometry. A knowledge of trigonometry is desirable.

- 201 ENGINEERING PHYSICS I** (3 + 0) 3 credits
Discussions of vectors, rectilinear and plane motion, particle dynamics, work and energy, momentum, rotational mechanics, oscillations, gravitation, fluids, elastic waves, and sound. Prerequisite or corequisite: MATH 215.

- 202 ENGINEERING PHYSICS II** (3 + 0) 3 credits
Discussions of electric charge, field, potential, current, dielectrics, circuit elements, magnetic fields and materials, electromagnetic oscillations, light, reflection, optical systems, interference, diffraction, and polarization. Prerequisite: PHYS 201. Corequisite: MATH 216.

- 203 ENGINEERING PHYSICS III** (3 + 0) 3 credits
Discussions of thermodynamic laws, kinetic theory, relativity, wave aspects of particles, quantum mechanics, statistical mechanics, band theory, semiconductors, radioactivity, nuclear physics, elementary particles. Prerequisites: PHYS 202, MATH 215-216.

- 204 ENGINEERING PHYSICS LABORATORY I**
(0 + 2) 1 credit

Laboratory experiments on vectors, motion, particle dynamics, work and energy, momentum, rotational mechanics, oscillatory motions, wave motion, and sound. Prerequisite or corequisite: MATH 215.

- 205 ENGINEERING PHYSICS LABORATORY II**
(0 + 2) 1 credit

Laboratory experiments on electric charge, field, potential circuit elements, magnetic fields, light, reflection, refraction, interference, diffraction, and polarization. Prerequisite: PHYS 201. Corequisite: MATH 216.

- 206 ENGINEERING PHYSICS LABORATORY III**
(0 + 3) 1 credit

Laboratory experiments on thermodynamic laws, kinetic theory, wave aspects of particles, quantum mechanics, solid state physics, semiconductors, radioactivity, nuclear physics, and elementary particles. Prerequisites: PHYS 202, MATH 215-216.

293 DIRECTED STUDY 1 to 3 credits

Individual study conducted under the direction of a faculty member. Maximum of 6 credits. Prerequisite: PHYS 151 or 201.

500-numbered courses in physics may be taken by non-physics majors providing prior permission is obtained from the department chairman. Graduate courses numbered 500 to 599 are not applicable toward an advanced degree in physics.

311, 511 ENVIRONMENTAL PHYSICS: THE OCEANS AND ATMOSPHERE (3 + 0) 3 credits

Introduction to the physical characteristics of the ocean and atmosphere and the processes which control their motion. Radiation balance of the earth, clouds and precipitation, diffusion and dispersal of pollution productions; fluid motions on the scale of the human environment. Application to problems of biology, engineering, and urban development. Prerequisite: PHYS 151-152 and MATH 215 or PHYS 201, 202, 203.

351, 551 MECHANICS (3 + 0) 3 credits

Newtonian mechanics. Mathematical formulation of dynamics of a particle and systems of particles including applications to atomic physics. Prerequisites: general physics and calculus. Differential equations desirable.

352, 552 MECHANICS (3 + 0) 3 credits

Continuation of PHYS 351. Mechanics of continuous media using Fourier series. Introduction to generalized coordinates including methods of Lagrange and Hamilton. Prerequisite: PHYS 351.

355, 555 PHYSICAL ELECTRONICS (2 + 3) 3 credits

Physical principles of electronic instrumentation used in physics. Emphasis on modern scientific instrumentation, components, circuits, active elements, systems. Prerequisites: general physics and calculus. Differential equations concurrently.

361-362, 561-562 LIGHT AND PHYSICAL OPTICS

(3 + 0) 3 credits each

Topics in physical optics including interference, diffraction, and polarization, with applications. Nature of light. Survey of geometrical optics and optical instruments. Prerequisite: general physics and calculus.

363-364, 563-564 OPTICS AND SPECTROSCOPY

LABORATORY (0 + 3) 1 credit each

Basic optical measurements. Theory and use of spectrometers, spectrographs and interferometers. Excitation and recording of emission spectra. Corequisite: PHYS 361-362.

372 CONCEPTS AND APPLICATIONS OF

MODERN PHYSICS (3 + 0) 3 credits

Non calculus based introduction to main ideas of quantum physics; applications in modern technology and medicine; impact on our civilization. Prerequisite: general physics (PHYS 151-152 or 103-104). Not applicable to a major in physics.

391, 591 INTRODUCTION TO ASTROPHYSICS

(3 + 0) 3 credits

Spectroscopy, distances, and types of stars, stellar energy, and modeling, HR diagram, mass luminosity, multiple and variable stars, star clouds, clusters, galaxies, exotic objects. Prerequisite: PHYS 351.

411, 611 INTRODUCTION TO ATMOSPHERIC PHYSICS

(3 + 0) 3 credits

Atmospheric scattering of light; visibility; optical phenomena. Elements of radiative heat transfer and of cloud physics. Description of the upper atmosphere. Prerequisite: PHYS 203 or 152 and 154, MATH 310, 320.

421, 621 MODERN PHYSICS I (3 + 0) 3 credits

Introduction to relativity and quantum mechanics. Prerequisite: PHYS 203 or equivalent, differential equations. Advanced calculus desirable.

422, 622 MODERN PHYSICS II (3 + 0) 3 credits

Applications of relativity and quantum mechanics to atomic and nuclear structure. Prerequisite: PHYS 421.

423, 623 ADVANCED LABORATORY TECHNIQUES I

(0 + 3) 1 credit

Application of contemporary devices for the acquisition and interpretation of data obtained from physical systems encountered in atomic, nuclear, solid state, and particle physics. Prerequisite: PHYS 203 and 206.

424, 624 ADVANCED LABORATORY TECHNIQUES II

(0 + 3) 1 credit

Continuation of PHYS 423. Prerequisite: PHYS 203 and 206.

426, 626 INTRODUCTION TO SOLID STATE PHYSICS

(3 + 0) 3 credits

Most important properties of solids, including crystal symmetries, lattice, vibrations, conductivity, magnetism, transport phenomena, the free electron model, and band theory. Prerequisite: PHYS 421.

455-456, 655-656 PHYSICS OF THE EARTH

(3 + 0) 3 credits each

Selected topics concerning the earth from the points of view of physicists and geophysicists. Gravitation, magnetism, heatflow, earth's rotation, waves, geochronology, and plate tectonics. Prerequisite: PHYS 351 or equivalent.

461, 661 HEAT AND THERMODYNAMICS (2 + 0) 2 credits

Fundamentals of thermodynamics including equations of state, laws of thermodynamics, entropy, and thermodynamic processes. Principles and methods of temperature measurement, calorimetry, and heat transfer calculations. Prerequisite: general physics and calculus through partial differentiation.

462, 662 KINETIC THEORY AND STATISTICAL

MECHANICS (2 + 0) 2 credits

Mean-free-path methods applied to diffusion, low-pressure flow, heat conduction, and other phenomena in gases. Transport theory of Maxwell, Boltzman, Chapman, Phase space, distribution functions, other elements of statistical mechanics. Prerequisite: general physics and calculus.

465, 665 PHILOSOPHY AND METHOD OF THE

PHYSICAL SCIENCES (3 + 0) 3 credits

(See PHIL 465 for description.)

466, 666 INTRODUCTION TO MICROCOMPUTER

INTERFACING (2 + 3) 3 credits

Introductory theory combined with laboratory work involving digital electronics, microcomputer programming, analog to digital conversion, and data acquisition with microcomputers. Prerequisite: PHYS 355.

473-474, 673-674 ELECTRICITY AND MAGNETISM

(3 + 0) 3 credits each

Electrostatics, magnetic fields, and electromagnetism. Maxwell's equations, theory of metallic conduction, motion of charged particles, radiation. Prerequisite: general physics, differential equations.

483-484, 683-684 SPECIAL TOPICS IN PHYSICS

(1 to 3 + 0) 1 to 3 credits each

Topics of current interest which are not incorporated in regular offerings. Prerequisite: PHYS 201 and 202 or 203.

493, 693 SPECIAL PROBLEMS 1 to 3 credits each

Laboratory or research work not specifically given in courses listed above. Maximum of 6 credits.

701 MATHEMATICAL PHYSICS (3 + 0) 3 credits

Designed to acquaint the student with some of the specific mathematical preliminaries to advanced study of theoretical physics. Prerequisite: graduate standing in physics.

702 CLASSICAL MECHANICS (3 + 0) 3 credits

Newtonian mechanics from an advanced point of view. Variational principles, Lagrange's and Hamilton's equations, central forces, rigid body motion, canonical transformations, Hamilton-Jacobi theory, small oscillations. Prerequisite: graduate standing in physics and PHYS 701.

707 SOLID STATE PHYSICS (3 + 0) 3 credits

Solid state properties related to the crystal lattice and the behavior of electrons in the lattice: band structure, electron-transport, phonons, X-ray diffraction, magnetism. Prerequisite: undergraduate solid state physics.

708 NUCLEAR PHYSICS (3 + 0) 3 credits

Nuclear properties including forces, moments, and decay modes. Scattering, reactions, and nuclear models. Prerequisite: graduate standing in physics.

711 ELECTROMAGNETIC THEORY I (3 + 0) 3 credits

General properties of vector fields with special application to electrostatic and magnetostatic fields. Solutions to boundary value problems. General electromagnetic equations and conservation theorems. Energy and momentum in the electromagnetic field. Prerequisite: graduate standing in physics.

712 ELECTROMAGNETIC THEORY II (3 + 0) 3 credits

Continuation of PHYS 711. Motions of charged particles in electromagnetic fields. Electromagnetic theory of radiation, electrodynamics, and special relativity. Reflections, refractions, and dispersion of electromagnetic waves. Prerequisite: PHYS 711.

721 QUANTUM THEORY I (3 + 0) 3 credits

Development of quantum theory. Schrodinger equation, operators, expectation values. Matrix formalism of Heisenberg, eigenvalue problems, wave packets, conjugate variables, and uncertainty principle. Solution of wave equation for square potentials, harmonic oscillator, and hydrogen-like atoms. Prerequisite: graduate standing in physics.

722 QUANTUM THEORY II (3 + 0) 3 credits

Perturbation theory, both time-independent and time-dependent. Degeneracy, interaction of matter with radiation, selection rules. Scattering theory. Born approximation and other approximation methods. Dirac notation and an introduction to spin. Prerequisite: PHYS 721.

732 STATISTICAL MECHANICS (3 + 0) 3 credits

Ensembles, fluctuations, and statistical basis of laws of thermodynamics. Distribution functions with application to cooperative phenomena, partition functions, and quantum statistics. Prerequisite: graduate standing in physics.

740 THEORETICAL FLUID DYNAMICS (3 + 0) 3 credits

Potential flow; vortex motion, gravity waves; Navier-Stokes equation; boundary layer theory; thermal convection and stability. Prerequisite or corequisite: PHYS 701.

741 ATMOSPHERIC MOTIONS I (3 + 0) 3 credits

General circulation, meteorological analysis, hurricane, tropical, and extra tropical cyclones. Prerequisite or corequisite: PHYS 701 and 740.

742 ATMOSPHERIC MOTIONS II (3 + 0) 3 credits

Principles of fluid dynamics applied to the atmosphere. Analysis of atmospheric models used in numerical computations for several scales of motion. Prerequisite: PHYS 741.

743 CLOUD PHYSICS (3 + 0) 3 credits

Condensation nuclei and droplet growth; ice phase phenomena; cloud thermodynamics and chemistry; precipita-

tion and electrification processes; methods of measurement. Prerequisite: PHYS 701 and 740.

745 ATMOSPHERIC TURBULENCE (3 + 0) 3 credits

Mechanical and statistical theory of turbulence. Application to convection, eddy diffusion, temperature, and wind profiles and related topics. Prerequisite: PHYS 742.

748 MEASUREMENT IN THE ATMOSPHERE

(3 + 3) 4 credits

Measurement of physically meaningful parameters in a heterogeneous turbulent medium. Direct and remote sensing, data reduction, theory of instrument design. Prerequisite: an upper-division electronics course (PHYS 355 or equivalent) and a working knowledge of computer programming. Prerequisite or corequisite: PHYS 742 and 743.

749 PHYSICAL METEOROLOGY (3 + 0) 3 credits

Introduction to radiative computations and diagrams as related to the atmosphere. Interaction of electromagnetic radiation with atmospheric particulates and molecules. Prerequisite: graduate standing in physics.

761 THEORETICAL SPECTROSCOPY (3 + 0) 3 credits

One- and two-electron atomic spectra, multiplet splitting, Zeeman, Stark, and Paschen-Back effects; molecular spectra, chiefly diatomic molecules, molecular symmetries; nuclear spectroscopy and analysis of the shell model. Prerequisite: PHYS 701-702, 721-722.

762 PHYSICS OF FUNDAMENTAL INTERACTIONS

(3 + 0) 3 credits

Elementary particles, symmetries, and conservation laws. Strong and weak interactions. Applications to nuclear level structure. Prerequisite: PHYS 761. Recommended: PHYS 711-712.

771 ADVANCED TOPICS (1 to 3 + 0) 1 to 3 credits

Consists of lectures dealing with various aspects of one of the fields listed. May be repeated for credit in different fields to a maximum of 12 credits: (a) dynamics, (b) fluid mechanics, (c) plasma physics, (d) quantum theory, (e) nuclear physics, (f) atomic and molecular physics, (g) electron and ion physics, (h) low-temperature physics, (j) solid and/or liquid state, (k) cosmic rays, (m) relativity, (n) elementary particles, (p) astrophysics, (r) atmospheric physics, (s) geophysics, (t) unspecified (new field). Prerequisite: PHYS 701-702 or 711-712 or 721-722 or 701,740.

790 SEMINAR (1 + 0) 1 credit

Recent developments in theoretical and experimental physics. Maximum of 6 credits.

792 SPECIAL PROBLEMS 1 to 6 credits

Special study of advanced topics not specifically in courses or seminars. Maximum of 6 credits. Prerequisite: graduate standing in physics.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only**797 THESIS 1 to 6 credits****799 DISSERTATION 1 to 24 credits***Inactive Courses*

451-452, 651-652 ACOUSTICS (2 + 0) 2 credits each

744 UPPER ATMOSPHERE (3 + 0) 3 credits

PHYSIOLOGY (PHSY)**401 MEDICAL PHYSIOLOGY (5 + 3) 6 credits**

Basic principles and mechanisms of function of membrane physiology, neurophysiology and muscle physiology. Prerequisites: B CH 401 and ANAT 401.

402 MEDICAL PHYSIOLOGY II (4 + 3) 5 credits

Basic principles and mechanisms of function of cardiovascular, respiratory, renal, gastrointestinal, endocrine and reproductive physiology. Prerequisite: PHSY 401.

490 INDEPENDENT STUDY 1 to 3 credits

700 ADVANCED NEUROPHYSIOLOGY (3 + 3) 4 credits
Principles of axonology, muscle physiology, synaptology, sensory mechanisms, autonomic nervous function and neurophysiology of the brain and spinal cord. Prerequisite: BIOL 366; B CH 301, 302; MATH 215; or equivalents.

701 ADVANCED MAMMALIAN SYSTEMS AND ORGANS PHYSIOLOGY (4 + 3) 5 credits

Principles of pulmonary, renal, cardiovascular, gastrointestinal and endocrine function. Prerequisite: PHSY 700.

PLANT, SOIL, AND WATER SCIENCE (PSW)

General

100 PRINCIPLES OF PLANT-SOIL-WATER RESOURCE USE (3 + 0) 3 credits

Introduction to the plant, soil, and water resources of the world. Use of these resources for the benefit of man.

120 SOILS AND SOIL MANAGEMENT (2 + 3) 3 credits

Introduction to the nature and properties of soils, their formations and their management for production of field crops, lawns, and gardens. Does not serve as prerequisite for upper-division courses in soil science. Credit not allowed for both PSW 120 and 222, nor for baccalaureate credit in the plant, soil, and water science major.

161 PRINCIPLES OF TURF MANAGEMENT (2 + 3) 3 credits

Environmental conditions that may affect the selection and maintenance of turf grasses. Management programs necessary to establish and maintain desirable turf.

162 GREENHOUSE PRODUCTION AND MANAGEMENT (2 + 6) 4 credits

Management practices in commercial greenhouses in relation to plant growth and development. Prerequisite: PSW 164.

163 LANDSCAPE DESIGN AND CONSTRUCTION (2 + 6) 4 credits

Design using plants to enhance man's environment with specific emphasis on single family dwellings.

164 HORTICULTURAL SCIENCE (3 + 0) 3 credits

Introduction to horticulture, including a study of the basic principles of plant growth, utilization, and reproduction.

222 SOILS (3 + 3) 4 credits

Physical, chemical, and biological properties of soils, soil genesis and classification, plant-soil-water relations. Prerequisite: CHEM 101 and 102 or 104.

260 ORNAMENTAL PLANT MATERIALS (2 + 3) 3 credits

Identification, horticultural characteristics, and use in landscaping of shrubs, trees, and ground covers. Prerequisite: BIOL 202 or PSW 164.

263 INDOOR PLANT PRODUCTION (2 + 3) 3 credits

Methods of indoor plant production including propagation, environmental factors and pot culture. Prerequisite: PSW 164.

264 NURSERY PRODUCTION AND MANAGEMENT (2 + 6) 4 credits

Management practices in commercial nurseries in relation to plant growth and development and personnel. Prerequisite: PSW 164.

304, 504 PRINCIPLES OF PLANT PRODUCTION

(2 + 3) 3 credits

Principles underlying the creation and maintenance of a favorable environment for the efficient production of plants. Prerequisite: BIOL 202.

316, 416 INTERNSHIP

(1 to 3 + 0) 1 to 3 credits *S/U only*

Coordinated work-study programs in industry or government under the direction of a faculty adviser. Written progress reports are prepared periodically and at the conclusion of the internship.

325, 525 SOIL MORPHOLOGY AND CLASSIFICATION

(2 + 3) 3 credits

Morphological description and identification of soils; kinds of soils; principles of soil mapping; use of soil maps; soil genesis; predicting behavior from morphology and taxonomic identity; some field classes. Prerequisite: PSW 222; GEOL 101 recommended.

327, 527 SOIL FERTILITY AND MANAGEMENT

(3 + 0) 3 credits

Soil as medium for plant growth, essential elements, fertilizers and their use, amendments, salinity, soil fertility evaluation, cropping systems, and soil management. Prerequisite: PSW 222 and CHEM 142.

331, 531 BIOCLIMATOLOGY (2 + 3) 3 credits

Elements of climatology and microclimatology in relation to living organisms. Effects of man's actions on bioclimates. Equipment for bioclimatic investigations and methods of data summarization and interpretation. (Same as GEOG 325.)

344, 544 IRRIGATION PRINCIPLES AND PRACTICES

(3 + 0 or 3) 3 or 4 credits

Principals and practices underlying efficient use of water in irrigation, irrigation methods, land preparation, salinity, etc. Laboratory optional. Prerequisite: PSW 222.

355, 555 FORAGE CROPS (2 + 3) 3 credits

Physiological bases for management of forage crops. Quality and utilization of forages. Greenhouse or laboratory problems relating to production of forages. Identification of important forage seeds and plants. Prerequisite: BIOL 202.

357, 557 CEREAL CROPS (2 + 3) 3 credits

Physiological basis for management of cereal crops. Quality and utilization of cereals. Greenhouse or laboratory problems relating to production of cereals. Identification of important cereal seeds and plants. Prerequisite: BIOL 202.

400 UNDERGRADUATE SEMINAR (1 + 0) 1 credit

Research work and reports on topics of interest in plant, soil, and water science. Prerequisite: senior standing.

406, 606 PLANT BREEDING (2 + 3) 3 credits

Methods of plant breeding and their application to various crops. Prerequisite: BIOL 300.

412, 612 ADVANCED PLANT PRODUCTION

(2 + 3) 3 credits

Cultural practices and related physiological processes of economic crop growth and development. Physical, chemical, and environmental control of crop production. Prerequisite: PSW 304, BIOL 355, or B CH 412.

421, 621 SOIL CHEMISTRY (2 + 3) 3 credits

Concepts of soil chemistry. Considers the physical and chemical properties of soils: mineralogical and chemical composition, ion exchange phenomena, chemistry of salt-affected and acid soils, trace element chemistry. Methods of analysis and interpretation. Prerequisite: PSW 327, CHEM 330.

422, 622 SOIL PHYSICS (2 + 3) 3 credits

Physical properties of soil components; soil structure, temperature, aeration; soil-water interactions; methods of measurement; application to tillage and soil management. Prerequisite: MATH 110 and PSW 222.

424, 624 SOIL MICROBIOLOGY AND POLLUTANT DECOMPOSITION (3 + 0) 3 credits

Fate and behavior of environmental pollutants added to the soil. Emphasizes the soil as an active means of solving the problems of environmental pollution by pesticides, animal wastes, and effluent components. Considers products, pathways, and rates of decomposition. Prerequisite: BIOL 101 and CHEM 101.

441, 641 HYDROLOGY FOR RESOURCE MANAGEMENT (3 + 0) 3 credits

Survey of processes of water movement and storage on the earth, their measurement, prediction, and application to resource management; the hydrologic cycle. Prerequisite: PHYS 152, GEOL 101 or PSW 222, AG 270.

444, 644 IRRIGATION SYSTEM MANAGEMENT (3 + 0) 3 credits

Types of organizations, distribution of water to irrigators; system maintenance, water rights and their administration. Prerequisite: PSW 344.

445, 645 FARM IRRIGATION SYSTEM DESIGN (3 + 0) 3 credits

Selection and design of farm irrigation and conveyance systems; land preparation, diversion of water wells, and pumping. Prerequisite: PSW 344.

446, 646 DRAINAGE OF AGRICULTURAL LANDS (2 + 3) 3 credits

Theory of drainage of agricultural lands; investigation techniques, solution of drainage problems, choices of systems. Prerequisite: PHYS 210. Corequisite: PSW 422.

480 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in: (a) bioclimatology, (b) crop science, (c) horticulture, (d) soil science, (e) water science.

485, 685 SPECIAL TOPICS (1 to 3 + 0) 1 to 3 credits

Presentation and review of recent research, innovations, and developments in plant, soil, and water science. These may include the areas of plant, soil, and water science, bioclimatology, crop science, drainage, horticulture, irrigation, plant breeding, and soil classification. Maximum of 6 credits.

711 RESEARCH METHODOLOGY (2 + 3) 3 credits

Research principles applied to plant, soil, and water sciences. Research problem analysis, library materials, research equipment and procedures, data presentation.

712 ENVIRONMENT AND PLANT RESPONSE (2 + 3) 3 credits

Specific environmental factors which influence the growth and development of green plants. Emphasizes how to distinguish symptoms associated with mineral nutrients, air, soil, and water pollutants, temperature, and light. The causes and mechanisms by which symptoms develop and possible procedures to ameliorate these problems. Prerequisite: PSW 327 and BIOL 355, 356. (Offered on demand.)

715 PLANT WATER RELATIONS (2 + 0) 2 credits

An integrated study of the role of water in plants in relation to their environment. Topics include soil water, root systems, water and salt absorption, and movement in plants, transpiration, effects of water deficits on plants, and measurement of plant water stress. Prerequisite: BIOL 355.

726 IRRIGATED SOIL MANAGEMENT (3 + 0) 3 credits

Management of soils for permanent irrigation agriculture with emphasis on the effects of irrigation water on soil physical and chemical properties. Prerequisite: PSW 327, 344.

731 ADVANCED BIOCLIMATOLOGY (3 + 0) 3 credits

Detailed study of evapotranspiration. Theories and water vapor exchange between the soil-plant complex and the atmosphere. Methods of study and analysis of potential and actual evapo-transpiration. Prerequisite: PSW 331, MATH 182. (Same as GEOG 725.)

790 SEMINAR (1 + 0) 1 credit

Research work and reports on topics of interest in plant, soil, and water science.

791 SPECIAL TOPICS 1 to 3 credits

Intensive study of a special problem in (a) bioclimatology, (b) crop science, (c) horticulture, (d) soil science, (e) water science. Prerequisite: graduate standing. Maximum of 6 credits in any area.

792 SPECIAL PROBLEMS 1 to 3 credits

Topics of current interest, selected according to student and staff interest: (a) plant, soil, and water science, (b) bioclimatology, (c) crop science, (d) drainage, (e) horticulture, (f) irrigation, (g) soil classification, (h) soil mineralogy. May be elected more than once to pursue different studies.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only**796 PROFESSIONAL PAPER 1 or 2 credits S/U only**

Required of all graduate students who wish to complete the Master of Science degree under Plan B.

797 THESIS 1 to 6 credits

Thesis may be written in area of (a) bioclimatology, (b) crop science, (c) horticulture, (d) soil science, (e) water science.

POLITICAL SCIENCE (P SC)

Political Science 103 is a prerequisite for all other political science courses except P SC 100.

100 CONSTITUTION OF NEVADA (1 + 0) 1 credit

Study of the Nevada Constitution, including the historical development of Nevada from Territory to Statehood. Satisfies Nevada Constitution requirement. Not open to students who have obtained credit for P SC 103, 208, or HIST 102, 111, 217. (Offered through Independent Study Division only.)

103 PRINCIPLES OF AMERICAN CONSTITUTIONAL GOVERNMENT (3 + 0) 3 credits

Constitutions of the United States and Nevada with additional attention to various principles and current problems of government. Satisfies United States and Nevada Constitution requirements.

104 GREAT ISSUES OF POLITICS (3 + 0) 3 credits

Examination of and methods for systematic inquiry into selected issues in politics, such as liberty, authority, and the role of elites.

205 INTRODUCTION TO ETHNIC POLITICS

(3 + 0) 3 credits

Examination of the causes, content, and impact of ethnic politics, with emphasis on historical, analytical, and comparative perspectives.

208 AMERICAN STATE AND LOCAL GOVERNMENTS

(3 + 0) 3 credits

Organization, working principles, and functional processes of state and local governments in the United States (satisfies the legislative requirement for the Nevada Constitution).

210 AMERICAN PUBLIC POLICY (3 + 0) 3 credits
Analysis of the interplay of forces involved in policy-making at all levels of American government. Study of the impact of policy on individuals and institutions.

211 COMPARATIVE GOVERNMENT AND POLITICS (3 + 0) 3 credits

Analysis of similarities and differences in the governing processes of different societies.

231 WORLD POLITICS (3 + 0) 3 credits

Introduction to the study of international relations; stresses the principles of a systematic approach to world politics.

300 CONGRESSIONAL INTERNSHIP

(6 + 0) 6 credits *S/U only*

Selected students serve in senator's or congressman's office in Washington. Prerequisite: 9 political science units, including 304, or examination.

301 LEGISLATIVE INTERNSHIP 3 or 6 credits *S/U only*

Selected students serve during regular session of Nevada Legislature. Prerequisite: 9 political science units, including 304, or examination.

304 THE LEGISLATIVE PROCESS (3 + 0) 3 credits

Analysis of legislative process in the political process—nation, state, and community. Emphasis on legislative behavior and legislative decision-making.

305 THE AMERICAN PRESIDENCY (3 + 0) 3 credits

Constitutional position of the President and development of the presidential powers; recruitment and party leadership; functional requirements of executive leadership; presidential participation in legislation and adjudication.

309 THE JUDICIAL PROCESS (3 + 0) 3 credits

Administration of justice in American courts, emphasizing the nature and function of law, court organization, participants in the system, trial processes, impact of court rulings.

323, 324 HISTORY OF POLITICAL THOUGHT

(3 + 0) 3 credits each

Analytical and critical survey of political theories from the Classical Period to the present.

336 TRANSNATIONAL POLITICS

(3 + 0) 3 credits

Economic, social, and physical-environment issues that transcend national boundaries and global and regional processes employed to manage them; politics of multinational integration.

341 ELEMENTS OF PUBLIC ADMINISTRATION

(3 + 0) 3 credits

Introduction to administrative theory, politics, and responsibilities; bureaucracy; and public financial and personnel administration.

354 POLITICS AND WOMEN (3 + 0) 3 credits

Examination of women's political movements, differential political socialization processes, and the economic and legal status of women.

400, 600 THE SUPREME COURT AND PUBLIC POLICY

(3 + 0) 3 credits

Major decisions of recent terms of the Supreme Court; their impact upon federal-state relations, the executive and legislative branches, and contemporary social issues. Prerequisite: American national government course. (Satisfies the legislative requirement for the United States Constitution.)

404, 604 JURISPRUDENCE (3 + 0) 3 credits

Introduction to problems of legal theory from the analytical, philosophical, and sociological points of view. Particular attention to modern theories of law.

406, 606 URBAN POLITICS (3 + 0) 3 credits

Analysis of policy alternatives and governmental systems in urban areas. The role of officials, planners, interest groups, and citizens in influencing the direction of policy.

407, 607 AMERICAN POLITICAL PARTIES AND ELECTORAL BEHAVIOR (3 + 0) 3 credits

Analysis of the nature, structure, and functions of American political parties and electoral participation. Special emphasis on theories of elections, voting habits and patterns, and campaigns in American politics.

409, 609 CONSTITUTIONAL LAW (3 + 0) 3 credits

Role of the Supreme Court in the political system, emphasizing constitutional development and judicial analysis of social and political issues; includes a study of administrative law. (Satisfies the legislative requirement for the United States Constitution.)

411, 611 GOVERNMENT AND POLITICS IN WESTERN EUROPE (3 + 0) 3 credits

Political systems of the major Western European states and the social situations from which they have arisen.

415, 615 GOVERNMENT AND POLITICS IN LATIN AMERICA (3 + 0) 3 credits

Comparative study of the structure and dynamics of Latin American politics and government.

416, 616 GOVERNMENT AND POLITICS IN THE SOVIET UNION AND EASTERN EUROPE (3 + 0) 3 credits

Communist states compared as to political culture, structures, forces, control, and other problems.

417, 617 GOVERNMENT AND POLITICS IN ASIA (3 + 0) 3 credits

Analysis of political forces, systems, and processes in selected Asian states.

418, 618 PROBLEMS IN DEVELOPED POLITICAL SYSTEMS (3 + 0) 3 credits

Aspects of political life common to such areas as Europe and North America. Maximum of 6 credits.

421, 621 POLITICAL ECONOMY (3 + 0) 3 credits

Examination of governmental policies as they are influenced by political theories and economic doctrines.

423, 623 CONTEMPORARY POLITICAL THEORY (3 + 0) 3 credits

Survey of theories linking political systems with socio-economic systems, e.g., politics in preindustrial and industrial societies, totalitarianism and democracy related to industrialization, postindustrialization theories.

426, 626 AMERICAN POLITICAL THOUGHT (3 + 0) 3 credits

American political thought from the colonial period to the present, including, among others, Puritanism, Republicanism, Jacksonian Democracy, Transcendentalism, Pragmatism, and Social Darwinism.

431, 631 COMPARATIVE STUDY OF FOREIGN POLICY (3 + 0) 3 credits

Factors, including ideology and national interest, which influence the formulation of foreign policy; objectives, instruments of policy of selected states. Prerequisite: P SC 231.

432, 632 AMERICAN FOREIGN POLICY (3 + 0) 3 credits

Environmental influences on United States policy; post-World War II problems; interests, principles, objectives, policies, and commitments of current policy. Prerequisite: P SC 231.

433, 633 CONDUCT OF AMERICAN FOREIGN AFFAIRS (3 + 0) 3 credits

Organization and administrative machinery involved in the conduct of American foreign affairs. Prerequisite: P SC 231.

437, 637 INTERNATIONAL CONFLICT (3 + 0) 3 credits
Classical and contemporary literature on the causes of war among nations and the conditions of international peace. Prerequisite: P SC 231.

439, 639 PROBLEMS OF WORLD POLITICS (3 + 0) 3 credits
Analysis of selected contemporary problems of world politics. Prerequisite: P SC 231. Maximum of 6 credits.

441, 641 PUBLIC FINANCIAL ADMINISTRATION (3 + 0) 3 credits
Analysis of fiscal agencies in federal, state, and local governments and discussion of the problems and processes of governmental budgeting, accounting, auditing, purchasing, tax administration, and treasury management.

442, 642 PUBLIC PERSONNEL ADMINISTRATION (3 + 0) 3 credits
Methods of recruiting, examining, training, and other techniques utilized in the management of employees in government service.

443, 643 THE POLITICS OF ADMINISTRATION (3 + 0) 3 credits
Process of translating legislative and executive decision into administrative action; effect of structure upon policy; manipulating and following public opinion; formal and informal decision-making.

444, 644 COMPARATIVE PUBLIC ADMINISTRATION (3 + 0) 3 credits
Ecology of public administration. Examination of basic administrative concepts in different cultural settings, in both technologically advanced countries and the developing nations.

445, 645 THEORIES OF PUBLIC ADMINISTRATION (3 + 0) 3 credits
Development and application of theories of public administration, especially their relevance to complex organizations, decision-making, group behavior, and politics.

446, 646 ADMINISTRATIVE LAW (3 + 0) 3 credits
Legal setting of public administrative, adjudicative, and rule-making authority. Remedies for abuse of administrative authority. Prerequisite: P SC 341.

450, 650 PUBLIC SERVICE INTERNSHIP 1 to 6 credits
Students serve in federal, state, or local government office. Prerequisite: P SC 341. *S/U only for 450; regular grading for 650.*

451, 651 PUBLIC OPINION AND POLITICAL PSYCHOLOGY (3 + 0) 3 credits
Analysis of the psychological aspects of politics in relation to public opinion, propaganda, personality, and political socialization.

452, 652 PRESSURE GROUPS AND POLITICAL MOVEMENTS (3 + 0) 3 credits
Structure, operation, tactics, and techniques of pressure groups. Nature, formation, and impact of political movements.

453 ETHNIC POLITICS IN THE UNITED STATES (3 + 0) 3 credits
Changing roles and special problems of ethnic groups in American politics and in comparative perspective with emphasis on the American Indian, Mexican-American, and Black communities. Maximum of 6 credits. Prerequisite: P SC 205.

455, 655 ENERGY AND RESOURCE POLICY (3 + 0) 3 credits
Politics shaping American energy and resource policies examined within international, federal and partisan contexts.

Special attention given to Western regional and public lands controversies. Prerequisite: P SC 210.

456, 656 PROBLEMS IN AMERICAN PUBLIC POLICY (3 + 0) 3 credits
Analysis of selected contemporary problems in American public policy. Maximum of 6 credits.

457, 657 ENVIRONMENTAL POLICY (3 + 0) 3 credits
Evaluation of policies in environmental areas. (Same as ENV 457.)

458, 658 PUBLIC POLICY: A GLOBAL PERSPECTIVE (3 + 0) 3 credits
Causes and consequences of governmental domestic policy variations among nations, emphasizing Europe and America.

481, 681 RESEARCH IN POLITICAL SCIENCE (2 + 2) 3 credits
Concepts and methods of political science research: includes legal research, information retrieval, interviews and surveys, and development of quantitative data. Prerequisite: PSY/SOC 210 or equivalent.

497, 697 INDEPENDENT STUDY 1 to 3 credits
Maximum of 6 credits.

701 SEMINAR IN AMERICAN POLITICS (3 + 0) 3 credits
Exploration of selected approaches to American politics. Emphasis on analysis of problems. Maximum of 9 credits.

711 SEMINAR IN COMPARATIVE POLITICS (3 + 0) 3 credits
Maximum of 9 credits.

723 SEMINAR IN POLITICAL THEORY (3 + 0) 3 credits
Maximum of 9 credits.

726 SEMINAR IN AMERICAN POLITICAL THEORY (3 + 0) 3 credits

731 SEMINAR IN INTERNATIONAL RELATIONS (3 + 0) 3 credits
Maximum of 9 credits.

741 SEMINAR IN PUBLIC ADMINISTRATION (3 + 0) 3 credits
Maximum of 9 credits.

750 SEMINAR IN PUBLIC POLICY (3 + 0) 3 credits
Aspects of policy formulation, content, implementation, and evaluation at the local, state, or national level. Maximum of 9 credits.

781 POLITICAL SCIENCE AS A DISCIPLINE (3 + 0) 3 credits
Examination of conceptual foundations of political science.

782 ADVANCED RESEARCH METHODS IN POLITICAL SCIENCE (2 + 2) 3 credits
Techniques and methodologies currently employed in political science, including statistical measures, survey research, and the relating of research to theory. Prerequisite: PSY/SOC 210 or equivalent.

791 SPECIAL TOPICS 1 to 3 credits
Maximum of 6 credits.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

797 THESIS 1 to 6 credits

799 DISSERTATION 1 to 24 credits

Inactive Courses

401-402 POLITICAL SCIENCE SYMPOSIUM (3 + 0) 3 credits each

- 412, 612 GOVERNMENT AND POLITICS IN AFRICA
(3 + 0) 3 credits
- 419, 619 PROBLEMS OF DEVELOPING POLITICAL
SYSTEMS (3 + 0) 3 credits
- 435, 635 INTERNATIONAL LAW (3 + 0) 3 credits
- 436, 636 INTERNATIONAL ORGANIZATION
(3 + 0) 3 credits
- 703 SEMINAR IN CONSTITUTIONAL LAW (3 + 0) 3 credits

PSYCHIATRY AND BEHAVIORAL SCIENCES (PCHY)

- 401 HUMAN BEHAVIOR I** (3 + 0) 3 credits
Human development, stress, communication and interpersonal and family dynamics as applied to behavioral problems in medicine.
- 402 HUMAN BEHAVIOR II** (4 + 0) 4 credits
Substance abuse, human sexuality, and basic principles of psychopathology and psychotherapy as applied to behavioral problems in medicine. Corequisite: PCHY 401.
- 451 CLERKSHIP** (1 + 21) 8 credits
Hospital and ambulatory clinical experience with preceptorial supervision to develop knowledge (practical, theoretical, basic science), technical and interpersonal skills basic to practicing psychiatry.
- 460 INTRODUCTION TO CLINICAL MEDICINE**
(2 + 3) 3 credits
Introduction to medical interviewing, medical record keeping, history taking and physical examination, clinical problem-solving, and potential doctor-patient relationship problems. Considers nature of health and disease and response to treatment in individual patients.
- 461 ADVANCED CLINICAL EXPERIENCES**
(0 + 96) 2-32 credits
Selected practical experiences with patients, with faculty advisement supervision.
- 468, 668 INDIVIDUAL STUDY IN BEHAVIORAL SCIENCE**
1 to 3 credits
Library research in selected topics in behavioral science and discussions with faculty. Maximum of 6 credits.
- 469, 699 DIRECTED RESEARCH IN BEHAVIORAL
SCIENCE** 1 to 3 credits
Guided research in any area of mutual interest to the student and faculty. Maximum of 6 credits.
- 490 INDEPENDENT STUDY** 1 to 3 credits

PSYCHOLOGY (PSY) *

- 101 INTRODUCTORY PSYCHOLOGY** (3 + 0) 3 credits
A survey of the discipline of psychology, introducing psychological theories, research methods and principles of behavior.
- 102 PSYCHOLOGY OF PERSONAL AND SOCIAL
ADJUSTMENT** (2 + 0) 2 credits
Deals with personality adjustment in normal persons. Adjustment techniques and reactions to frustration and conflict in the context of various social groups are considered. Prerequisite: PSY 101.

203-204 ADVANCED GENERAL PSYCHOLOGY

- (3 + 0) 3 credits each
Behavioral sciences, including perception, motivation, and learning the first semester to developmental, personality, and social psychology and sociology of institutions in the second semester. Approved for but not limited to those majoring in the health sciences fields. Prerequisite: PSY 101, admission to honors program or status as health science student.

205 ELEMENTARY ANALYSIS OF BEHAVIOR

- (2 + 3) 3 credits
Survey of principles of reinforcement theory in the analysis of behavior. The principles of learning are demonstrated in the laboratory. Prerequisite: PSY 101.

210 STATISTICAL METHODS (3 + 2) 4 credits

- Study and practice with statistical methods especially useful in the presentation and interpretation of psychological, sociological, and educational data, including BASIC programming. Prerequisites: PSY 101 or SOC 101; a standard score of 18 or better in the mathematics portion of the ACT or a grade of C or better in MATH 101. (Same as SOC 210.)

231 PSYCHOLOGY OF ADOLESCENCE (2 + 0) 2 credits

- Characteristics prominent in the adolescent with special emphasis upon applications to the work of the high school teacher. Prerequisite: PSY 101.

233 CHILD PSYCHOLOGY (3 + 0) 3 credits

- Development of the normal child from conception to twelve years of age. Consideration is given to the elimination of undesirable personality traits. Prerequisite: PSY 101.

261 SOCIAL PSYCHOLOGY I: THE PERSON AND SOCIAL INFLUENCE (3 + 0) 3 credits

- Nature of the person and of interpersonal relationships, their formation and maintenance, and their institutional, ideological and societal contexts; empirical examination of beliefs, attitudes, influence. Prerequisite: PSY 101 or SOC 101 (Same as SOC 261.)

275 HONORS STUDY AND RESEARCH

- (1 to 3 + 0) 1 to 3 credits
Independent study of research conducted under the supervision of a staff member. Maximum of 6 credits. Prerequisite: admission to honors work in psychology and sophomore standing.

299 SPECIAL PROBLEMS IN PSYCHOLOGY

- (1 to 5 + 0) 1 to 5 credits
Research from any field of psychology in which the student is adequately prepared. May be repeated with research on a new problem to a maximum of 5 credits. Open to freshmen and sophomores only.

301 EXPERIMENTAL PSYCHOLOGY (2 + 4) 4 credits

- Lecture and laboratory course in the application of scientific methods to the study of behavior and mental processes. Prerequisite: PSY 101 and 210.

321 EDUCATIONAL PSYCHOLOGY (3 + 0) 3 credits

- Educational applications of psychology to learning, discipline, and social, emotional, and intellectual behavior. Educational and psychological tests and measurements. Prerequisite: PSY 101.

325 PARAPSYCHOLOGY (3 + 0) 3 credits

- Review of professional psychological investigations of parapsychological phenomena from William James to the present, with emphasis upon experimental developments since 1970. Prerequisite: PSY 101.

*Graduate courses numbered 500 to 599 are not applicable toward an advanced degree in psychology.

- 327, 527 COMPUTER APPLICATION IN THE SOCIAL SCIENCES (3 + 0) 3 credits**
(See SOC 327 for description.)
- 333 ENVIRONMENTAL PSYCHOLOGY (3 + 0) 3 credits**
Investigation of human environment interactions: perception of and behavior in environment, both natural and built, and including the city as a special habitat. Prerequisite: PSY 101.
- 350 PSYCHOLOGICAL ANALYSIS OF CHRISTIAN IDEAS (3 + 0) 3 credits**
Developments in contemporary psychology relating humanistic, Jungian, phenomenological, and behaviorist psychologies to the religious ideas exemplified by Christian doctrines as practiced at various periods of the Christian era, including contemporary American movements. Prerequisite: PSY 101.
- 362 SOCIAL PSYCHOLOGY II: GROUP STRUCTURE AND PROCESS (3 + 0) 3 credits**
(See SOC 362 for description.)
- 375 HONORS STUDY AND RESEARCH (1 to 3 + 0) 1 to 3 credits**
Independent study or research conducted under the supervision of a staff member. Maximum of 6 credits. Prerequisite: admission to honors work in psychology and junior standing.
- 392 RESEARCH METHODS (3 + 0) 3 credits**
(See SOC 392 for description.)
- 403, 603 PHYSIOLOGICAL PSYCHOLOGY (2 + 3) 3 credits**
Physiological mechanisms associated with reflex action, emotions, motor skills, thinking, and language. Effects of drugs, internal secretions, and neural lesions on behavior. Prerequisite: PSY 101.
- 405, 605 PERCEPTION (3 + 0) 3 credits**
Basic principles by which man perceives his environment. Topics can include the perception of form, color, space, and depth. Prerequisite: PSY 101.
- 406, 606 APPLIED BEHAVIOR ANALYSIS (3 + 0) 3 credits**
Application of behavioral principles and techniques in the home, school, hospital, and institution. Emphasis on motivational and learning procedures for use with problem behaviors in children and adults. Prerequisite: PSY 101 or 203-204.
- 408, 608 HISTORY OF PSYCHOLOGY (3 + 0) 3 credits**
Historical background of psychology in philosophy and physiology until 1880; various schools of psychological thought until mid-century. Prerequisite: PSY 101.
- 412 MENTAL TESTING (3 + 2) 4 credits**
Theory of and practice with mental tests. Emphasis on standardization, administration, and interpretation of scales of intelligence. Prerequisite: PSY 101, 210, and senior standing.
- 421, 621 CONDITIONING AND LEARNING (3 + 0) 3 credits**
Factors and conditions which enhance or retard learning. A survey of learning theories and basic principles of classical conditioning, instrumental conditioning, and discrimination learning. Prerequisite: PSY 101.
- 422, 622 SOCIAL PSYCHOLOGICAL THEORIES (3 + 0) 3 credits**
(See SOC 422 for description.)
- 431, 631 COGNITIVE PSYCHOLOGY (3 + 0) 3 credits**
Current developments in cognitive psychology with major emphasis on research in human learning, memory, information processing, problem-solving, concept formation and thinking. Prerequisite: PSY 101.
- 435, 635 PERSONALITY (3 + 0) 3 credits**
Survey of major theories of personality. Personality development, structure, and dynamics. Examination of major areas of research on personality. Prerequisite: PSY 101.
- 441, 641 ABNORMAL PSYCHOLOGY (3 + 0) 3 credits**
Psychology of abnormal behavior—primarily neuroses and psychoses—stressing symptomatology, etiology, dynamics, and problems in diagnosis. Prerequisite: PSY 101. PSY 641 not open to psychology majors.
- 444, 644 PSYCHOLOGY OF EXCEPTIONAL CHILDREN (3 + 0) 3 credits**
Devoted to the study of children who are mentally deficient or mentally superior and children with sensory deficiencies or orthopedic handicaps. Prerequisite: PSY 101.
- 451, 651 PSYCHOLOGICAL PRINCIPLES OF COUNSELING (3 + 0) 3 credits**
Consideration of therapeutic techniques, with emphasis upon the client-centered approach. Some attention to tests, sound recordings, case materials, and other adjuncts to counseling. Prerequisite: PSY 101.
- 463, 663 SOCIAL PSYCHOLOGY III: SOCIAL PSYCHOLOGY OF EDUCATION (3 + 0) 3 credits**
Effects on learning of such social psychological factors as family, social class, school social structure, classroom structure, and allocation of the teacher role are considered. Prerequisite: PSY 101 or SOC 101 and PSY/SOC 261 or PSY/SOC 362. (Same as SOC 463.) PSY 663 not open to psychology majors.
- 472, 672 EXPERIMENTAL ANALYSIS OF BEHAVIOR (3 + 0) 3 credits**
Review of current research in the experimental analysis of behavior. Prerequisite: PSY 101.
- 473, 673 RADICAL BEHAVIORISM (3 + 0) 3 credits**
Skinner's analysis of verbal and other intellectual behavior, especially as it pertains to the conduct of psychological research. Prerequisite: PSY 101.
- 475 HONORS THESIS (3 + 0) 3 credits**
Research investigation conducted and written in thesis form. Prerequisites: admission to departmental honors program in psychology and senior standing.
- 480, 680 MOTIVATION (3 + 0) 3 credits**
Basic motivation theory, including biological and cultural bases. Survey of contemporary research on major drives and needs with emphasis on human motives. Prerequisite: PSY 101.
- 481, 681 PRINCIPLES OF ANIMAL BEHAVIOR (3 + 0) 3 credits**
Review of field and laboratory studies on the determinants and mechanisms of animal behavior to establish relations between behavior of similar and different species. Prerequisite: PSY 101 and BIOL 101. (Same as BIOL 481.)
- 482, 682 ANIMAL BEHAVIOR LABORATORY (0 + 3) 1 credit**
Observational study of behavior, in both laboratory and field, of various animal species. Emphasis on elements of ethogram preparation, and between-species comparisons. Prerequisite: Previous or concurrent registration in PSY or BIOL 481 or 681. (Same as BIOL 482.)
- 483, 683 ANIMAL COMMUNICATION (3 + 0) 3 credits**
Review of field and laboratory studies on animal communication and human nonverbal communication. Prerequisite: PSY 101 and BIOL 101.
- 499, 699 SPECIAL PROBLEMS IN PSYCHOLOGY (1 to 5 + 0) 1 to 5 credits**
Research from any field of psychology in which the student is

adequately prepared. May be repeated with research on a new problem to a maximum of 9 credits.

Prerequisite for following 700-level courses: admission to graduate standing in the Department of Psychology.

704 PSYCHOLOGICAL INTERVENTION I (3 + 0) 3 credits
Principles and methods of psychological intervention with children. Theoretical rationale, symptoms, causes, and target behaviors. Special techniques, including operant procedures and other psychotherapeutic methods. Prerequisite: enrollment in clinical psychology program.

705 PSYCHOLOGICAL INTERVENTION II (3 + 0) 3 credits
Principles and methods of psychological intervention with adults. Special techniques, including individual and group psychotherapy, desensitization, psychodrama, hypnotherapy, and encounter groups. Prerequisite: enrollment in clinical psychology program.

706 INTERMEDIATE STATISTICS I (3 + 0) 3 credits
Theory and application of statistical inference with special emphasis on probability, parametric, and nonparametric techniques including simple and complex analysis of variance, multiple comparison techniques and trend analysis. Prerequisite: PSY 210 or equivalent. (Same as SOC 706.)

707 INTERMEDIATE STATISTICS II (3 + 0) 3 credits
Theory and application of statistical inference with special emphasis on multivariate models, including multiple and partial regression, factor analysis, path analysis and discriminant function analysis. Prerequisite: PSY 706 (Same as SOC 707).

708 SEMINAR IN PHILOSOPHICAL PSYCHOLOGY (3 + 0) 3 credits
Selected topics in recent philosophical psychology. Prerequisite: PSY 408. (Same as PHIL 708.)

710 EXPERIMENTAL DESIGN (3 + 0) 3 credits
Theory and application of principles used in the construction of experimental designs primarily as derived from the analysis of variance. Prerequisite: PSY 706-707.

711 PSYCHOLOGICAL ASSESSMENT I (3 + 0) 3 credits
Theory and practice of psychological assessment of children. Interview, test, and observational techniques for evaluating behavioral, developmental, cognitive, perceptual-motor, and personality factors.

712 PSYCHOLOGICAL ASSESSMENT II (3 + 0) 3 credits
Theory and practice of psychological assessment of adults. Special techniques including interview, systematic observation, intelligence and personality tests, and functional behavioral analysis.

718 RESEARCH METHODS IN SOCIAL PSYCHOLOGY (3 + 0) 3 credits
Theory construction and the application of research methods in social psychology. (Same as SOC 718.)

720 SEMINAR IN SENSATION AND PERCEPTION (3 + 0) 3 credits
Experiments and problems in sensation and perception. Prerequisite: PSY 303.

721 ADVANCED PSYCHOPHYSIOLOGY (3 + 0) 3 credits
Current developments and animal physiological research relating to general principles of sensation, perception, and behavior. Prerequisite: PSY 403.

725 SOCIALIZATION (3 + 0) 3 credits
(See SOC 725 for description.)

726 INTERPERSONAL TRANSACTIONS (3 + 0) 3 credits
(See SOC 726 for description.)

727 GROUP BEHAVIOR (3 + 0) 3 credits
(See SOC 727 for description.)

728 COLLECTIVE BEHAVIOR AND MASS SOCIETY (3 + 0) 3 credits
(See SOC 728 for description.)

730 SEMINAR IN MOTIVATION AND LEARNING (3 + 0) 3 credits
Contemporary theory and research in the areas of motivation, emotion, and learning. Prerequisite: PSY 421.

731-732 THEORIES OF LEARNING (3 + 0) 3 credits each
Examination of research on learning and of theories which attempt to explain the processes of learning. Prerequisite: PSY 421.

733 PSYCHOBIOLOGY OF LANGUAGE (3 + 0) 3 credits
Critical review and discussion of the literature concerning the relationship of cognitive and communicative behavior to linguistic behavior with particular emphasis on research with animals.

736 ADVANCED STUDIES IN DEVELOPMENTAL PSYCHOLOGY (3 + 0) 3 credits
Principles, theories, and research in human development with emphasis on the normal individual. Includes supervised research in special problems. Prerequisite: PSY 204, 231, 233, or 444.

737 SURVEY RESEARCH METHODS (3 + 0) 3 credits
(See SOC 737 for description.)

738 METHODS AND INNOVATIONS IN ASSESSMENT (3 + 0) 3 credits
Theory of assessment of persons and situation. Survey of newer assessment techniques and instruments. Methods of constructing tests and other assessment devices. Prerequisite: graduate standing in behavioral sciences. (Same as SOC 738.)

739 RESEARCH METHODS IN CLINICAL AND PERSONALITY PSYCHOLOGY (3 + 0) 3 credits
Historical and philosophical background of psychological research. Theory construction, experimental design, and scientific writing. Current trends in clinical and personality research methodology.

740 BEHAVIOR PROBLEMS (3 + 0) 3 credits
Behavioral problems encountered in clinical practice. Developmental, emotional, and organic disturbances; alcoholism, marital discord, drug abuse, and other psychological problems of contemporary living. Prerequisite: PSY 441 or equivalent.

741 NONPATHOLOGICAL PROBLEMS OF BEHAVIOR AND PERSONALITY (3 + 0) 3 credits
Emphasis on the concerns of normal individuals such as competence, aggression, achievement, and anxiety; recent trends in research, and contributions of major and micropersonality theorists.

744-745 SEMINAR IN PERSONALITY (3 + 0) 3 credits each
Contemporary theory and research on personality. Recent trends and issues.

748 COMMUNITY PSYCHOLOGY (3 + 0) 3 credits
Mental health problems of population, including psychological epidemiology and mental health needs of communities. Mental health consultation and education. Crisis intervention. Prerequisite: graduate standing in behavioral or health sciences.

749 SEMINAR IN COMMUNITY PSYCHOLOGY (3 + 0) 3 credits
Advanced study of community psychology. Emphasis on com-

munity intervention approaches, systems analysis, and community change. Prerequisite: graduate standing in behavioral or health sciences.

750-751 SEMINAR IN CLINICAL PSYCHOLOGY

(3 + 0) 3 credits each

Consideration of contemporary theory, research, and practices in the field of clinical psychology.

752 GRADUATE RESEARCH 1 to 5 credits

Research projects in psychology carried out under supervision. Maximum of 6 credits.

753 RESEARCH PRACTICUM (1 to 3 + 0) 1 to 3 credits

Research apprenticeship in ongoing research projects. Familiarization with aims and methods of psychological research.

754 CLINICAL PRACTICUM (1 to 3 + 0) 1 to 3 credits

Supervised experience in psychological assessment and psychological intervention with children and adults in a variety of clinical agencies and community settings. Maximum of 15 credits. Prerequisite: enrollment in clinical program.

755 INDIVIDUAL READING 1 to 5 credits

Supervised reading with regular conferences between student and instructor. Maximum of 9 credits.

761-762 CONTEMPORARY ISSUES IN PSYCHOLOGY

(3 + 0) 3 credits each

Consideration in depth of selected topics of contemporary interest. Maximum of 6 credits each.

763 SPECIAL TOPICS IN EXPERIMENTAL PSYCHOLOGY*

(3 + 0) 3 credits

Consideration of selected current research problems and conceptual issues in experimental psychology.

764 SPECIAL TOPICS IN SOCIAL PSYCHOLOGY

(3 + 0) 3 credits

Consideration of selected current research problems and conceptual issues in social psychology. Maximum of 9 credits. (Same as SOC 764.)

771 CLINICAL ORIENTATION (1 + 0) 1 credit

Roles and responsibilities of the clinical psychologist. Ethical problems and standards. Professional trends and issues. Maximum of 3 credits. Prerequisite: enrollment in clinical program.

772 RURAL MENTAL HEALTH (3 + 0) 3 credits

Special characteristics of rural mental health, and the clinical psychologist's function as consultant in rural communities.

795 COMPREHENSIVE EXAMINATION 0 credit *S/U only*

797 THESIS 1 to 6 credits

799 DISSERTATION 1 to 24 credits

Inactive Courses

107 PSYCHOLOGY OF MANAGEMENT (2 + 0) 2 credits

391 INDUSTRIAL AND PERSONNEL PSYCHOLOGY

(2 + 0) 2 credits

410, 610 PHILOSOPHICAL CRITICISMS OF

PSYCHOLOGICAL RESEARCH (3 + 0) 3 credits

RECREATION AND PHYSICAL EDUCATION (RPED)

Special fees apply to many activity courses which are in addition to regular registration fee. Consult with the department prior to registration.

100-199 RECREATION-PHYSICAL EDUCATION

ACTIVITY CLASSES

A maximum of three credits from 100-199 may be taken during any one semester or summer session except for special programs listed in the class schedule. When beginning, intermediate, or advanced classes are scheduled in an activity, the student should consult the department to determine in which level to enroll. A student may enroll in the same class four times for credit.

200-797 RECREATION-PHYSICAL EDUCATION THEORY CLASSES

100-199 ACTIVITY CLASSES (0 + 2) 1 credit *S/U only*

AQUATICS

- 101 Diving
- 102 Life Saving
- 103 Sailing
- 104 Scuba
- 105 Swimming, Beginning*
- 106 Swimming, Intermediate
- 107 Swimming, Advanced
- 108 Swimming, Synchronized
- 109 Water Skiing, Beginning

DANCE

- 110 Modern Dance, Beginning*
- 111 Modern Dance, Intermediate
- 112 Modern Dance, Advanced
- 113 Dance, Ballet
- 115 Dance, Social
- 116 Dance Styles: Afro-Haitian, Jazz, Musical Comedy
- 117 Dance, Improvisation
- 118 Dance, Repertory

GYMNASTICS

- 120 Gymnastics (Men) Beginning*
- 121 Gymnastics (Women) Beginning*
- 122 Gymnastics (Men) Inter.-Adv.
- 123 Gymnastics (Women) Inter.-Adv.

GAMES (COURT)

- 126 Basketball
- 127 Team Handball
- 128 Badminton
- 129 Softball
- 130 Handball, Beginning*
- 131 Handball, Inter.-Adv.
- 132 Racquetball, Beginning*
- 133 Racquetball, Inter.-Adv.
- 134 Squash
- 135 Tennis, Beginning*
- 136 Tennis, Intermediate
- 137 Tennis, Advanced
- 138 Volleyball, Beginning*
- 139 Volleyball, Inter.-Adv.

MOUNTAIN SPORTS

- 140 Angling and Casting
- 141 Backpacking
- 142 Bike touring
- 143 Mountaineering
- 144 Orienteering
- 145 Rock Climbing, Beginning
- 146 Rock Climbing, Inter.-Adv.
- 147 Skiing, Alpine
- 148 Ski Touring

*Maximum of 2 credits.

MARTIAL ARTS

- 152 Karate, Beginning*
 153 Karate, Inter.-Adv.
 154 Judo

MISCELLANEOUS ACTIVITIES

- 156 Archery
 157 Bicycling
 158 Bowling, Beginning*
 159 Bowling, Inter.-Adv.
 160 Golf, Beginning*
 161 Golf, Intermediate
 162 Golf, Advanced
 163 Horsemanship** (0 + 3) *S/U Only*
 165 Skating, Ice
 166 Skating, Roller
 168 Soccer
 169 Yoga

CONDITIONING

- 178 Conditioning, Aerobic Dance
 179 Conditioning, Intercollegiate Athletics
 180 Conditioning and Body Building (men and women)
 181 Conditioning, ROTC
 182 Jogging
 183 Weight Lifting

INTERCOLLEGIATE COMPETITIVE ACTIVITIES

- 184 Intercollegiate Baseball
 185 Intercollegiate Basketball
 186 Intercollegiate Boxing
 187 Intercollegiate Cross Country
 188 Intercollegiate Football
 190 Intercollegiate Golf
 191 Intercollegiate Gymnastics
 192 Intercollegiate Riflery
 193 Intercollegiate Skiing
 194 Intercollegiate Softball
 195 Intercollegiate Swimming
 196 Intercollegiate Tennis
 197 Intercollegiate Track and Field
 198 Intercollegiate Volleyball

201 INTRODUCTION TO RECREATION AND PHYSICAL EDUCATION (2 + 2) 3 credits

Background, aims, objectives, and current trends in RPED; skill and proficiency tests required for all RPED majors and minors.

202 THEORY OF MOVEMENT (2 + 0) 2 credits

Analysis of movement; comparison of movement patterns, purposes and organizations within sports and dance.

216 METHODS OF TEACHING CROSS COUNTRY SKIING (1 + 2) 2 credits

Designed for experienced cross country skiers who wish to become competent cross country ski instructors.

217 METHODS OF TEACHING WATER SAFETY (1 + 2) 2 credits

Water Safety Instructor course. American Red Cross Certificate awarded upon completion. Prerequisite: Life Saving Certificate.

218 METHODS OF TEACHING SKIING (1 + 2) 2 credits

Instruction in American, Austrian and French ski systems. Progressions, finished technical forms of ski maneuvers, mechanics and correction of errors.

219 METHODS OF TEACHING FUNDAMENTAL RHYTHMIC ACTIVITIES (0 + 4) 2 credits

Elementary rhythmic activities including folk, square and social dance.

220 METHODS OF TEACHING ARCHERY AND BADMINTON (0 + 2) 1 credit

Designed for majors and minors in RPED.

221 METHODS OF TEACHING CONDITIONING (0 + 2) 1 credit

Designed for majors and minors in RPED.

222 METHODS OF TEACHING DANCE (0 + 2) 1 credit

Designed for majors and minors in RPED.

223 METHODS OF TEACHING GOLF (0 + 2) 1 credit

Designed for majors and minors in RPED.

224 METHODS OF TEACHING OUTDOOR RECREATION (0 + 2) 1 credit

Designed for majors and minors in RPED.

225 METHODS OF TEACHING SOCCER AND SPEEDBALL (0 + 2) 1 credit

Designed for majors and minors in RPED.

226 METHODS OF TEACHING SOFTBALL (0 + 2) 1 credit

Designed for majors and minors in RPED.

227 METHODS OF TEACHING TEAM HANDBALL (0 + 2) 1 credit

Designed for majors and minors in RPED.

228 METHODS OF TEACHING TENNIS (0 + 2) 1 credit

Designed for majors and minors in RPED.

229 METHODS OF TEACHING VOLLEYBALL (0 + 2) 1 credit

Designed for majors and minors in RPED.

230 METHODS OF TEACHING WRESTLING (0 + 2) 1 credit

Designed for majors and minors in RPED.

231 METHODS OF TEACHING TUMBLING (0 + 2) 1 credit

Designed for majors and minors in RPED.

240 RECREATION AND PLAYGROUND LEADERSHIP (1 + 2) 2 credits

Application of leadership techniques to community recreation and playground programs. Instruction and practical experience in specific recreation leadership skills.

250 PHYSICAL EDUCATION ACTIVITIES FOR PRIMARY GRADES K-3 (1 + 2) 2 credits

Extensive and intensive study of games, rhythms, stunts, and tumbling.

251 PHYSICAL EDUCATION ACTIVITIES FOR INTERMEDIATE GRADES 4-6 (1 + 2) 2 credits

Extensive and intensive study of games, rhythms, and dances, stunts, tumbling, and gymnastics.

252 PHYSICAL EDUCATION ACTIVITIES FOR MIDDLE SCHOOL GRADES 6-8 (1 + 2) 2 credits

Extensive and intensive study of games, rhythms, dances, stunts, tumbling, gymnastics, and team activities.

261 INTRODUCTION TO DANCE COMPOSITION (1 + 2) 2 credits

Basic elements of choreography. Guided experiences in movement, development, design and form. Prerequisite: one semester of dance.

262 DANCE PRODUCTION (1 + 2) 2 credits

Theory of and practical experience in the performance and production of a dance presentation. Prerequisite: RPED 261.

*Maximum of 2 credits.

**Same as A SC 163.

270 DISASTER FIRST AID (1 + 2) 2 credits

Standard and advanced Red Cross first-aid emergency care for sick and/or injured in case of a disaster.

271 INSTRUCTOR'S FIRST AID (2 + 0) 2 credits

Regular Red Cross course. Those completing the course may be designated first-aid instructors. Prerequisite: RPED 270 or First Aid Certificate.

290 FIELD EXPERIENCES IN RECREATION OR PHYSICAL EDUCATION (0 + 3) 1 credit

Directed field work experience in teaching and/or directing physical education activities for school or recreation groups. Maximum of 3 credits.

299 INDEPENDENT STUDY IN RECREATION OR PHYSICAL EDUCATION (1 or 2 + 0) 1 or 2 credits

Individual study and/or research in areas of recreation or physical education not covered in other undergraduate courses. Maximum of 4 credits.

301 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION AND ATHLETICS

(3 + 0) 3 credits

Principles and methods of organizing and administering physical education and athletics in secondary schools. Prerequisite: RPED 201.

302 ORGANIZATION AND ADMINISTRATION OF INTRAMURAL AND RECREATION PROGRAMS

(1 + 3) 2 credits

Theory of and active participation in the organization and administration of intramural and recreation sports programs.

321 ORGANIZATION AND JUDGING OF GYMNASIIC MEETS (0 + 2) 1 credit

Prerequisite: competitive or teaching experience in gymnastics.

322 ORGANIZATION AND JUDGING OF TRACK AND FIELD MEETS (0 + 2) 1 credit

Prerequisite: RPED 326.

323 THEORY OF BASEBALL (2 + 2) 3 credits

Lectures on theory of baseball; teaching techniques and practical demonstrations. Designed for those who wish to coach.

324 THEORY OF BASKETBALL (2 + 2) 3 credits

Lectures on theory of basketball; teaching techniques and practical demonstrations. Designed for those who wish to coach.

325 THEORY OF FOOTBALL (2 + 2) 3 credits

Lectures on theory of football; teaching techniques and practical demonstrations. Designed for those who wish to coach.

326 THEORY OF TRACK AND FIELD (2 + 2) 3 credits

Lectures on theory of track and field; teaching techniques and practical demonstrations. Designed for those who wish to coach.

327 THEORY OF SOFTBALL AND VOLLEYBALL

(2 + 2) 3 credits

Lectures on theory of softball and volleyball; teaching techniques and practical demonstrations. Designed for those who wish to coach.

330 OFFICIATING MAJOR SPORTS (2 + 0) 2 credits

Interpretations of rules, methods of officiating, and characteristics of officials. Coeducational class: men's major sports in the fall semester, women's major sports in the spring semester. May be repeated to a maximum of 4 credits; one fall semester and one spring semester.

331 PSYCHOLOGY OF COACHING (3 + 0) 3 credits

Role of psychology in coaching athletic activities. Prerequisites: RPED 201 and 323 or 324 or 325 or 326.

340 CAMPING AND OUTDOOR RECREATION

(1 + 2) 2 credits

Practices and principles of camping in relation to school curriculum. Campcraft skills, techniques of group work, program planning, and camp counseling.

341 PLANNING CONCEPTS FOR OUTDOOR RECREATION (2 + 2) 3 credits

Preparing, organizing and directing outdoor activities.

342 COMMUNITY RECREATION (2 + 2) 3 credits

The operation of a recreation department and its relationship to other community agencies.

350 TEACHING PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS (2 + 2) 3 credits

Curriculum planning, lesson plans, and teaching methods for the classroom teacher with lab teaching experience.

354 PERSONAL HEALTH AND LIFE STYLES

(3 + 0) 3 credits

For description see SHR 354.

360 COMPARATIVE DANCE STYLES I (1 + 2) 2 credits

Creative exploration of modern dance in relation to artistic trends from the beginnings of dance to the court period.

361 COMPARATIVE DANCE STYLES II (1 + 2) 2 credits

Creative exploration of modern dance in relation to artistic trends of nineteenth and twentieth centuries.

370 ATHLETIC INJURIES (1 + 2) 2 credits

Prevention and treatment of common athletic injuries, including practical application.

372 METHODS OF TEACHING PHYSICAL EDUCATION

(3 + 0) 3 credits

Preparation for student teaching. (Same as C I 372).

373 FIELD EXPERIENCE IN RECREATIONAL CRAFTS

(1 + 3) 2 credits

Instruction in crafts as applied to recreation. Major students assigned in crafts area of Reno Recreation Department under the supervision of staff member.

396 PRACTICAL EXPERIENCE IN ACTIVITY CLASSES

(0 + 2) 1 credit

Students assist in advanced work in physical education activities classes. Maximum of 3 credits.

401, 601 EVALUATION IN PHYSICAL EDUCATION

(1 + 2) 2 credits

Administering and interpreting tests; evaluating and reporting data collected. Prerequisite: RPED 201 and 4 credits above 300 in RPED.

402, 602 HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION (2 + 0) 2 credits

Historical analysis of physical education. Philosophical bases and principles as guidelines for the profession. Prerequisite: RPED 201 and 4 credits above 300 in RPED.

403 KINESIOLOGY (3 + 0) 3 credits

Mechanical and anatomical analysis of motion as a basis for the teaching of RPED activities. Designed for those majoring in health science fields. Prerequisite: BIOL 262, 263.

405, 605 MOTOR LEARNING (3 + 0) 3 credits

Motor-perceptual system processes, with special attention to skill acquisition and skill levels as categories of human learning.

406, 606 PHYSIOLOGY OF EXERCISE (3 + 0) 3 credits

Physiological bases for planning RPED programs. Observations of respiratory, circulatory, nervous, and metabolic adjustments to physical exercise. Designed for those majoring in health science fields. Prerequisite: BIOL 262, 263.

407, 607 THERAPEUTIC ASPECTS OF MOVEMENT

(3 + 0) 3 credits

Therapeutic exercises and muscular activities adapted to individuals with physical handicaps, tensions, or low muscular activity levels.

420 COACHING CLINIC (2 + 0) 2 credits *S/U only*

Lectures and demonstrations in techniques of coaching major sports for men. A maximum of 4 credits is acceptable toward the satisfaction of any department, college, or university requirement.

421, 621 LIFETIME SPORTS PROGRAM (2 + 2) 3 credits

The analyses, development, and maintenance of skills. Purchase and maintenance of equipment. Prerequisite: 4 credits from RPED 220, 221, 222, 228, and 229.

422 WOMEN'S COACHING WORKSHOP (1 + 2) 2 credits

Instruction and participation in techniques of coaching women's sports. Maximum of 4 credits.

440, 640 RECREATION ADMINISTRATION (2 + 0) 2 credits

Comprehensive study of recreation administration including community organization, promotion, reports, public relations, and leadership selection. Prerequisite: RPED 201, 240 (4 credits) and 2 credits above 300.

450, 650 MOVEMENT EDUCATION FOR ELEMENTARY SCHOOL CHILDREN (1 + 2) 2 credits

Problem-solving approach to the teaching of motor skills to children. Prerequisite: 12 credits in RPED or elementary school teaching certificate.

451, 651 ADAPTED PHYSICAL EDUCATION

(3 + 0) 3 credits

Understanding the role of physical education in providing special education service to the handicapped. Basic information regarding growth and development of handicapped.

460, 660 HISTORY AND DEVELOPMENT OF THE DANCE

(2 + 0) 2 credits

Study of dance and its relationship to other arts. Prerequisite: RPED 261.

461, 661 WORKSHOP IN MODERN DANCE

(1 + 2) 2 credits

Recent trends in modern dance techniques and compositions. Maximum of 4 credits.

462 PHYSICAL EDUCATION WORKSHOP (0 + 2) 1 credit

Recent trends, changes, and techniques in physical education activities.

495, 695 FIELD STUDIES IN RECREATION 1 to 6 credits

Directed field work in observing recreation programs and facilities outside Nevada. Maximum of 6 credits.

496, 696 FIELD STUDIES IN PHYSICAL EDUCATION

1 to 6 credits

Directed field work in observing physical education programs and facilities outside Nevada. Maximum of 6 credits.

497, 697 SPECIAL PROBLEMS IN PHYSICAL EDUCATION

(2 + 0) 2 credits

Maximum of 4 credits. Prerequisite: 12 credits in RPED.

498 INDEPENDENT STUDY IN PHYSICAL EDUCATION

(1 or 2 + 0) 1 or 2 credits

Individual study and/or research in areas of physical education not covered in other undergraduate courses. Maximum of 4 credits.

499 INDEPENDENT STUDY IN RECREATION

(1 or 2 + 0) 1 or 2 credits

Individual study and/or research in areas of recreation not covered in other undergraduate courses. Maximum of 4 credits.

701 ADVANCED KINESIOLOGY (2 + 0) 2 credits

A detailed study of the application of anatomical, mechanical, and physiological principles to human motion and sports skill. Prerequisite: RPED 403.

702 CRITICAL ISSUES IN PHYSICAL EDUCATION

(2 + 0) 2 credits

Examination of basic philosophies and objectives of physical education in relation to current societal needs.

703 CURRICULUM CONSTRUCTION IN PHYSICAL EDUCATION (2 + 0) 2 credits

Social and physiological principles underlying the development of a physical education curriculum consistent with goals of secondary education. Prerequisite: 24 credits in RPED.

704 PHYSICAL EDUCATION SEMINAR (2 + 0) 2 credits

Intensive study and discussion of selected areas in physical education. Maximum of 4 credits. Prerequisite: 15 credits in RPED.

705 PHYSIOLOGICAL BASES OF CONDITIONING PROGRAMS (2 + 0) 2 credits

Systematic analysis of the physiological results of conditioning programs with particular emphasis on changes in muscular strength, endurance, and coordination. Application of basic principles to the organization of conditioning programs. Prerequisite: RPED 406.

771 ATHLETIC INJURIES II (1 + 2) 2 credits

Methods of caring for athletic injuries. Prerequisite: RPED 370.

792 READINGS IN PHYSICAL EDUCATION AND RECREATION (1 + 0) 1 credit

Designed to acquaint advanced students with recent professional literature in physical education and recreation. One conference period per week. Maximum of 3 credits. Prerequisite: 15 credits in RPED.

793 INDEPENDENT PROJECTS IN PHYSICAL EDUCATION (1 or 2 + 0) 1 or 2 credits

Prerequisite: 15 graduate credits in RPED courses.

795 COMPREHENSIVE EXAMINATION 0 credit *S/U only***796 PROFESSIONAL PAPER 3 credits**

Required of all graduate students who wish to complete an M.S. degree under Plan B.

797 THESIS 1 to 6 credits*Inactive Courses*

100 CANOEING

114 SQUARE DANCE

149 FOIL FENCING

150 BEGINNING SABRE FENCING

151 INTERMEDIATE AND ADVANCED SABRE FENCING

155 WRESTLING

164 SHOOTING

189 INTERCOLLEGIATE FIELD HOCKEY

199 INTERCOLLEGIATE WRESTLING

RELIGIOUS STUDIES (R ST)*Interdisciplinary Courses***101 INTRODUCTION TO RELIGIOUS STUDIES**

(3 + 0) 3 credits

Varieties of religious expression: belief, ritual, scripture, art. Religious issues: God, death, evil, salvation. Methods of studying religion.

RENEWABLE NATURAL RESOURCES (RNR)

A number of courses require field trips and laboratory exercises that involve additional student expenses. Consult with the department prior to registration.

100 CONCEPTS IN RENEWABLE NATURAL RESOURCES MANAGEMENT(3 + 0) 3 credits

Scientific and managerial principles applied for forest, range, recreation, wildlife, and watershed resources.

271 WILDERNESS SURVIVAL (3 + 0) 3 credits

Basic skills and concepts to survive under wilderness conditions, including attitude, fire building, shelters, terrain hazards, location and preparation of edible plants and animals, clothing and equipment. Training and preparation necessary to make mountain and desert wildlands an enjoyable recreation resource.

280 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in (a) forestry, (b) wildlife management, (c) range management, (d) outdoor recreation management, (e) watershed management, (f) wildland conservation.

292 RESOURCE MAPS AND LAND MEASUREMENTS (2 + 3) 3 credits

Kinds of maps, mapping techniques, and instruments used in resource management. Explanation of techniques, instruments, and maps. Encourages students to develop solutions to field problems. Field trips required. Prerequisite: trigonometry

301, 501 SILVICULTURE (3 + 3) 4 credits

Foundations and practice of silviculture, including tree physiology, tree improvements, silvics, forest ecology, and control of forest establishment, composition, and growth. Field trips required. Prerequisites: RNR 393, BIOL 212.

302, 502 QUANTITATIVE RESOURCE ANALYSIS (4 + 3) 5 credits

Statistical techniques used in quantifying renewable resources. Planning and execution of surveys, sampling systems, data analysis, and presentation. Field trips required. Prerequisite: AG 270, RNR 100, 345 or 393.

303, 503 FOREST PRODUCTS (2 + 3) 3 credits

Introduction to wood anatomy; technological studies of major wood processing industries and wood product properties. Methods and costs of wood product fabrication. Mandatory field trips. Advance approval required. Prerequisite: RNR 301, 302.

316, 416 INTERNSHIP

(1 to 3 + 0) 1 to 3 credits *S/U only*

Coordinated work study programs in industry or government under the direction of a faculty adviser. Written progress reports are prepared periodically and at the conclusion of the internship.

321 WILDLIFE CONSERVATION (3 + 0) 3 credits

Foundations, concepts, and skills of wildlife conservation, including wildlife physiology, behavior, population dynamics, economics, ecology, and human attitudes, as applied to the wildlife resources. Prerequisite: BIOL 201 or equivalent.

335, 535 CONSERVATION OF NATURAL RESOURCES (3 + 0) 3 credits

(See GEOG 335 for description.)

341, 541 PRINCIPLES OF RANGE MANAGEMENT

(2 + 3) 3 credits

Conservation, management, and multiple use of range

resources. Prerequisite: BIOL 201 or 202 or equivalent. Field trips required.

345 RANGE PLANTS (2 + 6) 3 credits

Identification, distribution, and management of the major range plants occurring in the nine grazing regions of the United States.

346, 546 RANGE RESOURCES FIELD TRIP 2 credits

One-week field trip for students with an interest in resource management. Range, wildlife, forest, recreation, and watershed problems and practices on private and public lands. Prerequisite: BIOL 333 and 334 or RNR 341, 393.

348, 548 RANGE IMPROVEMENTS (2 + 3) 3 credits

Artificial revegetation, fencing, water development; manipulation of vegetation (controlling) mechanically, chemically, and by fire. Field trips required. Prerequisite: RNR 341.

351, 551 PHOTOGRAMMETRY AND REMOTE SENSING (2 + 3) 3 credits

Measurements and interpretation of aerial photography and other remotely sensed data for the analysis and monitoring of renewable natural resources. Prerequisite: MATH 110, BIOL 101 or GEOL 101. Surveying or cartography recommended.

361, 561 RECREATION RESOURCE MANAGEMENT (3 + 0) 3 credits

The historical, sociological, ecological and legal basis for recreation resource management. Policies and programs of recreation resource management agencies. Prerequisite: RNR 100.

362, 662 NATURAL RESOURCES INTERPRETATION (2 + 3) 3 credits

Principles of natural and cultural history interpretation and interpretive planning. Communications and public relation aspects of resource management. Prerequisite: BIOL 212 or RNR/GEOG 335.

391 WILDLAND PROTECTION (2 + 3) 3 credits

Recognition of insect and disease damage, identification of causal agents, and concepts of prevention and control. Fire prevention suppression and use, including fire behavior. Fire weather and development of fire control organizations. Prerequisites: BIOL 212.

393 DENDROLOGY (2 + 3) 3 credits

Identification, taxonomy, distribution, and management implications of forest trees of the United States and Canada. Emphasizes commercial species. Prerequisite: BIOL 101 or 202.

401, 601 LOGGING SYSTEMS (2 + 6) 4 credits

Analysis and development of timber harvest plans for different forest types and silvicultural treatments with consideration of the transportation system, logging methods and costs, silvicultural and watershed protection principles, and taxation and legal requirements. Mandatory field trip. Advance approval required. Prerequisite: RNR 301, 302.

402, 602 FOREST MANAGEMENT (3 + 0) 3 credits

Organization of forest properties for sustained production of wood products; determination of rotation, regulation of cut and growing stock, management plans, and forest valuation. Prerequisite: RNR 301 and 302.

403, 603 ADVANCED PRINCIPLES OF FOREST MENSURATION AND MANAGEMENT

(2 + 3) 3 credits

Advanced studies related to forest products influencing growth and yield in even-aged and all-aged forests. Advanced principles of inventory planning. Current trends in forest mensuration and management. Electronic data processing of

forest inventory data. Case studies of forest management problems. Prerequisite: RNR 301, 302 and 402.

404, 604 INTRODUCTION TO REMOTE SENSING
(3 + 0) 3 credits

(See GEOL 404 for description.)

420, 620 INTEGRATED NATURAL RESOURCE MANAGEMENT (2 + 3) 3 credits

Coordinated approach to resource management to include the application of policy guidelines. Recognition is made of the diverse values that any particular land type might provide for various segments of the population, including quantitative analytical techniques. Field trips required. Prerequisite: senior standing.

421, 621 UPLAND GAME AND WATERFOWL MANAGEMENT (3 + 3) 4 credits

Ecology and management of upland game and waterfowl. Field trips required. Prerequisite: BIOL 212, 376.

423, 623 FISHERIES MANAGEMENT (2 + 3) 3 credits

Fish ecology, habitat requirements, distribution, and techniques as applied to modern gamefish management. Field trips required. Prerequisite: BIOL 212, 372, 373.

425, 625 BIG GAME MANAGEMENT (3 + 0) 3 credits

Big game ranges and populations and their management. Prerequisite: BIOL 212, 378.

427, 627 FISH AND WILDLIFE HABITAT MANAGEMENT
(2 + 3) 3 credits

Cultural practices, including mechanical, chemical, and biological techniques to manipulate both aquatic and terrestrial environments, meeting specific habitat objectives. Field trips required. Prerequisite: BIOL 212, RNR 302.

441, 641 RANGE AGROSTOLOGY (1 + 3) 2 credits

Taxonomy of grasses. Natural and artificial systems of classification, cytology and evolution, ecotypic variations, internal and external morphology. Description, identification, and habitat of grasses. Prerequisite: RNR 345 or BIOL 334. (Same as BIOL 441, 641.)

442, 642 REMOTE SENSING OF RENEWABLE NATURAL RESOURCES (2 + 3) 3 credits

Applied interpretation of remote sensing imagery for the inventory of renewable natural resources and the solution of wildlife management problems. Conventional aerial photography, high flight photography, multiband and ERTS imagery emphasized. Prerequisite: RNR 292.

450, 650 RANGE MANAGEMENT PLANNING
(2 + 3) 3 credits

Principles of grazing land management with emphasis on grazing system design and allotment management planning. Prerequisite: RNR 341, 345, 348.

462, 662 RECREATION SITE AND SYSTEMS PLANNING
(3 + 3) 4 credits

Principles of developed recreation site design and comprehensive systems planning for park and recreation areas. Prerequisite: RNR 361, 362.

463, 663 PRINCIPLES OF DISPERSED RECREATION
(2 + 3) 3 credits

Planning, control and management of dispersed recreation on public and privately owned forest and rangelands. Wilderness area recreation management. Prerequisite: RNR 361, 362.

464, 664 ADVANCED RECREATION RESOURCE MANAGEMENT (2 + 3) 3 credits

Application of site, systems and interpretive planning, behavioral principles, and ecosystems management to selected forest and range areas. Preparation of a recreation management plan or program. Prerequisite: RNR 362, 462.

480 INDEPENDENT STUDY 1 to 3 credits

Intensive study of a special problem in (a) forestry, (b) wildlife management, (c) range management, (d) outdoor recreation management, (e) watershed management.

482, 682 WATERSHED MANAGEMENT (2 + 3) 3 credits

Management of upland watershed for soil and water conservation. Use of mechanical and vegetative techniques and storage facilities in conservation practice. Field trips required. Prerequisite: PSW 222; 441 recommended.

484, 684 WATERSHED ANALYSIS (3 + 0) 3 credits

Detailed development and analysis of streamflow, surface water quality, and land use parameters leading to a comprehensive report on the environment, resources, and pollution problems of a small watershed. Field trips required. Prerequisite: RNR 482.

485, 685 SPECIAL TOPICS (1 to 3 + 0) 1 to 3 credits

Presentation and review of recent research, innovations, and developments. These may include such areas as multiple resource management, photogrammetric interpretation, water quality, and game preserve management. Maximum of 6 credits.

490, 690 ENVIRONMENTAL ISSUES IN PUBLIC LAND MANAGEMENT (3 + 0) 3 credits

Critical presentations and discussions of selected topics. (Same as GEOG 431-432, 631-632.)

493, 693 RANGE AND FOREST ECOLOGY (2 + 3) 3 credits

Ecologic and economic interpretations of major range and forest communities. The application of autecological synecological principles to range and forest ecosystems. Ecosystem influences and modeling. Field trips required. Prerequisite: BIOL 212 or equivalent.

494, 694 ADMINISTRATION AND POLICY (3 + 0) 3 credits

Public administration applied to environmental management. Developmental history of resource agencies and policies. Administrative procedures, policy formation, decision-making, and public participation principles as related to the present and future political environment of natural resource protection, development, and management. Prerequisite: RNR 100, 101. (Same as GEOG 434.)

496, 696 LEGAL PROBLEMS IN LAND AND WATER
(3 + 0) 3 credits

Analysis of Prior Appropriation and Riparian Doctrines. Brief review of organic public land acts and legal interpretation of case histories. Prerequisite: senior standing in resource oriented program or professional experience.

701 ADVANCED RESOURCE MANAGEMENT 1 to 3 credits

Special advanced course work in (a) forestry, (b) wildlife, (c) range management, (d) outdoor recreation management, (e) watershed management. Prerequisite: graduate standing. Maximum of 6 credits.

711 ADVANCED RESEARCH CONCEPTS (3 + 0) 3 credits

Analysis of theories, techniques, and applications, drawn from any discipline, that have present or potential utility in resource management.

736 PERSPECTIVES IN RENEWABLE NATURAL RESOURCES (3 + 0) 3 credits

Man's influence on and use of renewable natural resources in a physical and social context. Case histories and field trips. Prerequisite: undergraduate degree in some phase of natural resources and/or biological science. (Same as GEOG 736.)

793 INDIVIDUAL STUDY 1 to 3 credits

Intensive study of a special problem in (a) forestry, (b) wildlife management, (c) range management, (d) outdoor recreation

management, (e) watershed management. Prerequisite: graduate standing. Maximum of 6 credits in any area.

795 COMPREHENSIVE EXAMINATION 0 credit *S/U only*

796 PROFESSIONAL PAPER 1 to 2 credits *S/U only*

Required of all graduate students who wish to complete the master of science degree under Plan B.

797 THESIS 1 to 6 credits

Thesis may be written in area of (a) forestry, (b) wildlife management, (c) range management, (d) outdoor recreation management, (e) watershed management.

Inactive Courses

101 RENEWABLE NATURAL RESOURCES LABORATORY
(2 + 3) 1 credit

291 FUNDAMENTALS OF FOREST AND RANGE FIRE CONTROL (1 + 0) 1 credit

426, 626 GAME MAMMAL POPULATIONS (3 + 0) 3 credits

465, 665 POLLUTION AND AESTHETIC VALUES
(3 + 0) 3 credits

743 RANGE AND PASTURE LITERATURE 1 or 2 credits

760 RANGE ECOSYSTEM ANALYSIS (1 + 3) 2 credits

SOCIAL AND HEALTH RESOURCES (SHR)

220 INTRODUCTION TO SOCIAL AND HEALTH SERVICES (4 + 0) 4 credits

Social and health problems with focus on the institutions and professions which address those problems. Interdisciplinary teamwork and the systems approach emphasized.

230 CRISIS INTERVENTION (3 + 0) 3 credits

Analysis of types of crises, crises theory, effects of crises on the community, methods of and community resources for crisis intervention. Prerequisite: PSY 101.

234 CLINICAL INTERVIEWING SKILLS (2 + 3) 3 credits

Analysis and methods for communication with clients. Strategies for dealing with specific problems in social and health care settings.

320, 520 INDIVIDUAL IN SOCIETY (3 + 0) 3 credits

Human growth and behavior within a sociocultural context, with special attention to professional practice and social policy formation in the helping professions. Prerequisite: SHR 220.

330, 530 METHODS OF THE SOCIAL SERVICES I
(3 + 0) 3 credits

Principles of casework, group work, and community organization. Intervention at individual, family, peer group, and community levels. Prerequisite: SHR 220.

331, 531 METHODS OF THE SOCIAL SERVICES II
(3 + 0) 3 credits

Continuation of SHR 330. To be taken concurrently with SHR 480. Prerequisite: SHR 330.

335, 535 TEAM APPROACH TO SOCIAL WORK AND HEALTH CARE (3 + 0) 3 credits

Interdisciplinary studies of teamwork issues. Teams observe care providers and decision making in community settings. Prerequisite: SHR 234.

337, 537 VOCATIONAL REHABILITATION
(2 + 0) 2 credits

Analysis of the problems, policies, and methods of rehabilitating educationally, physically, or mentally-handicapped persons to socially constructive roles. Use of case studies. Prerequisite: SHR 220.

340 HUMAN VALUES AND PROFESSIONAL ETHICS
(3 + 0) 3 credits

Focuses on value systems and major ethical issues in social and health care such as confidentiality, truth-telling and codes of professional behavior.

354 PERSONAL HEALTH AND LIFE STYLES
(3 + 0) 3 credits

Focus on health, illness prevention and health-care decision-making. Examination of stress, life style, environmental influences, chronic disorders, nutrition, fitness and family health. Cross-listed with RPED 354.

360, 560 THE LAW AND SOCIAL SERVICES
(2 + 0) 2 credits

Legal foundations and structures of practice and administration in social services. Legal aspects of all modes of intervention in social problems. Prerequisite: SHR 220.

370, 570 THE CHILD IN THE COMMUNITY (3 + 0) 3 credits
Analysis of the development and current programs in child welfare including the legal status of children. Prerequisite: SOC 101 or PSY 101.

371 HEALTH OF THE SCHOOL-AGED CHILD
(3 + 0) 3 credits

Major health problems encountered in school-age children. An interdisciplinary approach to health management and health awareness programs for children and youth.

372 WOMEN: SOCIAL AND HEALTH CARE CONCERNS
(3 + 0) 3 credits

Community resources, health care, sexism and problems unique to women in American society.

374, 574 SOCIAL INTERVENTION IN ALCOHOL AND DRUG ABUSE (3 + 0) 3 credits

Identification, treatment, prevention, and control of drug addiction and alcoholism.

376 AGING: SOCIAL AND HEALTH CARE CONCERNS
(2 + 2) 3 credits

Methods, policies and programs pertinent to social and health services delivery systems for the aged. Includes exploration of an individual's ability to age successfully.

378 CONTEMPORARY ISSUES IN SOCIAL WELFARE OR HEALTH (3 + 0) 3 credits

Analysis of current trends. Possible topics: guaranteed income, processes in social legislation, family and group therapy, health care systems, holistic health care, national health insurance. Maximum of six credits.

390 INTRODUCTION TO SOCIAL WORK RESEARCH
(3 + 0) 3 credits

Survey and application of research methods for practitioners, community organizers, and other professionals in social service settings. Examines evaluation and interpretation of research and statistical analysis. For social work majors only.

430, 630 SOCIAL SERVICES IN DEATH AND DYING
(2 + 0) 2 credits

Examines attitudes on death and associated grief processes. Prerequisite: one of the following: SHR 230, 320, or 376.

450, 650 SOCIAL WELFARE POLICY (3 + 0) 3 credits

Analysis of the development and implementation of social welfare programs and services. Examines the social worker's role in the policy making process. Prerequisite: SHR 220.

452 ADVANCED STUDIES IN HEALTH SYSTEMS AND POLICY (3 + 0) 3 credits

Emphasis on comparative health systems, the formation of governmental and private health policy, and the allocation of health resources. Prerequisite: SHR 220.

470 HEALTH EDUCATION SEMINAR (3 + 0) 3 credits
Emphasis on program development and on major issues and innovations.

480-481 FIELD EXPERIENCE IN SOCIAL WORK
(2 + 12) 5 credits each *S/U only*

One-year course combining a two-hour seminar with at least twelve hours of field experience in an approved social or correctional agency under the supervision of an experienced agency worker. Prerequisite: SHR 330.

486, 686 SUPERVISION AND ADMINISTRATION IN SOCIAL WORK (3 + 0) 3 credits

Analysis and application of the theory and methods of supervision and administration in health and social work settings. Emphasis on case studies. Prerequisite: SHR 330.

488 FIELD EXPERIENCE IN HEALTH CARE

1 to 3 credits *S/U only*

Special health problems as identified by health agencies. For preprofessional majors only. Maximum of 6 credits.

496, 696 DIRECTED INDEPENDENT RESEARCH

1 to 3 credits

Guided research in an area of mutual interest to the student and faculty. Maximum of 6 credits.

498, 698 SPECIAL PROBLEMS 1 to 3 credits

Maximum of 6 credits.

499, 699 INDIVIDUAL READING 1 to 3 credits

Supervised reading with regular conferences between student and instructor. Maximum of 6 credits.

SOCIOLOGY (SOC)

101 PRINCIPLES OF SOCIOLOGY (3 + 0) 3 credits

Sociological principles underlying the development, structure, and function of culture, society, human groups, personality formation, and social change.

102 SOCIAL PROBLEMS (3 + 0) 3 credits

Selected social problems, their causation, and proposed solutions.

202 AMERICAN SOCIETY (3 + 0) 3 credits

Analysis of the structure of American society; its historical development and its contemporary institutional forms.

204 COMPARATIVE SOCIOLOGY (3 + 0) 3 credits

Comparative analysis of social structure in traditional and modern societies. Emphasis on a macro-sociological approach in the study of socioeconomic processes in different social systems.

205 ETHNIC GROUPS IN CONTEMPORARY SOCIETIES

(3 + 0) 3 credits

(See ANTH 205 for description.)

207 INTRODUCTION TO MAIN CURRENTS IN SOCIOLOGICAL THOUGHT (3 + 0) 3 credits

The works of classical and contemporary sociological theorists. Emphasis on the development of sociological theory in the United States. Prerequisite: SOC 101.

210 STATISTICAL METHODS (3 + 2) 4 credits

(See PSY 210 for description.)

261 SOCIAL PSYCHOLOGY I: THE PERSON AND SOCIAL INFLUENCE (3 + 0) 3 credits

(See PSY 261 for description.)

275 MARRIAGE AND THE FAMILY (3 + 0) 3 credits

Sex roles, dating patterns, mate selection, marital interaction and success, and alternative forms of marriage and family life.

327, 527 COMPUTER APPLICATIONS IN THE SOCIAL SCIENCES (3 + 0) 3 credits

Role of the computer and its application to a variety of contemporary problems in the social sciences. Prerequisites: SOC 210 or PSY 210, SOC 101 or PSY 101 (Same as PSY 327.)

333 SOCIOLOGY OF RELIGION (3 + 0) 3 credits

Sociological and historical examination of institutionalized and non-institutionalized religion with emphasis on religions in America. Prerequisite: SOC 101.

342 SOCIAL STRATIFICATION (3 + 0) 3 credits

Analysis of major theories of stratification and inequality. Historical development of class systems with emphasis on the social class structure of American society. Prerequisite: SOC 101.

350 SOCIAL CHANGE (3 + 0) 3 credits

Institutional change emphasizing the comparative perspective. A survey of various theories of social change and their applications in the analysis of various historical and contemporary societies. Prerequisite: SOC 101.

352 JUVENILE DELINQUENCY (3 + 0) 3 credits

Causes, conditions, and prevention of juvenile crime. Prerequisite: SOC 101. Not open to those who have taken SOC 366 for credit. (Same as SHR 352.)

362 SOCIAL PSYCHOLOGY II: GROUP STRUCTURE AND PROCESS (3 + 0) 3 credits

Topics include interpersonal attraction, power, status, group norms, leadership, group problem-solving, roles, and role strain. Prerequisite: PSY 101 or SOC 101. (Same as PSY 362.)

366 CRIMINOLOGY (3 + 0) 3 credits

Major theories and research findings on the causes of delinquency and crime. Prerequisite: SOC 101. Not open to those who have taken SOC 352 for credit. (Same as SHR 366.)

367 PENOLOGY (3 + 0) 3 credits

Processes through which the apprehended offender passes: arrest, detention, probation, incarceration, and parole. Critical evaluation of various programs for treatment and prevention of crime. Prerequisite: SOC 352 or 366. (Same as C J 367.)

371 SOCIAL ORGANIZATION (3 + 0) 3 credits

Examination of major social institutions in terms of structure, function, and change. Prerequisite: SOC 101.

373 POLITICAL SOCIOLOGY (3 + 0) 3 credits

Sociological theories and concepts brought to bear on various aspects of political theory and behavior. Prerequisite: SOC 101.

376 THE COMMUNITY (3 + 0) 3 credits

Description and analysis of American urban, suburban, and rural communities including communes. Emphasis on variation in community institutions and processes. Prerequisite: SOC 101.

379, 579 ETHNIC AND RACE RELATIONS (3 + 0) 3 credits

Social, psychological, economic, and political aspects of minority problems in American society. Prerequisite: SOC 101. Not applicable toward an advanced degree in sociology.

391 BUREAUCRACY AND LARGE SCALE ORGANIZATIONS (3 + 0) 3 credits

Sociology of modern large scale organizations with emphasis on government agencies, corporations, political parties, and labor unions. Prerequisite: SOC 101.

392 RESEARCH METHODS (3 + 0) 3 credits

Major techniques and problems encountered in both survey and experimental research in the behavioral sciences. Prerequisite: PSY 101 or SOC 101. (Same as PSY 392.)

- 393 INDUSTRIAL SOCIOLOGY** (3 + 0) 3 credits
Examinations of various work settings such as factories and "white collar" industries and their impact upon individual employees, emphasizing the development of alienation. Prerequisite: SOC 101.
- 401-402, 601-602 ADVANCED GENERAL SOCIOLOGY** (3 + 0) 3 credits
Intensive survey of major areas of sociology. Prerequisite: SOC 101 or admission to honors program.
- 404, 604 SOCIOLOGY OF DEVELOPING SOCIETIES** (3 + 0) 3 credits
Analysis of major theories of development as applied to the experience of contemporary Third World societies. The socioeconomic development in countries of Asia, Africa, and Latin America examined from a comparative-historical perspective. Prerequisite: SOC 101.
- 422, 622 SOCIAL PSYCHOLOGICAL THEORIES** (3 + 0) 3 credits
Review of theories in social psychology. Emphasizes classical studies and the developmental trends which led to current perspectives in social psychology. Prerequisite: SOC 101 or PSY 101. (Same as PSY 422.)
- 453, 653 THE SOCIOLOGY OF SEX** (3 + 0) 3 credits
Socialization to sex roles, effects of sex on personality, relations between the sexes in organizational and informal groups, sexual deviancy, and alternative sex roles. Prerequisite: SOC 101.
- 463, 663 SOCIAL PSYCHOLOGY III: SOCIAL PSYCHOLOGY OF EDUCATION** (3 + 0) 3 credits
(See PSY 463 for description.)
- 464, 664 CONFORMITY AND DEVIATION** (3 + 0) 3 credits
Systematic analysis of the sources of normative and non-normative conduct. The nature and types of social deviations, their causes, description, and consequences. Prerequisite: SOC 101.
- 480, 680 THE FAMILY** (3 + 0) 3 credits
Forms and functions of the family as a social institution. Emphasis on present trends. Prerequisite: SOC 101. Not applicable toward an advanced degree in sociology.
- 485, 685 SOCIOLOGY OF KNOWLEDGE** (3 + 0) 3 credits
Reciprocal influence of social structure on personal perception and values. Prerequisite: SOC 101.
- 487, 687 SOCIAL MOVEMENTS AND COLLECTIVE BEHAVIOR** (3 + 0) 3 credits
Processes involved in collective behavior and social movements; includes such topics as rumor, panic, riots, disasters, and social movement organizations. Prerequisite: SOC 101.
- 491, 691 HISTORY OF SOCIAL THOUGHT** (3 + 0) 3 credits
Development of social and economic thought from prehistoric times to the period of the English and French Enlightenment. Prerequisite: SOC 101.
- 492, 692 CONTEMPORARY SOCIAL THEORY** (3 + 0) 3 credits
Development of social theory from the Enlightenment to the present day. Emphasis on recent developments in theory. Prerequisite: SOC 101 and 491.
- 494 SOCIAL FOUNDATIONS OF ECONOMIC LIFE** (3 + 0) 3 credits
Influence of noneconomic institutions on the productive relations of society. The family, the political community, religion, and culture as they affect the economic structure of modern society.
- 497, 697 SPECIAL TOPICS** 1 to 3 credits
Seminar on selected problems from the study of sociology. Maximum of 6 credits. Prerequisite: SOC 101.
- 499, 699 SPECIAL PROBLEMS IN SOCIOLOGY** 1 to 3 credits
Maximum of 6 credits.
- 701 INDIVIDUAL READING** 1 to 5 credits
Supervised reading with regular conferences between student and instructor. Maximum of 6 credits.
- 702 GRADUATE RESEARCH** 1 to 5 credits
Research projects in sociology carried out under supervision. Maximum of 6 credits.
- 704 SEMINAR IN SOCIAL ORGANIZATION** (3 + 0) 3 credits
Consideration of selected topics in social organization.
- 705 SEMINAR IN SOCIAL THEORY** (3 + 0) 3 credits
Consideration of selected topics on sociological theory.
- 706 INTERMEDIATE STATISTICS I** (3 + 0) 3 credits
(See PSY 706 for description.)
- 707 INTERMEDIATE STATISTICS II** (3 + 0) 3 credits
(See PSY 707 for description.)
- 718 RESEARCH METHODS IN SOCIAL PSYCHOLOGY** (3 + 0) 3 credits
(See PSY 718 for description.)
- 725 SOCIALIZATION** (3 + 0) 3 credits
Social psychological approaches to the individual, including field theory, theories of balance and congruency, and other conceptual approaches to social perception, interpersonal attraction, and stability of personality. (Same as PSY 725.)
- 726 INTERPERSONAL TRANSACTIONS** (3 + 0) 3 credits
Basic processes of social interaction including person perception, communication, attraction, and power in social relationships. (Same as PSY 726.)
- 727 GROUP BEHAVIOR** (3 + 0) 3 credits
Analysis of behavior in small and intermediate size groups, including organizational behavior and intergroup relations. (Same as PSY 727.)
- 728 COLLECTIVE BEHAVIOR AND MASS SOCIETY** (3 + 0) 3 credits
Analysis of social behavior at the societal level, including attitude formation, mass communication, crowd behavior, and social movements. (Same as PSY 728.)
- 737 SURVEY RESEARCH METHODS** (3 + 0) 3 credits
Strategies and techniques of survey research, including planning, sampling, questionnaire construction, coding, and data analysis. (Same as PSY 737.)
- 738 METHODS AND INNOVATIONS IN ASSESSMENT** (3 + 0) 3 credits
(See PSY 738 for description.)
- 764 SPECIAL TOPICS IN SOCIAL PSYCHOLOGY** (3 + 0) 3 credits
(See PSY 764 for description.)
- 795 COMPREHENSIVE EXAMINATION** 0 credits *S/U only*
- 797 THESIS** 1 to 6 credits
- 799 DISSERTATION** 1 to 24 credits
- Inactive Course*
- 384 POPULATION** (3 + 0) 3 credits

SPEECH AND THEATRE (SPTH)

100 INTRODUCTION TO THE THEATRE

(3 + 0) 3 credits

Survey of the art and craft of the theatre including a study of representative plays.

113 FUNDAMENTALS OF SPEECH COMMUNICATION

(3 + 0) 3 credits

Principles and theories of speech communication. Participation in public speaking and interpersonal communication activities.

118 ORIENTATION TO PERFORMING THEATRE

(3 + 0) 3 credits

Lecture, discussion, and performance encompassing the philosophy and techniques of interpretation, acting and directing.

119 ORIENTATION TO TECHNICAL THEATRE

(3 + 0) 3 credits

Lecture and discussion encompassing the philosophy and techniques of technical theatre.

203, 403 NEVADA REPERTORY COMPANY

3 credits each *S/U only*

Performance and production of plays for the University Theatre season. Includes instruction and research relative to the selected program of plays. Since company assignments are announced after registration the student may enroll in the semester following participation. Maximum of 9 credits for each course.

210 INTRODUCTION TO COMMUNICATION

(3 + 0) 3 credits

Survey of theories of human communications; study of the nature of speech communication process.

212 INTRODUCTION TO COMMUNICATION RESEARCH

(3 + 0) 3 credits

Basic approaches to research in speech communication. Introduction to historical, analytical, critical, and empirical methods of investigation.

217 ARGUMENTATION AND DEBATE (3 + 0) 3 credits

Theory and practice of oral argumentative discourse; intensive study of argumentative principles and debate fundamentals; participation in class discussions, speeches, and debates.

219, 220 PROJECTS IN TECHNICAL THEATRE

(3 + 0) 3 credits each

Specialized instruction in the theory and practice of such areas as scenery, lighting, sound properties, and costuming. Prerequisite: SPTH 119.

221 INTERPRETATION (3 + 0) 3 credits

Oral interpretation of the forms of literature. Lectures and performance.

250-251, 350-351 LABORATORY THEATRE: ACTING

(2 + 3) 3 credits each

Lectures and discussion providing fundamentals for laboratory workshops. Prerequisite: SPTH 118.

260 THEATRE SPEECH (3 + 0) 3 credits

Study of and practice in using the actor's voice.

315 SMALL GROUP COMMUNICATION (3 + 0) 3 credits

Speech communication in face-to-face and coacting groups. Analysis of group cohesiveness, leadership, role structure, information processing, and decision-making.

319 LEGAL ARGUMENTATION (3 + 0) 3 credits

Study and practice of argumentation theory in law, utilizing legal research, writing, and speaking; designed especially for the prelaw student.

320 PUBLIC SPEAKING (3 + 0) 3 credits

Theory and practice in the composition and delivery of public speeches. Advanced techniques of message development, organization, and style. Prerequisite: SPTH 113.

321 ADVANCED INTERPRETATION (3 + 0) 3 credits

Advanced techniques of oral expression. Prerequisite: SPTH 221.

329 BUSINESS AND PROFESSIONAL SPEAKING

(3 + 0) 3 credits

Study and practice of the principles of public speaking, conference methods, and group discussions which are applicable to the business and professional community.

330 STAGE LIGHTING (3 + 0) 3 credits

Theory and practice of lighting design and control. Prerequisite: SPTH 119.

340 STAGE COSTUMING (3 + 0) 3 credits

Theory and practice of costume design.

360 EXPERIMENTAL THEATRE (3 + 0) 3 credits

Concentrates on specific areas of contemporary theatre practice, such as mime, improvisations, mixed media, musical theatre, etc. Specific content announced in advance. Maximum of 6 credits.

410, 610 NONVERBAL COMMUNICATION (3 + 0) 3 credits

Principles, implications, and effects of nonverbal communication, the ways in which unspoken elements modify communication.

411, 611 INTERPERSONAL COMMUNICATION

(3 + 0) 3 credits

Investigation into the role of interpersonal communication in human relations.

412, 612 INTERCULTURAL COMMUNICATION

(3 + 0) 3 credits

Factors important to meaningful communication across cultures with emphasis on intercultural differences in North America.

419, 619 SCENIC DESIGN (3 + 0) 3 credits

Art of scenic interpretation through play analysis; rendering, color, style, ground plans, construction plans; research in history of design and period styles. Prerequisite: SPTH 119.

421, 621 READERS THEATRE (3 + 0) 3 credits

Preparation and performance of literary selections for a theatrical environment.

427, 627 COMMUNICATION AND SOCIAL CHANGE

(3 + 0) 3 credits

Role of communication in social change, including protest movements, political campaigns, and advertising strategies.

428, 628 ORGANIZATIONAL COMMUNICATION

(3 + 0) 3 credits

Analysis of communication functions and networks in organizational settings. Study of organizational structures and dynamics and their effect upon the communication process.

431-432, 631-632 CHILDREN'S THEATRE

(2 + 3) 3 credits

Laboratory and conference course offering practical experience in a children's theatre.

433, 633 COMPARATIVE THEORIES OF HUMAN COMMUNICATION (3 + 0) 3 credits

Review and comparative analysis of contemporary behavioral theories of human communication.

434, 634 COMMUNICATION AND CONFLICT RESOLUTION (3 + 0) 3 credits

Role of communication in conflict and negotiation with

special emphasis on business, governmental, and educational organizations.

435, 635 PERSUASION (3 + 0) 3 credits

Review of contemporary theory and research in persuasive communication; the role of speech communication in changing beliefs, attitudes, values, intentions, and behavior.

450, 650 THEORIES AND STYLES OF ACTING

(3 + 0) 3 credits

Study and practice in period acting styles. Prerequisite: SPTH 118.

452-453, 652-653 LABORATORY THEATRE:

PLAYWRITING (2 + 3) 3 credits each

Lectures and discussion to provide fundamentals for laboratory workshop.

454-455, 654-655 LABORATORY THEATRE: DIRECTING

(2 + 3) 3 credits each

Lectures and discussion providing fundamentals for laboratory workshops. Prerequisite: Two semesters of Laboratory Theatre Acting.

471, 671 HISTORY OF THEATRE I (3 + 0) 3 credits

Development of theatrical art from its beginning to 1642.

472, 672 HISTORY OF THEATRE II (3 + 0) 3 credits

Development of theatrical art from 1642 to present.

473, 673 SEMINAR IN THEATRICAL PERIODS

(3 + 0) 3 credits

Intensive study into a specific historical period or significant movement, subject to be listed in class schedule. Maximum of 6 credits.

480, 680 COMMUNICATION TRAINING SYSTEMS

(3 + 0) 3 credits

Development and evaluation of innovative speech communication training programs and classroom methods.

490, 690 SPECIAL PROBLEMS IN SPEECH

COMMUNICATION 1 to 3 credits

Designed for students who wish to study in depth a particular area of general speech, rhetoric and public address, or communication theory. Maximum of 6 credit.

495, 695 INDEPENDENT STUDY 1 to 3 credits

Open to juniors and seniors specializing in speech communication and theatre. Maximum of 8 credits.

700 RESEARCH METHODS (3 + 0) 3 credits

Research methodologies in the areas of speech communication and theatre arts. Required of all M.A. candidates in speech and theatre.

710 SEMINAR: SMALL GROUP COMMUNICATION

(3 + 0) 3 credits

Critical review of literature in problem-solving processes within the small group.

719 SEMINAR: TECHNICAL THEATRE (3 + 0) 3 credits

Intensive study of specialized techniques of stagecraft.

720 SEMINAR: INTERPERSONAL COMMUNICATION

(3 + 0) 3 credits

Critical review of the literature in human relations within the small group.

721 SEMINAR: ORAL INTERPRETATION (3 + 0) 3 credits

Study of history and theories of the oral interpretation of literature from the Greeks to the present.

729 THEATRE CRITICISM AND AESTHETICS

(3 + 0) 3 credits

Historical study of theories of theatre criticism and their relationship to modern aesthetic theories.

730 SEMINAR: ORGANIZATIONAL COMMUNICATION

(3 + 0) 3 credits

Communication behavior and the evaluation-decision process in human organizations.

740 SEMINAR: PUBLIC COMMUNICATION

(3 + 0) 3 credits

History and critical analysis of rhetorical advocacy.

750 SEMINAR: PERSUASION (3 + 0) 3 credits

Review of the literature on strategies and techniques of persuasive discourse.

760 SEMINAR: COMMUNICATION THEORY

(3 + 0) 3 credits

Study of communication theory as it applies to the design, research, and management of communication systems.

792 SPECIAL PROJECTS IN THEATRE (3 + 0) 3 credits

Enrollment with approval of advisory committee as supplement to existing curriculum. Variety of options, i.e., design project, directed research, performance, recital, etc. Maximum of 6 credits.

793 INDEPENDENT STUDY 1 to 3 credits

Maximum of 6 credits.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

797 THESIS 1 to 6 credits

798 INTERNSHIP: APPLIED COMMUNICATION

SYSTEMS 1 to 3 credits

Professional work experience in close association with selected executives—managers in education, business, and governmental agencies. Maximum of 6 credits.

Inactive Courses

105-106, 205-206, 305-306, 405-406 INTERCOLLEGIATE

FORENSICS (0 + 3) 1 credit each

430, 630 MODERN THEORIES OF PUBLIC

COMMUNICATION (3 + 0) 3 credits

SPEECH PATHOLOGY AND AUDIOLOGY (SPA)

259 PHONETICS (3 + 0) 3 credits

Practical course in the science of speech sounds with emphasis on transcription of the International Phonetic Alphabet.

310 SPEECH AND LANGUAGE DEVELOPMENT

(3 + 0) 3 credits

Traditional and psycholinguistic approaches to language and speech development in the individual.

320 INTRODUCTION TO GENERAL SEMANTICS

(3 + 0) 3 credits

Emphasizes the distinctively human functions of creating and using symbols. Reveals the relationship of symbol systems and the bodily process of symbolizing experience to the development of personality and society. Prerequisite: SPA 310.

356 SURVEY OF SPEECH PATHOLOGY (3 + 0) 3 credits

Designed particularly for the classroom teacher. Stresses correction of minor speech problems and understanding of more involved disorders.

357 COMMUNICATION SCIENCE (3 + 0) 3 credits

Anatomical, neurological, physiological, and physical bases of speech and voice production.

359 ASSESSMENT OF COMMUNICATION DISORDERS

(3 + 0) 3 credits

Developmental, environmental, organic, and psychogenic

bases of disorders of speech and voice. Prerequisite: SPA 259 and 357.

360 METHODS OF CLINICAL MANAGEMENT

(3 + 0) 3 credits

Therapy and clinical management of problems of defective speech. Includes clinical equipment and public school speech correction programs. Prerequisite: SPA 359.

361 ARTICULATION DISORDERS (2 + 3) 3 credits

Assessment and treatment of phonemic disorders.

362 INTRODUCTION TO AUDIOLOGY (3 + 0) 3 credits

Physics of sound, anatomy and physiology of the ear, medical and surgical aspects of hearing loss, basic audiometric techniques, and hearing conservation.

363 PRACTICUM IN SPEECH PATHOLOGY

(0 + 6) 2 credits

Supervised clinic experience in the treatment and management of children and adults with speech and hearing defects. Prerequisite: SPA 259, 357, 359, 360. Maximum of 12 credits.

364 PREVENTION OF COMMUNICATIVE DISORDERS

(3 + 6) 3 credits

Familiarization with developmental landmarks of communication, causes of communicative disorders, and application of methods for prevention and early intervention of communicative disorders.

365 ADVANCED AUDIOLOGICAL TESTING

(3 + 0) 3 credits

Calibration of test equipment. Rationale and procedures used in the evaluation of hearing loss. Laboratory exercises. Prerequisite: SPA 362.

459, 659 SEMINAR IN CLINICAL PROCEDURE

(2 + 0) 2 credits

Advanced study in specialized areas of the field. Maximum of 8 credits.

460, 660 ASPECTS OF SPEECH PATHOLOGY AND

AUDIOLOGY (1 + 0) 1 credit

Pathologies affecting the auditory and speech mechanisms including central nervous system involvement. Special emphasis on medical and surgical treatment and speech and language pathology from the physician's viewpoint.

461, 661 ADVANCED SPEECH PATHOLOGY

(2 + 0) 2 credits

Diagnosis of speech disorders, with special emphasis on stuttering and allied problems and organic speech disorders.

463, 663 INTERNSHIP IN SPEECH PATHOLOGY AND

AUDIOLOGY (0 + 18 or 24) 6 or 8 credits

Clinical experience in the diagnosis and management of children and adults with speech or hearing defects. Experience to be gained in an off-campus rehabilitation program.

464, 664 PRACTICUM IN AUDIOLOGICAL TESTING

(0 + 3 or 6) 1 or 2 credits

Supervised clinical procedures in descriptive and diagnostic hearing examinations. May be repeated. Prerequisite: SPA 362, 365.

465, 665 MEDICAL AUDIOLOGY (3 + 0) 3 credits

Differential hearing tests and their interpretation from a medical and surgical viewpoint.

466, 666 REHABILITATION FOR HEARING

HANDICAPPED (3 + 0) 3 credits

Problems of adjustment and language involvement of the hearing handicapped. Use of amplification, auditory training, and lipreading principles. Prerequisite: SPA 310 and 362.

467, 667 LANGUAGE DISORDERS IN CHILDREN

(3 + 0) 3 credits

Conditions leading to delayed language in children. Emphasis on methods of teaching language. Prerequisite: SPA 310.

494 WORKSHOPS AND INSTITUTES 1 to 3 credits

Intensive study of special topics in speech pathology and audiology. Maximum of 6 credits.

495 INDEPENDENT STUDY 1 to 3 credits

Intensive study of special topics in speech pathology or audiology on an individual basis. Maximum of 6 credits.

720 INTRODUCTION TO GRADUATE STUDY

(3 + 0) 3 credits

Research methods in the communicative arts and sciences.

721 CRANIOFACIAL DISORDERS (2 + 3) 3 credits

Causes and treatment of communicative disorders related to cleft palate and lip. The interdisciplinary team approach will be stressed.

751 DYSPHASIA (2 + 3) 3 credits

Language and speech disorders related to central nervous system deficits.

752 STUTTERING (2 + 3) 3 credits

Disorders of speech rhythm.

753 COMMUNICATION DISORDERS IN THE CEREBRAL

PALSIED (3 + 0) 3 credits

Causes, assessment, and treatment of communicative disorders among the cerebral palsied.

754 SEMINAR IN PHYSICAL ANOMALIES (2 + 0) 2 credits

Anatomical and neurological deficits of the speech mechanism.

757 EXPERIMENTAL PHONETICS (3 + 0) 3 credits

Speech production and reception and the physical characteristics of speech.

759 SEMINAR IN CLINICAL PROCEDURES (2 + 0) 2 credits

Advanced study in specialized areas of the field. Maximum of 8 credits.

762 DISORDERS OF VOICE (2 + 3) 3 credits

Causes, diagnosis, and treatment of disorders of voice.

765 ADVANCED AUDIOLOGY (2 + 3) 3 credits

Calibration of test equipment. Rationale and procedures used in the evaluation of hearing loss. Laboratory exercises. Prerequisite: SPA 362.

767 ADVANCED PRACTICUM (0 + 6) 2 credits

Supervised clinical experience in the treatment and management of children and adults with complex communicative disorders.

768 SEMINAR IN AUDIOLOGY (3 + 0) 3 credits

Special topics; hearing aids, psychophysics of audition; current research and publications in clinical hearing measurement or rehabilitation. Maximum of 6 credits.

769 SEMINAR IN AUDIOLOGICAL MEASUREMENT

(2 + 0) 2 credits

Special topics in the measurement of hearing, hearing aids, psychophysics of audition, and special tests.

793 INDEPENDENT STUDY 1 to 3 credits

794 WORKSHOPS AND INSTITUTES 1 to 3 credits

Intensive study of special topics in speech pathology or audiology. Usually offered during Summer Session. May be repeated to a maximum of 8 credits.

795 COMPREHENSIVE EXAMINATION 0 credit S/U only

797 THESIS 1 to 6 credits

SURGERY (SURG)**451 CLERKSHIP (2 + 30) 12 credits**

Hospital and ambulatory clinical experience with preceptorial supervision to develop knowledge (practical, theoretical, basic science), technical and interpersonal skills basic to practicing surgery.

461 ADVANCED CLINICAL EXPERIENCES

(1 + 96) 2-32 credits

Selected practical experiences with patients, with faculty advisement and supervision. Elective clerkships available in Trauma, General Surgery at Southern Nevada Memorial Hospital and in Vascular Surgery at Reno Veterans Administration Medical Center.

490 INDEPENDENT STUDY 1 to 3 credits**VETERINARY MEDICINE (V M)****100 VETERINARY MEDICINE (1 + 0) 1 credit**

An orientation course limited to students intending to pursue veterinary medicine as a career.

101 ANIMAL CARE (3 + 0) 3 credits

Basic information in the care and handling of animals.

102 ANIMAL HOSPITAL PROCEDURES

(1 + 3) 2 credits

Veterinary ethical conduct, nursing, small animal grooming, receptionist and secretarial duties, record keeping.

202 ANIMAL CARE (3 + 0) 3 credits

Basic information on the anatomy, physiology, and pharmacology of laboratory animals. Prerequisite: BIOL 201.

408, 608 DISEASES OF DOMESTIC ANIMALS

(3 + 0) 3 credits

Cause, pathogenesis, and control of infectious and non-infectious diseases of domestic animals with emphasis on those

occurring in Nevada. Prerequisite: A SC 407; BIOL 306 recommended.

413, 613 ANATOMY OF LARGE ANIMALS (2 + 6) 4 credits

Comparative study of the anatomy of the skeletal, articular, muscular, digestive, urinary, reproductive, endocrine, nervous, circulatory, integumentary, and sensory systems of large, primarily domestic, animals. Prerequisite: A SC 204 or BIOL 101.

416 VETERINARY CLINICS (0 + 9) 3 credits

An internship in veterinary hospitals. Prerequisite: must have completed all other requirements for a B.S. in Veterinary Science under the animal health option, or being taken concurrently with other required courses in the final semester of this option.

713 PHYSIOLOGICAL SURGERY (1 + 3) 2 credits

Surgical techniques used to obtain specialized information from ruminant animals. Restricted to graduate thesis requiring surgery on nonlaboratory animals. Prerequisite: graduate standing, BIOL 306 or equivalent, BIOL 366 or V M 413, V M 408-608. Offered in odd-numbered years.

WOMEN'S STUDIES (W S)**101 INTRODUCTION TO WOMEN'S STUDIES**

(3 + 0) 3 credits

Interdisciplinary introduction to the methods and concerns of Women's Studies drawing from history, psychology, sociology, law, and language concerns.

ZOOLOGY

(See *Biology*)



University Faculty

The date following each description designates the time of original appointment to the faculty of the university. (Dates of resignations and reappointments are not indicated.) A second date indicates the beginning of service in present rank when this differs from the date of original appointment.

Chancellor, University of Nevada System

Robert M. Bersi, Ph.D.

B.A., University of the Pacific, 1958; M.A., Stanford University, 1963; Ph.D., 1966.

President, Reno Campus

Joseph N. Crowley, Ph.D.

B.A., University of Iowa, 1959; M.A., Fresno State College, 1963; Ph.D., University of Washington, 1967. (1966-1979)

Retired

Archie R. Albright, B.S., Area Extension Agent, Cooperative Extension Service.

Bernard A. Anderson, Ph.D., Professor of Speech, Emeritus.

Arthur Baker III, Ph.D., Dean of Mines, Emeritus.

Fred C. Batchelder, M.S., Extension Agent, Lyon County, Cooperative Extension Service, Emeritus.

Samuel M. Basta, Ed.D., Professor and Director of External Relations, College of Education, Emeritus.

E. Maurice Beesley, Ph.D., Professor of Mathematics, Emeritus.

Lena H. Berry, B.S., Home Agent, Churchill County, Emeritus.

Enrico U. Bertalot, Ph.D., Associate Professor of Foreign Languages and Literatures, Emeritus.

Juan M. Bilbao, M.A., Basque Studies Bibliographer, Emeritus.

John A. Bonell, M.S., P.E., Professor of Civil Engineering, Emeritus.

Frank W. Bowdish, Ph.D., P.E., Professor of Chemical Engineering, and Mineral Technologist, Nevada Mining Analytical Laboratory, Emeritus.

Harry H. Bradley, Sr., B.S., Lecturer and Coordinator of Community Development, Emeritus.

George A. Broten, Ed.D., Professor of Recreation and Physical Education, Emeritus.

Harold N. Brown, Ed.D., Professor of Education, Emeritus.

Russell Wilfrid Brown, Ph.D., Distinguished Professor of Microbiology, Assistant to the Dean.

Ferren W. Bunker, B.S., County Extension Agent in Charge, Cooperative Extension Service, Emeritus.

Eleanore Bushnell, Professor of Political Science, Emeritus.

John N. Butler, M.S., Professor of Metallurgy, Emeritus.

Clayton Carpenter, P.E.E., Physical Plant Engineer, Emeritus.

Kenneth J. Carpenter, M.A., Librarian, Emeritus.

Harry M. Chase, Jr., Ph.D., Professor of Political Science, Emeritus.

Howard H. Christensen, Ph.D., Associate Professor of Industrial Mechanics, Emeritus.

Donald G. Cooney, Ph.D., Professor of Biology, Emeritus.

Howard P. Cords, Ph.D., Professor of Agronomy and Agronomist, Emeritus.

Raymond C. Cox, M.S., State Management and Operations Officer, Emeritus.

Harold E. Cude, B.S., Assistant Professor of Engineering Technologies, Emeritus.

Alex di C. Dandini, D.S.L., D.H.E., Ph.D., Sc.D., Consultant to Engineering Research and Development Center and Professor of Foreign Languages and Literatures, Emeritus.

J. Kirk Day, B.S., County Extension Agent in Charge, Humboldt and Northern Lander Counties, Emeritus.

Meryl William Deming, Ph.D., Professor of Chemistry, Emeritus.

Alene R. Dickinson, Ed.D., Professor of Nursing, Emeritus.

David F. Dickinson, Ph.D., P.E., Professor of Electrical Engineering, Emeritus.

Grace M. Donehower, M.A., Associate Director of Off-Campus Programs and Independent Study, Emeritus.

Kathryn H. Duffy, S.J.D., Professor of Managerial Sciences, Emeritus.

Laraine E. Dunn, Ph.D., Associate Professor of Biochemistry and Soil Science, and Associate Research Chemist, Emeritus.

Russell R. Elliott, Ph.D., Professor of History, Emeritus.

Marjorie J. Elmore, Ed.D., Professor of Nursing, Emeritus.

Charles F. Fell, M.S., P.E., Professor of Electrical Engineering, Emeritus.

Georgia N. Felts, B.S., Home Agent, Eureka and White Pine Counties

Herbert D. Fine, B.S., Assistant Professor of Mining Engineering and Assistant Mining Engineer, Emeritus.

John Willard Garberson, M.A., Associate Professor of Journalism, Emeritus.

Louie A. Gardella, B.S., Extension Agent, Washoe County, Emeritus.

Vincent P. Gianella, Ph.D., Professor of Geology, Emeritus.

Robert M. Gorrell, Ph.D., Vice President for Academic Affairs and Professor of English, Emeritus.

John Gottardi, M.A., Professor of Foreign Languages, Emeritus.

Robert S. Griffin, Ph.D., Professor of Speech and Drama, Emeritus.

Cyrus O. Guss, Ph.D., Professor of Chemistry, Emeritus.

Andrew A. Halacsy, Ph.D., P.E., Professor of Electrical Engineering, Emeritus.

Claude W. Hammond, Met.E., Associate Professor of Metallurgy, Emeritus.

Everett W. Harris, Ph.D., P.E., Professor of Mechanical Engineering, Emeritus.

M. Henry Hattori, B.B.A., Controller, Emeritus.

M. Gertrude Hayes, B.S., Home Agent, Washoe County, Emeritus.

George Herman, A.M., Lecturer in English, Emeritus.

Robert A. Hume, Ph.D., Professor of English, Emeritus.

Austin E. Hutcheson, Ph.D., Professor of History and Political Science.

Ralph A. Irwin, Ph.D., Administrative Vice President and Professor of Psychology, Emeritus.

- James G. Jensen, B.S., Extension Agent, Esmeralda, Southern Lander and Nye Counties, Emeritus.
- Austin E. Jones, M.S., Research Associate in Seismology.
- Winthrop G. Jones, M.S.E.E., Assistant Professor of Engineering Technologies.
- Helen Joslin, Lecturer in Art, Emeritus.
- Lawton B. Kline, Ph.D., Associate Professor of Foreign Languages, Emeritus.
- Jack Knoll, Ph.D., Professor of Biology, Emeritus.
- Charlton G. Laird, Ph.D., Professor of English, Emeritus.
- Sigmund W. Leifson, Ph.D., Professor of Physics, Emeritus.
- C. Robert Locke, M.D., Director of Student Health Service, Emeritus.
- Kenneth D. Loeffler, J.D., Associate Professor of Managerial Sciences.
- Catherine C. Loughlin, M.A., Associate Professor and Extension Specialist of Home Economics, Emeritus.
- Alice B. Marsh, M.S., Associate Professor of Home Economics, Emeritus.
- John Edward Martie, M.P.E., Professor of Health, Physical Education, and Recreation, Emeritus.
- Wayne S. Martin, Ed.D., Director, Continuing Education, Emeritus.
- John A. McCormick, M.P.A., Associate Professor of Natural Resources, Natural Resource Specialist, Emeritus.
- Lon S. McGirk, Jr., Ph.D., Associate Professor of Geology.
- Christian W.F. Melz, Ph.D., Professor of Foreign Languages, Emeritus.
- Mark W. Menke, B.S., Extension Agent, Elko County, Emeritus.
- Melvin P. Miller, B.S., County Extension Agent in Charge, Lincoln County.
- William C. Miller, Ph.D., Professor of Speech and Drama, Emeritus.
- Joe Eugene Moose, Ph.D., Professor of Chemistry; Dean of the Graduate School; Director of Research, Emeritus.
- John W. Morrison, Ph.D., Professor of English, Emeritus.
- Z. Iona Mowrer, M.S., Associate Professor of Recreation and Physical Education, Emeritus.
- James K. Murphy, Grants and Contracts Administrator, Emeritus.
- Harve P. Nelson, Ph.D., Professor of Mining Engineering, Emeritus.
- Norman E. Nichols, B.S., Livestock Extension Agent and County Extension Agent, Emeritus.
- Chauncey W. Oakley, M.Ed., Lecturer in Mathematics, Emeritus.
- Thomas D. O'Brien, Ph.D., Dean of the Graduate School and Professor of Chemistry, Emeritus.
- Dan L. Oppleman, Ed.D., Professor of Medical Education, Emeritus.
- Maurica G. Osborne, M.L.S., Life and Health Science Librarian, Emeritus.
- Walter S. Palmer, Jr., Ph.D., Professor of Accounting and Information Systems, Emeritus.
- Ray K. Petersen, M.S., Associate Agronomist, Experiment Station, Emeritus.
- Edward L. Pine, C.E., Vice President for Business, Emeritus.
- Chester F. Pinkerton, M.S., Lecturer in Mathematics, Emeritus.
- Alden J. Plumley, M.A., Professor of Economics, Emeritus.
- Donald G. Potter, Ed.D., Director and Professor of Audio-Visual Communications, Emeritus.
- R. Borden Reams, Director of Development and Ambassador in Residence, Emeritus.
- Albert J. Reed, M.S., Animal Husbandman, Agricultural Extension Service, Emeritus.
- Calvin H. Reed, Ph.D., Professor of Education, Emeritus.
- Joseph H. Robertson, Ph.D., Professor of Range Ecology, Emeritus.
- Robert T. Roelofs, Ph.D., Professor of Philosophy, Emeritus.
- LaVerne B. Rollin, A.B., Associate Technical Editor, Nevada Bureau of Mines and Geology, Emeritus.
- John Torney Ryan, Shop Superintendent and Instructor, Engineering Shops, Emeritus.
- Irving Jesse Sandorf, M.S., Professor of Electrical Engineering, Emeritus.
- Vernon E. Scheid, Ph.D., Professor of Mineral Sciences; Dean of the Mackay School of Mines; Director of the Nevada Bureau of Mines and Geology and Nevada Mining Analytical Laboratory, Emeritus.
- Otto R. Schulz, B.S., Agronomist, Cooperative Extension Service, Emeritus.
- William T. Scott, Ph.D., Professor of Physics, Emeritus.
- Jack B. Selbig, M.Ed., Director, Counseling and Testing and Foreign Student Adviser, Emeritus.
- C. Eugene Shepherd, Lecturer in Physics, Emeritus.
- Benjamin L. Smith, M.B.A., C.P.A., Professor of Accounting and Information Systems, Emeritus.
- Victor E. Spencer, M.S., Soils Research Chemist, Experiment Station.
- Joseph F. Stein, Ph.D., Associate Director, Cooperative Extension Service; Professor of Animal Science, Emeritus.
- Lloyd L. Stitt, M.S., Associate Pesticide Specialist, Biochemistry, Emeritus.
- Mildred Swift, M.S., Professor of Home Economics, Emeritus.
- Thomas T. Tucker, Jr., Ed.D., Professor of Educational Administration and Higher Education, Emeritus.
- Walter H. Voskuil, Ph.D., Distinguished Visiting Professor of Mineral Economics, Emeritus.
- Robert C. Weems, Jr., Ph.D., Professor and Dean of the College of Business Administration; Director of the Bureau of Business and Economic Research, Emeritus.
- Howard J. Weeth, Ph.D., Professor of Physiology and Animal Science, Physiologist, Emeritus.
- Frits W. Went, Ph.D., Distinguished Professor of Botany, Professor of Botany, Emeritus.
- Loring R. Williams, Ph.D., Professor of Chemistry, Emeritus.
- John S. Winston, M.Sc., Professor of Metallurgy, Emeritus.
- John H. Wittwer, B.S., Agricultural Agent, Emeritus.
- Benjamin M. Wofford, Ph.D., Associate Dean and Professor of Economics, Emeritus.
- R. Edwin Worley, Ph.D., Professor of Physics, Emeritus.
- Charles R. York, Sr., B.S., County Extension Agent in Charge, Churchill County, Emeritus.

Active

- Jack Robert Abbott, M.S.W., Adjunct Instructor.
B.A., Whitman College, 1950; M.S.W., University of Washington, 1958. (1970)

- Gary Adams, Ph.D., Clinical Assistant Professor.
B.A., California State University, Long Beach, 1968; M.A., 1970; Ph.D., Southern Illinois University, 1973. (1980)
- David L. Adkisson, M.D., Clinical Assistant Professor.
D.O., Colorado Osteopathic Physicians & Surgeons, 1954; M.D., California College of Medicine, 1962; M.D., Central University, Facultad de Ciencias, 1963. (1976)
- Joanne A. Aglione, M.S., Clinical Instructor.
B.S., State University of New York, 1972; M.S., 1974. (1980)
- Salim Akhtar, Ph.D., Associate Professor of Chemical and Metallurgical Engineering and Associate Metallurgist, Nevada Mining Analytical Laboratory.
B.S., University of Panjab, 1958; M.S., Montana School of Mines, 1963; Ph.D., Stanford University, 1968. (1969-1971)
- Dennis Alexander, Ph.D., Associate Professor of Speech and Theatre.
B.A., Linfield College, 1963; M.A., University of Hawaii, 1967; Ph.D., Ohio State University, 1969. (1981)
- Rosemarie Alexander, M.A., Assistant Professor of Journalism.
B.A., Michigan State University, 1971; M.A., 1976. (1981)
- Kenneth S. Allen, M.D., Clinical Assistant Professor.
M.D., University of St. Louis, College of Medicine, 1966. (1979)
- William Allen, M.A., Head Basketball Coach.
A.B., Marshall University, 1959; M.A., 1962. (1980)
- Philip L. Altick, Ph.D., Professor of Physics.
B.S., Stanford University, 1955; M.A., University of California, Berkeley, 1960; Ph.D., 1963. (1963-1975)
- John C. Altrocchi, Ph.D., Professor of Behavioral Science and Psychology.
A.B., Harvard University, 1950; Ph.D., University of California, Berkeley, 1957. (1970)
- Loretta A. Amaral, M.L.S., Librarian.
B.A., University of California, Berkeley, 1952; M.L.S., 1963. (1972)
- Stanley Ames, M.D., Clinical Assistant Professor.
B.A., New York University, 1956; M.D., Albert Einstein College of Medicine, 1960. (1978)
- S. Darlene Ammons, M.A., Assistant Coordinator, Basque Studies Program.
B.A., University of Nevada Reno, 1968; M.A., 1973. (1979)
- Fred Anderson, M.D., Clinical Professor.
B.S., University of Nevada Reno, 1928; B.A., Oxford University, 1932; M.D., Harvard Medical School, 1934. (1980)
- Grant P. Anderson, M.D., Clinical Assistant Professor.
M.D., University of New Mexico, 1974. (1979)
- James T. Anderson, Ph.D., P.E., Professor of Mechanical Engineering.
B.S., Michigan State College, 1943; M.S., 1948; D.I.C., Ph.D., University of London, 1952. (1963-1976)
- Katherine Klaiach Anderson, M.N., Instructor of Nursing.
B.S., University of Nevada Reno, 1970; M.N., University of Washington, 1977. (1978)
- Robert J. Andrew, M.D., Clinical Assistant Professor.
B.A., Washington University, 1965; M.D., Vanderbilt University, 1969. (1977)
- Allen R. Anes, M.D., Clinical Assistant Professor.
B.A., Brooklyn College, 1965; M.D., Wayne State University, 1971. (1977)
- Mary B. Ansari, M.B.A., Mines Librarian.
A.B., University of Illinois, 1961; M.L.S., 1963; M.B.A., Western Michigan University, 1967. (1969-1975)
- Nazir Ahmad Ansari, Ph.D., Professor of Managerial Sciences.
B.S., Banaras University, India, 1955; M.C., 1957; Ph.D., University of Illinois, 1964. (1967-1973)
- David O. Antonuccio, Ph.D., Adjunct Assistant Professor.
B.A., Stanford University, 1975; M.A., University of Oregon, 1979; Ph.D., 1980. (1981)
- Raymond H. Antosh, M.S., Captain, Assistant Professor of Military Science.
B.S., University of Florida, 1971; M.S., Florida Institute of Technology, 1979. (1979)
- Agnes Apicella, M.S., Clinical Instructor.
B.S.Ed., St. John's University, 1960; M.S., State University College at Buffalo, 1975. (1980)
- Michael Apicella, M.D., Clinical Professor.
A.B., College of the Holy Cross, 1959; M.D., State University of New York, 1963. (1979)
- Rena Mae Armstrong, M.S., Instructor of Animal Science and Jr. Animal Scientist.
B.S., California State Polytechnic University, 1977; M.S., University of Nevada Reno, 1979. (1979)
- William H. Arnett, Ph.D., Professor of Entomology; Entomologist, Biochemistry.
B.S., Mississippi State University, 1955; M.S., 1957; Ph.D., Kansas State University, 1960. (1960-1974)
- Robert W. Artinian, Ph.D., Associate Professor of Foreign Languages and Literatures.
B.A., Union College, 1963; Ph.D., Cornell University, 1967. (1979)
- John L. Artz, M.S., Professor, Range Science, Extension Range Scientist, Renewable Natural Resources.
B.S.F., Montana State University, 1950; M.S., University of Nevada Reno, 1969. (1966-1977)
- Merle F. Askren, Ph.D., Adjunct Assistant Professor.
B.A., University of San Francisco, 1975; Ph.D., University of Nevada Reno, 1979. (1980)
- James B. Atcheson, M.D., Clinical Associate Professor.
B.S., University of Nevada, 1962; M.D., University of Utah, 1966. (1975-1981)
- Patricia A. Atcheson, Graphic Artist. (1981)
- Glendel W. Atkinson, M.A., Associate Dean and Professor of Economics.
B.A., Humboldt State College, 1963; M.A., University of Oklahoma, 1966. (1967-1977)
- Gorka Aulestia, M.A., Lexicographer/Instructor.
Ordination Seminarios of San Sebastian, 1958; Graduado, Universidad de Deusto, 1966; Certificat Pratique ler, Universite de Paris, 1971; M.A., University of Nevada Reno, 1978. (1980)
- Christopher T. Ault, M.A., Lecturer in Physical Education; Head Football Coach in Intercollegiate Athletics.
B.S., University of Nevada Reno, 1969; M.A., 1972. (1976)
- Ronald M. Avery, M.D., Clinical Assistant Professor.
B.S., Arkansas A & M College, 1958; M.D., University of Arkansas School of Medicine, 1962. (1975)
- Carl W. Backman, Ph.D., Professor of Sociology.
A.B., Oberlin College, 1948; A.M., Indiana University, 1950; Ph.D., 1954. (1955-1966)
- Rex T. Baggett, M.D., Clinical Associate Professor.
B.S., University of Oklahoma, 1958; M.D., 1962. (1971)
- Frank Geile Baglin, Ph.D., Associate Professor of Chemistry.
B.S., Michigan State University, 1963; Ph.D., Washington State University, 1967. (1968-1972)
- Curtiss M. Bailey, Ph.D., Professor and Geneticist, Animal Science.
B.S., University of Wisconsin, 1952; M.S., Texas A & M College, 1954; Ph.D., University of Wisconsin, 1960. (1960-1971)
- John A. Bailey, Ed.D., Professor of Counseling and Guidance Personnel Services.
B.S.Ed., University of Nebraska, 1956; M.Ed., 1957; Ed.D., 1963. (1963-1970)
- Ronald G. Bailey, M.A., Assistant Professor of Recreation and Physical Education.
B.A., Colorado State College, 1963; M.A., Sacramento State College, 1972. (1970-1979)
- George F. Bajor, M.D., Clinical Assistant Professor.
B.S., University of California at Los Angeles, 1955; M.D., St. Louis University, 1959. (1981)
- Susan C. Baker, Ph.D., Associate Professor of English.
B.A., Rice University, 1967; M.A., University of Texas, 1971; Ph.D., 1975. (1975-1981)

- William W. Baker, M.S., P.E., Associate Professor of Engineering Technologies.
B.S., University of Wyoming, 1959; M.S., University of Nevada Reno, 1972. (1965-1981)
- Dewitt C. Baldwin, Jr., M.D., Professor and Assistant Dean for Rural Health.
B.A., Swarthmore College, 1943; M.D., Yale University, 1949. (1971)
- Michele A. Baldwin, S.M., Assistant Professor of Family and Community Medicine.
B.A., University of Washington, 1957; S.M., Simmons College, 1966. (1972-1976)
- Daniel A. Ball, M.S., County Extension Agent for Douglas County.
B.S., Kansas State University, 1976; M.S., University of California, Riverside, 1980. (1981)
- Jerry L. Ballew, B.S., Head Swimming Coach, Intercollegiate Athletics, and Lecturer, Recreation and Physical Education.
B.S., University of Utah, 1965. (1977-1978)
- Peter L. Bandurraga, Ph.D., Adjunct Professor.
A.B., Stanford University, 1966; M.A., University of California, Santa Barbara, 1968; Ph.D., 1977. (1981)
- Terence Banich, M.D., Clinical Senior Instructor.
B.S., Loyola University, 1968; M.D., 1972; M.S., University of Illinois, 1975. (1981)
- David A. Barber, M.E., Extension Youth Agent, Washoe County, Cooperative Extension Service.
B.S., Oregon State University, 1963; M.E., University of Nevada Reno, 1973. (1970-1975)
- James D. Barger, M.D., Clinical Professor.
A.B., St. Mary's College, 1939; B.S., University of North Dakota, 1939; M.D., University of Pennsylvania, 1941. (1974)
- Edmund R. Barmettler, Ph.D., Assistant to the Dean and Director for Management Services, College of Agriculture.
B.S., University of California, Davis, 1952; M.Ed., 1953; Ph.D., Ohio State University, 1958. (1958-1967)
- George Barnes, Ph.D., Professor of Physics.
A.B., Pomona College, 1942; M.S., University of Colorado, 1946; Ph.D., Oregon State College, 1955. (1957-1961)
- Mauvine R. Barnes, M.D., Clinical Assistant Professor.
B.S., Ursinus College, 1946; M.D., Women's Medical College of Pennsylvania, 1957. (1971)
- Patricia J. Barnes, M.A., Lecturer in English.
A.B., University of Illinois, 1964; M.A., University of Chicago, 1980. (1981)
- Roberta J. Barnes, Ph.D., Dean of Students.
B.S., University of California, Berkeley, 1955; M.A., University of New Mexico, 1958; Ph.D., University of California, Berkeley, 1976. (1959-1971)
- Robert Barnet, M.D., Clinical Professor.
M.D., Loyola University, 1954. (1980)
- Earl S. Barnhill, J.D., Professor of Criminal Justice.
B.S., Kansas State University, 1956; J.D., Washburn University, 1959. (1973)
- Robert N. Barone, Ph.D., Associate Professor of Managerial Sciences.
A.B., Georgetown University, 1966; Ph.D., 1972. (1978-1981)
- Mack R. Barrington, M.S., Assistant Research Scientist, Renewable Natural Resources.
B.S., Oklahoma State University, 1975; M.S., 1978. (1978)
- Charles P. Bartl, Ph.D., Professor and Coordinator of Educational Computer Facilities and Programs.
B.A., Sacramento State College, 1952; M.A., 1956; Ph.D., University of Denver, 1958. (1966-1980)
- Royce S. Beals, Manager, Field Operations, Oil School, State Fire Service Training Program. (1980)
- Glenn Bedell, Ph.D., Assistant Professor of Biology.
B.A., Greenville College, 1960; M.Ed., University of Illinois, 1965; Ph.D., 1972. (1980)
- John H. Bees, Jr., B.S., Accountant/Auditor.
A.A.S., Westchester Community College, 1975; B.S., State University of New York, 1977. (1980)
- William C. Behrens, M.S., Extension Livestock Specialist, Animal Science.
B.S., Colorado Agricultural and Mechanical College, 1947; M.S., 1955. (1956-1973)
- Claude M. Belcourt, M.D., Clinical Assistant Professor.
M.D., University of Montreal, 1951. (1975)
- Elaine J. Bell, M.S., Adjunct Assistant Research Professor.
B.S., University of Wisconsin, 1971; M.S., Arizona State University, 1974. (1980)
- John W. Bell, M.S., Associate Engineering Geologist, Nevada Bureau of Mines and Geology.
A.B., Augustana College, 1968; M.S., Arizona State University, 1974. (1976-1979)
- Robert R. Belliveau, M.D., Clinical Assistant Professor.
B.A., Clark University, 1953; M.D., Washington University, 1957. (1980)
- Nathan B. Benedict, Ph.D., Assistant Professor of Biology.
B.A., Duke University, 1976; M.S., University of California, Davis, 1979; Ph.D., 1981. (1980)
- Darrell D. Bennett, M.D., Clinical Assistant Professor.
B.S., University of Nevada, 1962; M.D., University of Utah, 1967. (1975-1977)
- Kim M. Bennett, M.S., Research Assistant, Internal Medicine.
B.S., Mississippi State University, 1971; M.S., Texas A & M University, 1977. (1980)
- Alison Benson, B.A., Assistant Director, Financial Aid.
B.A., University of Nevada Reno, 1975. (1979-1981)
- Lynne E. Benson, B.S., Nursing Assistant Instructor, Sierra Nevada Job Corps Center.
B.S., San Diego State University, 1981. (1981)
- William B.A. Bentley, M.D., Clinical Assistant Professor.
B.S., Yale University, 1945; M.D., Cornell University, Medical College, 1948. (1980)
- Jo L. Bentz, B.S., Research Associate, Junior Geologist, Nevada Bureau of Mines and Geology.
B.S., California State College, Sonoma, 1978. (1981)
- Berch Berberoglu, Ph.D., Assistant Professor of Sociology.
B.S., Central Michigan University, 1972; M.A., 1974; Ph.D., University of Oregon, 1977. (1977)
- Joseph S. Beres, M.D., Director, Student Health Services.
M.D., Indiana University, 1960. (1979)
- James E. Berg, B.S., Field Supervisor of Biochemistry.
B.S., University of Washington, 1973. (1977)
- Emanuel Berger, M.D., Clinical Assistant Professor.
B.S., College of the City of New York, 1929; M.D., St. Louis School of Medicine, 1933. (1981)
- James A. Bernardi, Ph.D., Associate Professor of Speech and Theatre.
B.A., University of Nevada Reno, 1964; M.A., University of Oregon, 1966; Ph.D., University of Denver, 1976. (1972-1979)
- Theodore E. Berndt, M.D., Clinical Assistant Professor.
B.S., University of Wisconsin-Madison, 1963; M.D., 1966. (1981)
- Constance A. Bernhardt, M.Ed., Assistant Director, Career Planning and Placement.
A.B., University of Illinois, 1976; M.Ed., 1978. (1978)
- Elizabeth Bernheimer, M.P.H., Assistant Professor, Family and Community Medicine.
B.M., New England Conservatory of Music, 1946; M.P.H., University of Hawaii, 1969. (1978)
- Easwar Bhoothalingom, M.D., Clinical Assistant Professor.
B.Sc., Trivandrum University College, 1957; M.D., Stanley Medical School, Madras, India, 1961. (1981)
- Alan Bible, LL.D., Adjunct Professor.
B.A., University of Nevada, 1930; LL.B., Georgetown University, 1934; LL.D., Rider College; LL.D., Georgetown Law School, 1970. (1977)
- G. Kim Bigley, M.D., Assistant Professor of Internal Medicine.
B.A., University of California at San Diego, 1973; M.D., University of Chicago, 1977. (1981)

- John W. Bird, Ph.D., P.E., Professor of Civil Engineering. B.C.E., University of Minnesota, 1956; M.S.C.E., 1964; Ph.D., University of Nevada Reno, 1970. (1964-1978)
- William R. Bishop, Ph.D., Associate Dean and Professor of Medical Education. B.A., University of Oregon, 1950; M.S., 1952; Ph.D., 1960; Ph.D., 1962. (1979)
- Richard E. Bitterman, M.Ed., County Extension Agent in Charge, Cooperative Extension Service. B.S., Cornell University, 1955; M.Ed., University of Maryland, 1964. (1976)
- Richard A. Bjur, Ph.D., Assistant Professor of Pharmacology. B.A., Lewis and Clark College, 1963; Ph.D., University of Colorado, 1973. (1975-1979)
- Franklin R. Black, M.D., Clinical Associate Professor. A.B., Albion College, 1938; M.D., University of Michigan Medical School, 1941. (1971)
- Bruce E. Blackadar, Ph.D., Associate Professor of Mathematics. A.B., Princeton University, 1970; M.A., University of California, Berkeley, 1974; Ph.D., 1975. (1975-1979)
- William Blaine, M.S., County Extension Agent. B.S., University of Illinois, 1966; M.S., 1968. (1981)
- Robert E. Blesse, M.A., Special Collections Librarian. B.A., California State University, Chico, 1970; M.A., 1972. (1981)
- Clifton R. Blincoc, Ph.D., Professor of Biochemistry; Research Chemist. B.S., University of Missouri, 1947; M.A., 1948; Ph.D., 1955. (1956-1969)
- Stanley Block, M.D., Clinical Associate Professor. B.S., Worcester Polytechnic Institute, 1959; M.A., University of California at Berkeley, 1962; M.D., University of California at Los Angeles, 1965. (1981)
- Gary Blomquist, Ph.D., Associate Biochemist. B.S., University of Wisconsin, 1969; Ph.D., Montana State University, 1973. (1977-1979)
- Stephen H. Bloomfield, M.D., Assistant Professor of Family and Community Medicine. B.S., University of Florida, 1968; M.D., 1972. (1979)
- Richard Ray Blurton, Ph.D., Adjunct Professor. A.B., Stanford University, 1947; Ph.D., University of Southern California, 1968. (1981)
- Kathleen Ann Boardman, M.A., Lecturer in English. A.B., University of Nebraska, 1969; M.A., University of Washington, 1970. (1979)
- Phillip C. Boardman, Ph.D., Associate Professor of English. B.A., University of Nebraska, 1967; M.A., 1969; Ph.D., University of Washington, 1973. (1974-1979)
- Thomas Bodensteiner, M.D., Clinical Assistant Professor. B.S., Creighton University, 1957; M.A., State University of Iowa, 1960; M.D., Creighton University, 1967. (1976)
- Verle R. Bohman, Ph.D., Professor of Animal Science; Animal Nutritionist, Experiment Station. B.S., Utah State University, 1949; M.S., 1951; Ph.D., Cornell University, 1952. (1952-1963)
- Dale W. Bohmont, Ph.D., Consultant in Administration, College of Agriculture. B.S., University of Wyoming, 1948; M.S., 1950; Ph.D., University of Nebraska, 1952; M.P.A., Harvard University, 1959. (1963)
- Robert W. Bonar, M.D., Medical Director, Sierra Nevada Job Corps Center, and Assistant Professor of Family and Community Medicine and Pediatrics. B.S., College of Idaho, 1966; M.D., George Washington University, 1970. (1972-1979)
- Kathy S. Bond, M.Ed., Program Assistant, Research & Educational Planning Center. B.S., Oregon State University, 1970; M.Ed., University of Nevada Reno, 1974. (1980-1981)
- Harold F. Bonham, Jr., M.S., Mining Geologist, Nevada Bureau of Mines and Geology. B.A., University of California, Los Angeles, 1954; M.S., University of Nevada Reno, 1963. (1963-1974)
- Don N. Book, M.S., Assistant Professor of Statistics and Station Statistician, Agricultural Experiment Station, College of Agriculture. B.S., Northwestern State College, 1965; M.S., 1968. (1977-1981)
- Roscoe M. Booth, Ed.D., Professor of Music. B.A., University of Colorado, 1948; M.A., 1949; Ed.D., Colorado State College, 1964. (1965-1976)
- William S. Bossack, M.D., Clinical Assistant Professor. B.S., University of Miami, 1970; M.D., 1974. (1980)
- Bridgett A. Boulton, M.A., Geologic Editor, Nevada Bureau of Mines and Geology. B.A., University of Nevada Las Vegas, 1978; M.A., 1980. (1981)
- Frederick T. Boulware, Jr., M.D., Clinical Associate Professor. B.S., Lincoln University, 1958; M.D., Meharry Medical College, 1965. (1975-1976)
- Joel Bower, M.D., Clinical Assistant Professor. B.S., St. Francis College, 1958; M.D., University of Pennsylvania, 1962. (1978)
- Spotswood D. Bowers, Jr., Ph.D., Professor of Chemistry. B.S., Yale University, 1942; Ph.D., 1951. (1981)
- Fredric M. Boyden, M.D., Clinical Professor. B.A., Hastings College, 1957; M.D., University of Nebraska Medical Center, 1960. (1971-1979)
- Darwin Bradfield, B.S., County Extension Agent in Charge, Cooperative Extension Service. B.S., Utah State University, 1947. (1962-1978)
- Allen H. Brady, Ph.D., Professor of Mathematics. B.S., University of Colorado, 1956; M.S., University of Wyoming, 1959; Ph.D., Oregon State University, 1964. (1979)
- Thomas W. Brady, M.D., Clinical Associate Professor. A.B., University of Kansas, 1959; M.D., Kansas University, 1963. (1971-1979)
- Carlos Enrique Brandenburg, Ph.D., Clinical Psychologist, Sierra Nevada Job Corps Center and Clinical Assistant Professor. B.A., University of Nevada Las Vegas, 1969; M.A., 1971; Ph.D., University of Nevada Reno, 1978. (1979)
- Kenneth A. Braunstein, M.A., Associate Professor of Criminal Justice. B.A., San Jose State College, 1965; M.A., Washington State University, 1966. (1968-1973)
- Charles R. Brees, Sr., M.S., P.E., Professor of Civil Engineering and Dean of the College of Engineering. B.S., University of Nevada, 1948; M.S., 1956. (1948-1973)
- William E. Brenner, M.D., Professor of Obstetrics and Gynecology. A.B., Adelbert College of Western Reserve University, 1958; M.D., Western Reserve University, 1962. (1981)
- Mary M. Bride, M.S.Ed., Program Director, Research and Educational Planning Center. B.S., Temple University, 1966; M.S.Ed., 1970. (1972-1981)
- Edna S. Brigham, B.S., Development Officer and Administrative Assistant to the Dean, School of Medicine. B.S., Illinois State University, 1947. (1976-1979)
- Michael J. Brodhead, Ph.D., Professor of History. A.B., University of Kansas, 1959; M.A., 1962; Ph.D., University of Minnesota, 1967. (1967-1979)
- John W. Brophy, M.D., Clinical Professor. B.S., University of North Dakota, 1948; M.D., Northwestern University Medical School, 1951. (1967-1979)
- Willard S. Bross, M.D., Clinical Assistant Professor. B.S., University of Washington, 1946; M.D., Creighton University, 1951. (1979)
- Nancy J. Broughton, B.S., Program Assistant, Research and Educational Planning Center. B.S., University of Wisconsin, 1971. (1979-1981)
- Alice J. Brown, Program Director, Research and Educational Planning Center. (1979-1981)

- David E. Brown, M.S., Assistant Professor of Animal Science and Assistant Animal Scientist.
B.S., University of California, Davis, 1968; M.S., University of Guelph, 1974. (1980)
- Dennis J. Brown, M.D., Clinical Assistant Professor.
B.S., University of Nevada Reno, 1974; M.D., University of Arizona, 1977. (1981)
- Gary D. Brown, B.A., ASUN Business Manager.
B.A., University of Nevada Reno, 1970. (1976)
- John C. Brown, M.S., Research Assistant, Renewable Natural Resources.
B.S., University of Nevada Reno, 1971; M.S., 1972. (1972)
- Richard E. Brown, Ph.D., Associate Professor of English.
A.B., Stanford University, 1968; M.A., Cornell University, 1971; Ph.D., 1972. (1972-1978)
- Ward E. Brown, Ed.D., Coordinator, Tutorial Program, Reading Specialist.
B.A., Pepperdine University, 1948; M.S., University of Southern California, 1950; Ed.D., Nova University, 1981. (1980-1981)
- Morris R. Brownell, Ph.D., Professor of English.
A.B., Princeton University, 1955; M.A., University of California, Berkeley, 1962; Ph.D., 1966. (1976-1979)
- Richard J. Browning, M.D., Clinical Associate Professor.
A.B., West Virginia University, 1952; B.S., 1954; M.D., Medical College of Virginia, 1956. (1975-1976)
- Allen D. Bruner, M.S., Agriculture Development Specialist, Renewable Natural Resources.
B.S., California State Polytechnic College, 1961; M.S., University of Nevada Reno, 1967. (1974-1979)
- James L. Bruce, B.A., Research Assistant/Geologist, Mackay School of Mines.
A.A., Mt. San Antonio College, 1971; B.A., California State University, Fullerton, 1976. (1980)
- Merle F. Bruce, M.D., Clinical Assistant Professor.
M.D., University of Oregon, 1966. (1980)
- John A. Bryant, M.D., Clinical Assistant Professor.
B.S., Drake University, 1959; M.D., University of Iowa, 1963. (1975)
- Susan S. Buchwald, M.D., Clinical Assistant Professor.
M.D., Medical College of Vermont, 1973. (1980)
- Conor P. Buckley, N.B., B.Ch., B.A.O., Assistant Professor of Medicine.
N.B., B.Ch., B.A.O., University College, Dublin, Ireland, 1967. (1981)
- Robert Buckley, M.D., Clinical Assistant Professor.
B.S., Loyola University, 1946; M.D., Georgetown University, 1950. (1980)
- Jerome D. Budy, B.S., Assistant Professor and Assistant Research Scientist, Renewable Natural Resources.
B.S., University of Wisconsin, 1966. (1974-1981)
- Charles A. Buerk, M.D., Associate Professor/Associate Director, School of Medicine.
A.B., University of Rochester, 1959; M.D., Western Reserve University, 1963. (1980)
- Leon J. Buist, Ph.D., Associate Professor of Outdoor Recreation Management and Associate Outdoor Recreation Scientist.
B.S., Michigan State University, 1966; Ph.D., University of Washington, 1974. (1977)
- Rose M. Bullis, M.A., Adjunct Instructor.
B.A., University of Nevada Reno, 1930; M.A., 1955. (1976)
- Patricia Burgess, B.S., Instructor of Nursing.
B.S., University of Nevada Reno, 1974. (1974)
- Jerold Wayne Burkhardt, Ph.D., Assistant Professor of Range Management and Assistant Range Scientist.
B.S., University of Idaho, 1964; M.S., 1967; Ph.D., 1969. (1976)
- Richard D. Burkhardt, Ph.D., Professor of Chemistry.
A.B., Dartmouth College, 1956; Ph.D., University of Colorado, 1960. (1965-1971)
- Andrew Burnett, D.V.M., Adjunct Assistant Professor.
D.V.M., Colorado State University, 1967. (1977)
- Nancy Busch, M.S., Adjunct Instructor.
B.S., University of Nevada Reno, 1966; M.S., 1976. (1977)
- Theodore A. Butler, M.A., Associate Professor of Industrial Mechanics and Associate Agriculture Engineer.
B.S., University of Wyoming, 1949; M.A., 1953. (1960-1965)
- Thorne J. Butler, M.D., Clinical Associate Professor.
B.S., California Institute of Technology, 1951; M.D., Stanford University, 1955. (1975)
- Jane D. Button, B.S., Research Assistant in Biochemistry.
B.S., University of Nevada Reno, 1979. (1980)
- Darius F. Caffaratti, M.D., Clinical Assistant Professor.
M.D., St. Louis University, 1941. (1975)
- H. Treat Cafferata, M.D., Clinical Professor.
M.D., University of Oregon, 1964. (1975)
- Edmund J. Cain, Ed.D., Professor and Dean of the College of Education.
B.S., Columbia University, 1947; M.A., 1948; Ed.D., 1952. (1964)
- Virginia H. Cain, M.Ed., Adjunct Instructor.
B.A., New York University, 1943; M.Ed., University of Delaware, 1963. (1974)
- Kim Cairney, B.A., Laboratory Helper, Chemistry.
B.A., University of California, Santa Barbara, 1979. (1980)
- John L. Califano, M.S., Head Athletic Trainer, Intercollegiate Athletics.
B.A., California State University, 1973; M.S., Indiana State University, 1976. (1979)
- John W. Callister, M.D., Clinical Associate Professor.
B.A., University of Utah, 1945; M.D., 1949. (1971)
- Jerry C. Calvanese, M.D., Clinical Assistant Professor.
M.D., University of Colorado, 1975. (1979)
- John A. Cameron, M.D., Clinical Assistant Professor.
B.S., University of Nevada Reno, 1968; M.D., University of New Mexico, 1972. (1979)
- Edward M. Camhi, M.S.Ed., Resident Director of Housing, Student Services.
B.A., State University of New York, 1974; M.S.Ed., 1976. (1979)
- Kirk V. Cammack, M.D., Clinical Assistant Professor.
B.S., Denver University, 1949; M.D., 1953. (1975-1977)
- Hilda G. Cao, M.L.S., Librarian.
B.A., University of Nevada Reno, 1963; M.L.S., University of California, Berkeley, 1967. (1967-1977)
- Joseph E. Cardillo, Ph.D., Clinical Assistant Professor.
B.A., Brown University, 1965; M.A., University of Rhode Island, 1968; Ph.D., University of Pennsylvania, 1975. (1978)
- Ronald J. Carducci, Ph.D., Adjunct Assistant Professor.
B.A., Fairleigh Dickinson University, 1958; Ph.D., University of Nevada Reno, 1975. (1976)
- Thomas F. Cargill, Ph.D., Professor of Economics.
B.S., University of San Francisco, 1964; M.A., University of California, Davis, 1965; Ph.D., 1968. (1973-1978)
- James Carlin, M.D., Clinical Professor.
M.D., Western Reserve University, 1952. (1978)
- Arthur W. Carlson, M.D., Clinical Professor.
B.S., University of California, Berkeley, 1958; M.D., McGill University, 1962. (1971-1979)
- Thomas N. Carmena, M.D., Clinical Assistant Professor.
B.S., Louisiana State University, 1953; M.D., 1956. (1980)
- Jannet Mari Carmichael, B.S., Lecturer in Family and Community Medicine.
B.S., University of Iowa, 1975. (1979)
- Beth W. Carney, M.A., Lecturer in Foreign Languages and Literatures.
B.A., Middlebury College, 1943; M.A., University of California, Santa Barbara, 1966. (1966)
- John Carr, M.D., Clinical Assistant Professor.
B.A., Stanford University, 1945; M.D., 1948, M.P.H., University of Hawaii, 1970. (1981)
- Vicki J. Casella, Ed.D., Assistant Professor of Education.
B.S., University of Alabama, 1965; M.A., 1967; Ed.D., 1977. (1980)
- Constancio Castro, Doctor, Adjunct Professor.
Licenciado, University of Complutense, Madrid, 1956; Diplomado, 1958; M.A., Stanford University, 1970; Doctor, University Central, Caracas, 1976. (1979)

- William N. Cathey, Ph.D., Associate Professor of Physics.
B.S., University of Tennessee, 1961; M.S., 1962; Ph.D., 1966.
(1967-1974)
- Richard Cavell, M.D., Clinical Assistant Professor.
B.A., Cornell University, 1957; M.D., Boston University, 1961.
(1980)
- Geoffrey V. Cecchi, M.D., Clinical Assistant Professor.
M.D., Emory University, 1972. (1980)
- Dikran L. Chamlain, M.D., Clinical Associate Professor.
M.D., University of Brussels, 1957. (1979)
- William O. Champney, Ph.D., Associate Professor of
Agricultural and Resource Economics.
B.S., Michigan State University, 1952; M.S., 1958; Ph.D., Kansas
State University, 1969. (1967-1974)
- Pallamrju Chanderraj, M.B.B.S., Clinical Assistant Professor.
M.B.B.S., Cuntur Medical College (Andhra University), 1971.
(1980)
- John N. Chappel, M.D., Professor of Psychiatry.
B.A., University of Alberta, 1955; M.D., 1960; M.P.H., Harvard
University, 1965. (1974)
- Patricia Chatham, Ph.D., Clinical Assistant Professor.
B.A., University of California, Berkeley, 1967; M.S., San Francisco
State University, 1972; Ph.D., Wright Institute, 1975. (1977)
- Carol A. Cherne, B.S., Assistant Professor of Engineering
Technologies.
A.A., Pasadena City College, 1963; B.S., University of Nevada
Reno, 1970. (1979-1980)
- Americo Chiarito, M.L.S., Librarian.
B.A., New York University, 1943; M.L.S., University of California,
Berkeley, 1965. (1965-1974)
- Barbara A. Chism, Ed.D., Assistant Professor of Accounting
and Information Systems.
B.S., Villa Marie College, 1961; M.B.A., Long Island University,
1963; M.Ed., University of Nevada Reno, 1971; Ed.D., 1977.
(1973-1977)
- Don L. Christensen, M.D., Clinical Associate Professor.
B.S., University of Utah, 1952; M.D., 1955. (1975-1981)
- G. Norman Christensen, M.D., Clinical Associate Professor.
B.S., University of Arizona, 1957; M.D., University of Tennessee,
1961. (1975-1981)
- Maynard S. Christian, M.D., Clinical Associate Professor.
B.A., Pacific Union College, 1952; M.D., University of British Col-
umbia, 1957. (1971-1979)
- Marlene Chrissinger, Ph.D., Associate Professor of Social and
Health Resources.
B.A., University of Wisconsin-Milwaukee, 1958; M.S.W., 1960;
Ph.D., United States International University, 1978. (1981)
- Linda L. Christy, M.S.S.W., Adjunct Assistant Professor.
B.A., University of Redlands, 1972; M.S.S.W., San Diego State
University, 1977. (1981)
- Li-Ming Chu, M.S.N., Instructor.
B.S.N., University of Nevada Reno, 1978; M.S.N., 1980. (1981)
- Shih-Fan Chu, Ph.D., Professor of Economics and Research
Analyst.
B.A., National Taiwan University, 1955; M.S., University of Illinois,
1965; Ph.D., 1968. (1967-1977)
- Frank R. Ciofalo, Ph.D., Associate Professor of Phar-
macology.
B.A., California State University, 1958; M.A., 1961; Ph.D., Univer-
sity of Southern California, 1964. (1973)
- Albert A. Cirelli, Jr., M.S., Assistant Professor of Animal
Science.
B.S., California State University, Fresno, 1969; M.S., 1969. (1979)
- Judith N. Citterman, B.S., Continuing Education Informa-
tion Specialist.
B.S., Oregon State University, 1973. (1979)
- Paul S. Clark, M.D., Clinical Assistant Professor.
A.B., Princeton University, 1962; M.D., Cornell University, 1966.
(1975)
- Peter F. Clark, M.D., Clinical Associate Professor.
A.B., Stanford University, 1959; M.D., University, 1963.
(1966-1979)
- Robert W. Clark, M.D., Clinical Associate Professor.
B.S., University of Utah, 1961; M.D., 1964. (1975-1981)
- Angela W. Clarke, M.D., Clinical Assistant Professor.
M.D., University of Maryland, 1961. (1979)
- Jack F. Clarke, Ph.D., Director, Counseling and Testing.
B.A., University of Redlands, 1958; M.S., University of Oregon,
1965; Ph.D., Arizona State University, 1971. (1970-1979)
- Michael Cleveland, D.M.A., Associate Professor of Music.
B.A., San Jose State College, 1960; M.M., University of Oregon,
Eugene 1967; D.M.A., 1970. (1981)
- Robert C. Clift, M.D., Clinical Associate Professor.
B.A., University of Washington, 1961; M.D., University of Kansas,
1965. (1975-1979)
- Gregory J. Cluff, M.S., Junior Research Scientist and Range
Agronomist.
B.S., University of Nevada Reno, 1974; M.S., 1977. (1979)
- Augustus V.R. Coe, B.S., Captain, Assistant Professor of
Military Science.
B.S., University of Colorado, 1970. (1978)
- James R. Colgan III, M.D., Clinical Associate Professor.
B.S., University of Nevada Reno, 1963; M.D., University of
Southern California, 1967. (1975-1979)
- Robert E. Collison, M.S., Lecturer in Mathematics.
B.S., United States Naval Academy, 1938; M.S., Purdue University,
1960. (1960)
- Carol A. Colton, Ph.D., Assistant Professor of Physiology.
B.S., Florida Presbyterian College, 1968; M.S., Rutgers University,
1972; Ph.D., 1973. (1981)
- Joel S. Colton, Ph.D., Associate Professor of Physiology.
M.S., Rutgers University, 1969; Ph.D., 1972. (1976)
- Kathleen A. Conaboy, B.A., Information Officer.
B.A., Villanova University, 1973. (1979-1981)
- John M. Connor, M.S., Superintendent, Newlands Field Sta-
tion, Agriculture Experiment Station.
B.S., University of Nevada Reno, 1960; M.S., 1962. (1978)
- Rodney V. Connor, Ph.D., Associate Professor of English.
B.A., University of Washington, 1949; Ph.D., 1962. (1958-1970)
- Theodore E. Conover, M.A., Professor of Journalism.
B.S., Ohio University, 1959; M.A., Ohio State University, 1960.
(1960-1970)
- Elisabeth Constantino, M.A., Lecturer in Mathematics.
A.B., Sterling College, 1945; M.A., University of Illinois, 1971.
(1961)
- Ada Faye Cook, M.Ed., Director of Special Programs.
B.S., Jackson State College, 1958; M.Ed., Tennessee State Univer-
sity, 1966. (1970-1977)
- Jack Heath Cook, M.A., Track and Cross Country Coach, Inter-
collegiate Athletics.
B.A., LaVerne College, 1951; M.A., Northern Arizona University,
1966. (1968-1978)
- Thomas W. Cook, B.S., Area Extension Agent, Indian Pro-
grams, Cooperative Extension Service.
B.S., University of California, Davis, 1952. (1952-1963)
- Helen J. Cooke, Ph.D., Assistant Professor of Physiology.
B.S., University of Massachusetts, 1965; M.S., University of Califor-
nia, Los Angeles, 1967; Ph.D., University of Sydney, 1971. (1980)
- Dennis V. Cookro, M.D., Physician, Student Services.
B.S., University of Akron, 1969; M.P.H., Loma Linda University,
1971; M.D., University of Arizona, 1977. (1980)
- Stephen V. Cooper, Ph.D., Lecturer in Range Ecology and
Assistant Range Ecologist.
B.S., Union College, 1967; M.S., State University of New York,
1969; Ph.D., Washington State University, 1975. (1975)
- Ralph J. Copolla, M.D., Clinical Assistant Professor.
B.A., Providence College, 1955; M.D., Georgetown University,
1959. (1970)
- Michael S. Coray, Ph.D., Associate Professor of History.
B.A., University of California, Santa Barbara, 1966; M.A., 1969;
Ph.D., 1973. (1972-1973)
- Emmalina G. Cortez, M.D., Clinical Assistant Professor.
M.D., University of the Philippines, 1969. (1979)

- Richard V. Cotter, Ph.D., Professor of Managerial Sciences.
B.S., Lewis and Clark College, 1952; M.S., University of Oregon, 1963; Ph.D., 1965. (1965-1980)
- Annette V. Cottle, B.S., Volleyball Coach and Assistant Softball Coach, Intercollegiate Athletics.
B.S., Utah State University, 1980. (1980)
- Timothy D. Coughlin, M.D., Associate Professor of Family and Community Medicine.
B.A., Tulane University, 1968; M.D., University of Cincinnati, 1972. (1980)
- Martha G. Couvillion, M.S.S.W., Clinical Instructor.
B.A., Northwestern State College of Louisiana, 1963; M.S.S.W., University of Tennessee, 1969. (1981)
- Neal J. Coyle, M.S., Associate Professor of Agriculture and Industrial Mechanics.
B.S., Kansas State University, 1957; M.S., University of Illinois, 1964. (1978)
- Milford N. Crandall, Clinical Instructor.
Diploma, Helmuth School of Nursing, 1952; Diploma, Lackland Air Force Base School of Anesthesia, 1959. (1981)
- Charles A. Crist, M.D., Clinical Assistant Professor.
B.A., University of California, Los Angeles, 1958; M.D., 1962. (1975)
- Keith M. Croskery, M.A.E., Instructor of Curriculum and Instruction.
B.A., San Fernando Valley State College, 1970; M.A.E., California Lutheran College, 1978. (1981)
- Joseph N. Crowley, Ph.D., President and Professor of Political Science.
B.A., University of Iowa, 1959; M.A., Fresno State College, 1963; Ph.D., University of Washington, 1967. (1966-1979)
- Crispian Cufflin, B.S., Manager, ASUN Bookstore.
B.A., University of Nevada Reno, 1962. (1961-1971)
- Alastair W.B. Cunningham, M.D., Ch.B., Professor of Laboratory Medicine, School of Medicine.
M.B., Ch.B., University of Edinburgh Medical School, Scotland, 1944. (1974)
- Steven Cunningham, M.D., Clinical Assistant Professor.
B.A., Northwestern University, 1965; M.D., University of Nebraska, 1970. (1978)
- Arrah C. Curry, M.D., Clinical Assistant Professor.
B.A., Union College, 1954; M.D., Loma Linda University, 1958. (1971)
- Richard A. Curry, Ph.D., Associate Professor of Foreign Languages and Literatures.
B.A., University of Washington, 1964; M.A., 1967; Ph.D., 1971. (1976)
- David Cuttler, B.A., Instructor of Accounting and Information Systems.
B.A., State University of New York at Albany, 1975. (1981)
- Albin J. Dahl, Ph.D., Professor of Economics and Research Analyst in the Bureau of Business and Economic Research.
B.A., University of California, Berkeley, 1948; M.A., 1953; Ph.D., 1961. (1962-1972)
- Alex di C. Dandini, D.S.L., D.H.E., Ph.D., Sc.D., University Marshal.
D.S.L., University of Grenoble, 1921; D.H.E., University of Turin, 1923; Ph.D., University of Laval (Quebec), 1954; Sc.D., University of Nevada Reno, 1976.
- Lillian Dangott, Ph.D., Assistant Professor of Social and Health Resources.
B.A., University of California, Berkeley, 1956; M.S.W., 1969; Ph.D., Humanistic Psychology Institute of California, 1976. (1975-1976)
- Glen C. Daniels, B.A., Producer/Director, Office of Communications and Broadcasting.
B.A., San Jose State University, 1972. (1980)
- Richard T. Dankworth, Ed.D., Vice President for Public Affairs.
B.S., Pepperdine University, 1952; M.S., University of Southern California, 1954; Ed.D., Utah State University, 1969. (1956-1978)
- William G. Danton, Ph.D., Adjunct Assistant Professor.
B.A., California State University, Northridge, 1968; M.A., University of Houston, 1975; Ph.D., 1975. (1976)
- Robert M. Daugherty, Jr., M.D., Ph.D., Dean of Medicine, Professor of Internal Medicine and Physiology.
B.S., University of Kansas, 1956; M.D., 1960; M.S., University of Oklahoma, 1965; Ph.D., 1965. (1981)
- Sandra A. Daugherty, M.D., Ph.D., Associate Professor Internal Medicine.
B.A., University of Kansas, 1956; M.D., 1960; Ph.D., University of Oklahoma, 1966. (1981)
- Barry S. Davidson, Ed.D., Assistant Director of Admissions.
B.S., Pittsburg State University, 1971; M.S., 1973; Ed.D., University of Arkansas, 1977. (1980)
- Jane P. Davidson, Ph.D., Associate Professor of Art.
B.A., Louisiana State University, 1969; M.A., 1970; M.A., University of Kansas, 1973; M. Phil., 1974; Ph.D., 1975. (1978-1980)
- Richard O. Davies, Ph.D., Vice President for Academic Affairs, Professor of History.
B.A., Marietta College, 1959; M.A., Ohio University, 1960; Ph.D., University of Missouri, 1963. (1980)
- Dana J. Davis, Ph.D., Professor of Curriculum and Instruction.
B.A., University of Colorado, 1949; M.Ed., Arizona State University, 1961; Ph.D., 1964. (1962-1972)
- Deborah Davis, Ph.D., Associate Professor of Psychology.
B.A., University of Texas, 1970; Ph.D., Ohio State University, 1973. (1978)
- Henry F. Davis, M.D., Clinical Assistant Professor.
B.A., Stanford University, 1959; M.D., 1962. (1975)
- Larry D. Davis, M.A., Project Director, Research & Educational Planning Center.
B.S., Illinois State University, 1955; M.A., 1963. (1980-1981)
- Maria H. Davis, B.S., Project Director, Research & Educational Planning Center.
B.S., University of Nevada Reno, 1978. (1980-1981)
- Phillip B. Davis, Ph.D., Assistant Professor of Renewable Natural Resources and Assistant Resources Manager.
A.B., University of Michigan, 1974; M.S., Michigan State University, 1975; Ph.D., 1979. (1979)
- Robert Dabney Davis, Ph.D., Associate Professor of Mathematics.
B.S., North Carolina State University, 1961; M.S., 1963; Ph.D., Florida State University, 1969. (1969-1974)
- William M. Dawson, Jr., M.D., Clinical Assistant Professor.
B.S., University of Tennessee, 1965; M.D., 1967. (1976)
- Willard F. Day, Ph.D., Professor of Psychology.
B.A., University of Virginia, 1949; M.A., 1951; Ph.D., 1953. (1956-1968)
- Warren L. d'Azevedo, Ph.D., Professor of Anthropology.
B.A., University of California, Berkeley, 1942; Ph.D., Northwestern University, 1962. (1963-1970)
- Arnold J. R. DeAngelis, M.S., P.E., Associate Professor of Civil Engineering.
B.S., Rutgers University, 1948; M.S., Lehigh University, 1958. (1961-1966)
- Joseph A. Debellis, M.D., Clinical Assistant Professor.
M.D., Medical College of Wisconsin, 1963. (1980)
- James W. Decker, M.D., Clinical Assistant Professor.
B.A., University of Minnesota, 1950; M.D., 1954. (1971)
- Carl E. Defillipi, M.S., Instructor in Chemical and Metallurgical Engineering.
B.S., University of Nevada Reno, 1978; M.S., 1981. (1981)
- George H. Del Carlo, B.S., Captain, Assistant Professor of Military Science.
B.S., University of Nevada Reno, 1972. (1980)
- Timothy Dekin, M.F.A., Lecturer in English.
B.A., University of California, Santa Barbara, 1969; M.F.A., University of California, Irvine, 1971. (1979)
- Louis A. Delionback, M.D., Assistant Professor of Family and Community Medicine.
B.S., University of Alabama, 1972; M.D., 1975. (1981)

- Ralph G. DePalma, M.D., Professor of Surgery.
M.D., New York University, 1956. (1980)
- Donald De Quevedo, M.D., Clinical Assistant Professor.
B.S., Muhlenberg College, 1955; M.D., Temple University, 1959.
(1981)
- Sachiko de St. Jeor, Ph.D., Assistant Professor of Family and Community Medicine.
B.A., University of Utah, 1963; R.D., State University of Iowa, 1964; M.A., 1965; Ph.D., Pennsylvania State University, 1980.
(1980)
- Stephen C. de St. Joer, Ph.D., Associate Professor of Microbiology.
B.S., University of Utah, 1964; Ph.D., 1969. (1979)
- William M. DeWitt, M.A., Program Director, Research and Educational Planning Center.
B.A., Washington State University, 1969; M.A., University of Nevada Reno, 1975. (1980-1981)
- Robert Edwin Diamond, Ph.D., Professor of English.
B.A., State University of Iowa, 1941; M.A., 1948; Ph.D., Harvard University, 1954. (1968)
- W. John Diamond, M.B.B.Ch., Clinical Assistant Professor.
B.S., University of Witwatersrand, South Africa, 1970; M.B.B.Ch., University of Witwatersrand, 1973. (1981)
- Robert E. Dickens, Ph.D., Project Coordinator, Office of Communications and Broadcasting.
B.A., University of Nevada Reno, 1969; M.A., 1973; Ph.D., University of Arizona, 1978. (1979-1980)
- Charles R. Dickson, Ph.D., Adjunct Professor.
B.A., Indiana University, 1959; Ph.D., University of Nevada Reno, 1971. (1972-1976)
- Martin H. Dickstein, M.S., Librarian.
B.A., Brooklyn College, 1953; M.S., Columbia University, 1958.
(1959-1977)
- David L. Diedrichsen, M.D., Clinical Assistant Professor.
M.D., Washington University, 1971. (1977)
- A. Jack Dieringer, B.S., Adjunct Assistant Professor.
B.S., University of Nevada Reno, 1948. (1977)
- Paul E. Dieringer, M.D., Clinical Assistant Professor.
B.S., University of Nevada Reno, 1972; M.D., University of Southern California, 1976. (1981)
- Robert Lee Dillard, Ph.D., Professor of Speech and Theatre.
B.S., Southwest Missouri State College, 1955; M.A., University of California, Los Angeles, 1958; Ph.D., University of Missouri, 1965.
(1968-1980)
- Stephanie W. Dillon, Ph.D., Clinical Assistant Professor.
B.A., University of California, Berkeley, 1965; Ph.D., University of California, San Francisco, 1976. (1978)
- Ann M. Dimitroff, M.D., Clinical Assistant Professor.
M.D., University of Louisville, 1959. (1979)
- A. J. Dingacci, M.D., Clinical Assistant Professor.
M.D., Creighton University, 1941. (1975)
- John L. Dobra, M.S., Assistant Professor of Economics.
B.S., Portland State University, 1972; M.S., 1975. (1980)
- Edwin S. Dodson, Ed.D., Professor of Educational Administration and Higher Education.
B.A., University of Nevada, 1942; M.A., University of Oregon, 1948; M.A., University of California, Berkeley, 1966; Ed.D., 1967.
(1967-1971)
- Ruth Hadley Donovan, B.L.S., Associate Director of Libraries.
B.A., University of Wisconsin, 1949; B.L.S., 1950. (1954-1981)
- John Dooley, M.D., Clinical Assistant Professor.
B.A., Wesleyan University, 1967; M.D., Albany Medical College, 1971. (1978)
- Bruce M. Douglas, Ph.D., Professor of Civil Engineering.
B.C.E., University of Santa Clara, 1959; M.S., University of Arizona, 1965; Ph.D., 1965. (1964-1973)
- William A. Douglass, Ph.D., Professor and Basque Studies Coordinator.
A.B., University of Nevada Reno, 1961; M.A., University of Chicago, 1966; Ph.D., 1967. (1978-1981)
- Stephen D. Dow, M.D., Clinical Associate Professor.
B.S., University of Michigan, 1956; M.D., 1960. (1971-1979)
- Donna Beth Downer, Ph.D., Dean and Professor, School of Home Economics.
B.S., University of Wyoming, 1951; M.S., Pennsylvania State University, 1967; Ph.D., Purdue University, 1977. (1978)
- Charles J. Downing, Ed.D., Associate Professor, Counseling and Guidance Personnel Services.
B.A., University of California, Santa Barbara, 1955; M.A., San Jose State College, 1963; Ed.D., Indiana University, 1971. (1976)
- Charles Drain, B.S., Adjunct Assistant Professor.
B.S., Langston University, 1963. (1980)
- Earl L. Drake, D.V.M., Professor of Veterinary Medicine; Veterinarian.
B.S., Colorado State University, 1947; D.V.M., 1951. (1967-1973)
- Charles Ernest Dreiling, Ph.D., Associate Professor of Biochemistry.
B.A., University of Washington, 1964; M.S., New Mexico State University, 1968; Ph.D., Oregon State University, 1971. (1971-1981)
- Don W. Driggs, Ph.D., Professor of Political Science.
B.S., Brigham Young University, 1950; M.A., Harvard University, 1955; Ph.D., 1956. (1956-1968)
- Nellie Droe, M.S., Assistant Professor of Family and Community Medicine.
B.S., Stanford University, 1957; M.S., University of Nevada Reno, 1975. (1975-1976)
- Susan Duckstein, M.S.W., Adjunct Assistant Professor.
A.A., Miami Dade Jr. College, 1971; B.A., University of Florida, 1975; M.S.W., Florida State University, 1977. (1980)
- Glenda R. Duckworth, M.A., Extension Home Economist, Lyon County, Cooperative Extension Service.
B.S.E., Peru State College, 1965; M.A., University of Northern Colorado, 1973. (1973-1977)
- Burton Dudding, M.D., Professor of Pediatrics.
A.B., Harvard College, 1960; M.D., Cornell University, 1964.
(1978)
- Harry Arthur Dudley, M.S.W., Adjunct Associate Professor.
B.A., San Francisco State University, 1964; M.S.W., Fresno State University, 1971. (1978)
- Molly E. Dufort, M.S., Program Assistant for Research and Educational Planning Center.
B.S., University of Oregon, Eugene, 1969; M.S., 1977. (1980)
- William Richard Eadington, Ph.D., Professor of Economics.
B.S., Santa Clara University, 1967; M.A., Claremont Graduate School, 1970; Ph.D., 1973. (1969-1981)
- Betty Jean Earl, M.P.H., Clinical Assistant Professor.
B.S., Berea College, 1961; M.P.H., University of California, Berkeley, 1968. (1971-1980)
- David W. Eckert, M.D., Clinical Assistant Professor.
M.D., University of Washington, 1967. (1979)
- Richard E. Eckert, Ph.D., Adjunct Professor.
B.S., University of California, Davis, 1952; M.S., University of Nevada Reno, 1954; Ph.D., Oregon State College, 1957. (1963)
- John M. Edmiston, M.D., Associate Professor of Surgery.
A.B., University of California, 1943; M.D., 1946. (1971-1976)
- Mabel I. Edmundson, B.S., Area Extension Agent, Home Economist, Cooperative Extension Service.
B.S., Oklahoma State University, 1940. (1963-1976)
- David A. Edwards, M.D., Clinical Assistant Professor.
B.A., Transylvania University, 1968; M.D., Creighton University, 1972. (1978)
- E. Anne Edwards, M.L.S., Public Services Librarian.
M.A., Aberdeen University, 1972; M.L.S., University of Western Ontario, 1974. (1981)
- Jerome E. Edwards, Ph.D., Professor of History.
B.A., Yale University, 1958; M.A., University of Chicago, 1960; Ph.D., 1966. (1965-1981)
- Joan Foster Edwards, Ph.D., Adjunct Associate Professor.
A.B., University of Nevada, 1953; A.M., University of Southern California, 1955; Ph.D., Washington University, 1962. (1972)

- David Ehrke, D.M.A., Assistant Professor of Music.
B.M., San Francisco State University, 1969; M.M., New England Conservatory, 1971; D.M.A., University of Southern California, 1974. (1978)
- Robert S. Elkins, Ed.D., Assistant Professor of Curriculum and Instruction.
B.A., California State University, Los Angeles, 1959; M.A., California State University, Northridge, 1968; Ed.D., University of Southern California, 1974. (1978)
- John A. Ellerton, M.D., Clinical Assistant Professor.
M.D., McGill University, 1974. (1980)
- Richard Ellis, M.D., Clinical Assistant Professor.
A.B., Johns Hopkins University, 1957; M.D., 1961. (1976)
- Robert G. Elston, M.A., Research Associate, Nevada Archeological Survey.
B.A., San Francisco State College, 1965; M.A., Washington State University, 1970. (1972-1976)
- Nicki L. Eoff, M.Ed., Assistant Professor of Recreation and Physical Education.
B.S., Abilene Christian University, 1968; M.Ed., Texas A & M University, 1969. (1978)
- John W. Erwin, M.S., P.E., Professor of Geophysics and Geophysicist, Nevada Bureau of Mines and Geology.
B.S., Michigan College of Mining and Technology, 1949; M.S., Colorado School of Mines, 1954. (1964-1971)
- Susan Ervin, M.S., Instructor of Nursing.
B.S., University of Utah, 1974; M.S., 1980. (1981)
- Ahmed Essa, Ph.D., Associate Professor of English.
B.S., Ohio State University, 1956; M.A., University of Southern California, 1962; Ph.D., 1969. (1967-1976)
- Eva L. Essa, Ph.D., Associate Professor of Home Economics.
B.A., University of Southern California at Los Angeles, 1963; M.S., University of Nevada Reno, 1971; Ph.D., Utah State University, 1977. (1971-1981)
- Henry L. Ettman III, Ph.D., Assistant Professor of Managerial Sciences.
A.B., Washington University, 1962; M.A., University of Nevada Reno, 1966; Ph.D., 1978. (1981)
- William L. Eubank, Ph.D., Assistant Professor of Political Science.
B.S., University of Houston, 1967; M.A., 1969; Ph.D., University of Oregon, 1978. (1979)
- Ardith Ann Eudey, M.A., Assistant Professor in Anthropology.
A.A., San Bernardino Valley College, 1954; A.B., University of California, Berkeley, 1956; M.A., University of California, Los Angeles, 1961. (1976-1981)
- Arlene C. Evans, M.S., Associate Professor of Nursing.
B.A., University of California, Berkeley, 1940; B.S., University of Hawaii, 1965; M.S., University of California, Los Angeles, 1967. (1978)
- Gano Senter Evans, Ph.D., Professor of Managerial Sciences.
B.A. Colorado State College, 1959; M.B.A., University of Denver, 1963; Ph.D., University of Washington, 1969. (1969-1976)
- Joseph E. Evans, M.D., Acting Director of Residency Program and Assistant Professor.
B.A., Carroll College, 1961; M.D., St. Louis University, 1965. (1981)
- Raymond A. Evans, Ph.D., Adjunct Professor.
B.A., University of Redlands, 1950; Ph.D., University of California, Berkeley, 1956. (1963)
- William Evans, M.D., Clinical Assistant Professor.
B.S., University of California, Irvine, 1972; M.D., 1976. (1981)
- Melvin F. Everts, Ph.D., Adjunct Assistant Professor.
B.A., Trinity College, 1966; Ph.D., Vanderbilt University, 1975. (1979)
- Richard L. Everett, M.S., Adjunct Lecturer.
B.S., University of Nevada Reno, 1971; M.S., 1974. (1976)
- Katherine E. Everson, M.S., County Extension Home Economist, Clark County Cooperative Extension Service.
B.S., Ricks College, 1956; M.S., Montana State College, 1958. (1960-1978)
- Christopher Exline, Ph.D., Associate Professor of Geography.
B.A., Sonoma State University, 1971; M.A., San Francisco State University, 1974; Ph.D., University of California, Berkeley, 1978. (1981)
- Robert A. Fairman, Head Tennis Coach for Intercollegiate Athletics. (1973).
- Mortimer S. Falk, M.D., Clinical Professor.
A.B., University of Michigan, 1939; M.S., 1940; M.D., 1943. (1972-1980)
- Richard H. Fashbaugh, Ph.D., Professor of Mechanical Engineering.
B.S., University of Michigan, 1949; M.S., 1950; Ph.D., University of Colorado, 1969. (1975-1979)
- Karl Fazekas, M.D., Clinical Assistant Professor.
M.D., University of Vienna, 1965. (1980)
- Carla Fears, M.S., County Extension Home Economist, Cooperative Extension Service.
B.S., Kansas State University, 1977; M.S., 1978. (1979)
- Harold L. Feikes, M.D., Clinical Associate Professor.
B.A., Union College, 1954; M.D., Loma Linda University, 1958. (1981)
- Alan W. Feld, M.D., Clinical Associate Professor.
A.B., Princeton University, 1951; M.D., Columbia University, 1955. (1975)
- Neal Allen Ferguson, Ph.D., Acting Dean of Continuing Education and Associate Professor of History.
B.A., Wichita State University, 1965; M.A., 1967; Ph.D., University of Oregon, 1971. (1970-1981)
- Roberta Ferguson, Ph.D., Adjunct Assistant Professor.
B.A., Wichita State University, 1966; M.A., University of Nevada Reno, 1972; Ph.D., 1980. (1980)
- Garry N. Fickes, Ph.D., Associate Professor of Chemistry.
B.S., University of California at Davis, 1960; Ph.D., University of Wisconsin, 1965. (1966-1973)
- James R. Firby, Ph.D., Associate Professor of Geology-Geography.
A.B., San Francisco State College, 1960; M.A., University of California, Berkeley, 1963; Ph.D., 1969. (1966-1975)
- Angela Anne Fisher, A.A., Clinical Instructor.
A.A., Carnegie Institute of Technology, 1961. (1980)
- Barry Fisher, M.D., Clinical Assistant Professor.
B.A., St. John's College, 1962; M.D., Yeshiva University, 1966. (1981)
- Charles E. Fleming, M.D., Clinical Assistant Professor.
B.S., University of Nevada, 1948; M.D., University of Southern California, Los Angeles, 1952. (1971)
- Patricia D. Flynn, B.A., Research Associate, Mackay School of Mines.
B.A., Smith College, 1972. (1980)
- Thomas Flynn, M.A., Research Associate, Mackay School of Mines, Nevada Bureau of Mines and Geology.
B.S., State University of New York, 1971; M.A., 1976. (1978)
- John Gregg Folkes, M.A., Lecturer in History.
B.A., University of Nevada, 1957; M.A., 1964. (1969)
- Hugh C. Follmer, M.D., Clinical Associate Professor.
B.S., University of Nebraska-Lincoln, 1952; M.D., University of Nebraska Medical Center, 1956. (1975-1979)
- W. Darrell Foote, Ph.D., Professor of Animal Science and Physiology, Animal Physiologist, Experiment Station, and School of Medicine.
B.S., University of Utah, 1953; M.S., University of Wisconsin, 1956; Ph.D., 1959. (1959-1970)
- Tahirih Khodadoust Foroughi, Ph.D., Associate Professor of Accounting and Information Systems.
B.B.A., University of Tehran, 1963; M.P.A., 1968; Ph.D., University of Oregon, 1975. (1979)
- James W. Forsythe, M.D., Clinical Associate Professor.
B.A., University of California, Berkeley, 1960; M.D., University of California, San Francisco, 1964. (1975)
- Quincy E. Fortier, M.D., Clinical Assistant Professor.
B.S., University of South Dakota, 1941; M.B., University of Minnesota, 1944; M.D., 1945. (1981)

- Randall Foster, M.D., Clinical Associate Professor of Psychiatry.
M.D., Loyola University, 1952. (1980)
- Catherine S. Fowler, Ph.D., Associate Professor of Anthropology.
B.A., University of Utah, 1962; M.A., University of Pittsburgh, 1966; Ph.D., 1972. (1964-1976)
- Don D. Fowler, Ph.D., Professor of Anthropology, Executive Director, Historic Preservation and Social Sciences Center.
B.A., University of Utah, 1959; Ph.D., University of Pittsburgh, 1965. (1978)
- Warren H. Fox, Ph.D., Associate Dean and Associate Professor of Political Science.
A.B., University of California, Berkeley, 1967; M.P.A., University of Southern California, Los Angeles, 1968; Ph.D., 1973. (1974-1979)
- Elizabeth A. Francis, Ph.D., Associate Professor of English.
A.B., Mt. Holyoke College, Massachusetts, 1962; M.A., Yale University, 1966; Ph.D., 1970. (1978)
- Cecilia Francisco, M.L.S., Librarian, Savitt Medical Library.
B.S., University of St. Thomas, 1967; M.L.S., Pratt Institute, 1975. (1978)
- Barry S. Frank, M.D., Assistant Professor of Pediatrics.
B.M.S., Northwestern University, 1968; M.D., 1972. (1981)
- Kathleen E. Frank, M.P.H., Assistant Professor of Social Health Resources.
B.S., California Polytechnic State University, 1977; M.P.H., University of California, Berkeley, 1979. (1981)
- Thomas V. Frazier, Ph.D., Professor of Physics.
B.A., University of California at Los Angeles, 1943; M.A., 1949; Ph.D., 1952. (1950-1965)
- Marie E. Freeman, A.B., Program Coordinator, Research and Educational Planning Center.
A.B., Stanford University, 1967. (1979)
- Paule T. Fricke, Ph.D., Associate Professor of Foreign Languages and Literatures.
A.B., University of Paris, 1944; M.A., University of California at Los Angeles, 1955; Ph.D., 1970. (1959-1973)
- Ellen S. Fries, M.N., Instructor of Nursing.
A.A., Palomar Community College, 1972; A.A., Nursing, 1974; B.S.N., University of San Diego, 1978; M.N., University of California, Los Angeles, 1980. (1980)
- Michael V. Fromhart, Ph.D., Adjunct Assistant Professor.
B.A., University of Florida, 1963; M.A., 1965; Ph.D., 1967. (1976)
- Donald K. Fronck, Ph.D., Associate Professor of Electrical Engineering.
B.A., Washington State University, 1960; B.S., 1964; M.S., University of Idaho, 1969; Ph.D., 1973. (1976)
- H. Randall Frost, Ph.D., Project Director, Sierra Nevada Job Corps Center.
B.G.Ed., University of Omaha, 1960; M.Ed., University of Nevada Reno, 1967; Ph.D., University of Colorado, 1978. (1976-1978)
- Frederick T. Fuetsch, Jr., M-Arch., Assistant Professor of Engineering.
B.S., Stanford University, 1970; M-Arch., University of California, Berkeley, 1973. (1980)
- Martin Fujiki, Ph.D., Assistant Professor of Medicine.
B.S., University of Idaho, 1972; M.S., University of Utah, 1974; Ph.D., 1980. (1980)
- Billy J. Fuller, Ph.D., Associate Professor of Accounting and Information Systems.
B.B.A., University of Mississippi, 1955; M.B.A., 1966; Ph.D., 1973. (1976)
- Colin Fuller, M.D., Clinical Assistant Professor.
B.S., Bates College, 1969; M.D., Tufts University, 1973. (1980)
- Dianne L. Fuller, A.S., Nurse Practitioner, Sierra Nevada Job Corps Center.
A.S., Cabrillo College, 1977. (1981)
- George J. Furman, M.D., Associate Professor in Obstetrics and Gynecology.
B.A., Ohio State University, 1952; M.D., 1960. (1966-1981)
- Robert J. Gabrielli, B.A., News Bureau Manager.
B.A., University of Nevada Reno, 1978. (1981)
- Robert G. Gagliano, M.D., Clinical Assistant Professor.
B.A., University of Southern California, 1965; M.S., Southern Methodist University, 1967; M.D., Medical College of Wisconsin, 1971. (1976)
- Michael D. Gainey, M.D., Clinical Associate Professor.
B.E.E., Cornell University, 1958; M.D., University of California, San Francisco, 1965. (1971)
- Harry Gallaway, B.S., Adjunct Assistant Professor.
B.S., University of Nevada Reno, 1939. (1979)
- Shelba G. Gamble, Assistant to the President. (1976)
- Richard P. Ganchan, M.D., Clinical Assistant Professor.
B.A., Rice University, 1964; M.D., Baylor College of Medicine, 1968. (1977)
- Gary G. Gansert, M.D., Clinical Associate Professor.
B.S., University of Texas, 1971; M.D., 1975. (1979)
- M. Richard Ganzel, Ph.D., Associate Professor of Political Science.
B.A., Carroll College, 1963; Ph.D., Claremont Graduate School, 1970. (1970-1976)
- Beatrice T. Gardner, Ph.D., Professor of Psychology.
A.B., Radcliffe College, 1954; M.S., Brown University, 1956; Ph.D., Oxford University, 1959. (1964-1973)
- Larry W. Gardner, M.D., Clinical Assistant Professor.
B.D., Ouachita Baptist University, 1964; M.D., University of Arkansas, 1968. (1978)
- Robert A. Gardner, Ph.D., Professor of Psychology.
B.A., New York University, 1950; M.A., Columbia University, 1951; Ph.D., Northwestern University, 1954. (1963-1968)
- Leon Garoian, B.A., Research Associate-Saval, Agricultural & Resource Economics.
B.A., California State University, Sacramento, 1974. (1981)
- James R. Garrett, Ph.D., Associate Professor and Resource Economist, Agricultural and Resource Economics.
B.S., New Mexico State University, 1958; M.S., 1961; Ph.D., Washington State University, 1967. (1966-1971)
- Larry J. Garside, M.S., Associate Economic Geologist, Nevada Bureau of Mines and Geology.
B.S., Iowa State University, 1965; M.S., University of Nevada Reno, 1968. (1968-1979)
- John W. Garver, Ph.D., Assistant Professor of Political Science.
B.A., B.S., Oklahoma State University, 1968; M.A., University of Colorado, 1973; Ph.D., 1979. (1981)
- Gregory R. Gaustad, B.A., Research Associate of Psychology.
B.A., California State University, Hayward, 1965. (1976)
- Joseph H. Gauthier, M.D., Clinical Assistant Professor.
B.A., Duke University, 1968; M.D., Northwestern University, 1972. (1978)
- Carolyn Gearhart, Sign Language Instructor and Registered Interpreter for the Deaf, Speech Pathology and Audiology. (1979)
- David Patrick Geary, Ph.D., Associate Professor of Criminal Justice.
B.A., University of Laverne, 1971; M.P.A., University of Southern California, 1972; Ph.D., Marquette University, 1979. (1979)
- John L. Gebhardt, Operations Sergeant, Military Science.
- Dennis L. George, M.B.A., Assistant Dean of Business Administration.
B.S. in Business Administration, University of Nevada Reno, 1972; M.B.A., University of Utah, 1976. (1981)
- Lynn B. Gerow, M.D., Clinical Assistant Professor.
B.S., University of Nevada Reno, 1966; M.D., McGill University, 1967. (1979)
- Kyung-II Ghymn, Ph.D., Associate Professor of Managerial Sciences.
B.A., Kyung Hee University, Korea, 1963; M.B.A., University of Hawaii, 1970; Ph.D., University of Pittsburgh, 1974. (1978)
- Edward E. Gickling, Ph.D., Associate Professor of Curriculum and Instruction.
B.S., Utah State University, 1965; M.S., 1966; Ph.D., Southern Illinois University, 1973. (1978)

- Richard O. Gifford, Ph.D., Professor, Soil Scientist and Bioclimatologist.
B.S., University of Delaware, 1954; M.S., University of Maryland, 1956; Ph.D., 1960. (1959-1971)
- DeWayne Gilbert, Ph.D., Professor of Agronomy and Extension Agronomist, Plant, Soil, and Water Science, College of Agriculture.
B.S., Iowa State College, 1950; M.S., 1956; Ph.D., 1959. (1976)
- Ayesha Elenin Gill, Ph.D., Associate Professor of Biology.
B.A., University of California, Berkeley, 1957; A.B., 1961; Ph.D., 1972. (1979-1981)
- LaRue W. Gilleland, A.M., Professor of Journalism.
B.J., University of Missouri, 1952; A.M., 1962. (1963-1974)
- Philip J. Gillette, M.P.H., Health Systems Administrator.
B.A., University of California, Berkeley, 1946; M.P.H., 1952. (1969)
- Robert A. Gilman, Ph.D., Professor, Curriculum and Instruction.
B.A., Stanford University, 1955; M.Ed., University of Oregon, 1960; M.A., Stanford University, 1964; Ph.D., 1969; M.L.S., University of California, Berkeley, 1975. (1967-1977)
- William Alan Gilstrap, M.S., Assistant Professor of Mechanical Engineering.
B.S.M.E., University of Nevada Reno, 1967; M.S., 1970. (1967-1971)
- Gerald P. Ginsburg, Ph.D., Professor of Psychology.
B.S., University of Illinois, 1958; Ph.D., University of Michigan, 1964. (1963-1973)
- Linda D. Glaser, B.S., Extension Livestock Youth Agent.
B.S., University of Nevada Reno, 1971. (1976)
- Mary Ellen Glass, M.A., Head, Oral History Project, Library.
B.A., University of Nevada, 1962; M.A., 1965. (1964-1973)
- Craig D. Glasco, Adjunct Assistant Baseball Coach. (1981)
- Eugene Glick, M.D., Clinical Assistant Professor.
B.S., Ursinus College, 1951; M.D., Jefferson Medical College, 1956; M.P.H., University of California, Berkeley, 1972. (1978)
- Marilyn Goad, M.S., County Extension Home Economist, Cooperative Extension Service.
B.S., Texas A & I University, 1973; M.S., University of Nevada Reno, 1974. (1975-1980)
- Virginia C. Gobeli, M.A., 4-H Specialist, Cooperative Extension Service.
B.A., Salve Regina College, 1964; M.A., University of Rhode Island, 1972. (1973-1978)
- Harold Goddard, M.M., Professor of Music.
B.M., University of Colorado, 1948; B.M.Ed., 1949; M.M., 1949. (1959-1969)
- Leah M. Gorbet, B.S., Fiscal Officer, Medical School.
B.S., Sacramento State University, 1976. (1978-1979)
- Lydia Gorrez, Ph.D., Assistant Professor, Division of Curriculum and Instruction.
A.M., Stanford University, 1975; Ph.D., 1980. (1981)
- Arthur Gould, M.S., Lecturer; Film and Production Television Specialist, Agricultural Communications Services.
B.A., Los Angeles State College, 1950; M.S., University of California, Los Angeles, 1951. (1972-1977)
- Leslie H. Gould, B.S., Clinical Associate Professor.
B.S., Southern California College of Medical Technology, 1946. (1979)
- Stephen G. Grace, M.D., Clinical Assistant Professor.
B.A., University of Oregon, 1966; M.D., Baylor College of Medicine, 1970. (1980)
- Alan J. Grant, M.S., Adjunct Professor.
B.S., Illinois Institute of Technology, 1946; M.S., 1948. (1976)
- Jean S. Gray, M.S., 4-H Specialist.
B.A., Fresno State College, 1971; M.S., 1972. (1972-1981)
- Linda G. Gray, M.S.W., Assistant Coordinator, Health Careers for American Indians.
B.A., University of Washington, 1975; M.S.W., 1977. (1981)
- George H. Greenberg, M.D., Clinical Assistant Professor.
A.B., Columbia University, 1961; M.D., Chicago Medical School, 1966. (1975)
- Eric M.D. Greenlees, Ph.D., C.P.A., Associate Professor of Accounting and Information Systems.
B. Comm., University of Alberta, 1967; M.B.A., University of Washington, 1968; Ph.D., 1972. (1976-1977)
- E. James Greenwald, M.D., Clinical Associate Professor.
B.S., University of Illinois, 1965; M.D., Northwestern University, 1969. (1978-1981)
- Don A. Greenwell, M.S., Cooperative Extension Service — Agent in Charge — Pershing County.
B.S., University of Idaho, 1953; M.S., 1965. (1978)
- Richard W. Grefrath, M.L.S., Librarian.
B.A., New York University, 1968; M.A., Temple University, 1972; M.L.S., University of Maryland, 1972. (1978)
- Francis P. Grenn, M.D., Clinical Assistant Professor.
A.B., Boston University, 1962; M.D., Georgetown University, 1966. (1975)
- Robert T. Griffin, M.F.A., Associate Professor of Art.
B.A., Wisconsin State University, 1970; M.F.A., Washington State University, 1972. (1973-1980)
- Bryce W. Griffith, B.A., Administrative Director, Family and Community Medicine.
B.A., University of North Carolina, 1965. (1980)
- Judson C. Groshong, B.S., Research Assistant in Internal Medicine.
B.S., University of Oregon, 1972. (1978-1981)
- Michelle A. Gross, M.A., Assistant Professor of Recreation and Physical Education.
B.A., Queens College, 1975; M.A., New York University, 1979. (1980)
- Eugene K. Grotegut, Ph.D., Professor of Foreign Languages and Literatures.
B.A., University of Nevada, 1949; M.A., University of California, Los Angeles, 1952; Ph.D., 1959. (1969)
- Alan Andrew Gubanich, Ph.D., Associate Professor of Biology.
B.A., Wilkes College, 1964; M.S., University of Arizona, 1966; Ph.D., 1970. (1970-1978)
- Lucille R. Guckes, Ed.D., Associate Professor of Curriculum and Instruction.
B.A., Sacramento State College, 1962; M.A., 1969; Ed.D., University of Buffalo, 1973. (1973-1979)
- Johannes C. Guitjens, Ph.D., Professor of Irrigation Engineering and Irrigation Engineer in Plant, Soil, and Water Science.
B.S.A., University of British Columbia, 1961; M.S., University of California, Davis, 1964; Ph.D., 1968. (1967-1978)
- Judith Fauss Guitjens, M.A., Lecturer of Foreign Languages.
B.A., University of California, Davis, 1967; M.A., University of Nevada Reno, 1974. (1980)
- Rex L. Gunderson, Director of News and Public Affairs, Communications and Broadcasting. (1980)
- Barbara A. Gunn, Ph.D., State Home Economics Extension Specialist.
B.S., University of Oregon, 1948; M.A., University of California, Los Angeles, 1956; Ph.D., Stanford University, 1960. (1973-1980)
- Joan Gusman, M.A., Financial Aid Officer.
B.A., Mills College, 1975; M.A., University of Nevada Reno, 1977. (1981)
- Ronald H. Gustafson, B.S., County Extension Agent in Charge, Washoe County, Cooperative Extension Service.
B.S., Colorado State University, 1961. (1966-1978)
- Martin E. Gutride, M.P.S., Clinical Assistant Professor.
B.A., New York University, 1965; M.A., Syracuse University, 1968; Ph.D., 1970; M.P.S., Long Island University, 1978. (1980)
- Stephan Gurovsky, M.D., Clinical Assistant Professor.
M.D., Bulgaria Medical School, 1959. (1979)
- Meryl H. Haber, M.D., Professor of Laboratory Medicine.
B.S., Northwestern University, 1956; M.S., 1958; M.D., 1959. (1973)
- E. Irving Hackett, M.S., County Extension Agent, Elko County, Cooperative Extension Service.
B.S., University of Nevada, 1951; M.S., 1957. (1957-1979)

- Husain F. Haddawy, Ph.D., Associate Professor of English.
B.A., University of Maryland, 1951; M.A., Cornell University, 1954;
Ph.D., 1962. (1969)
- Margarete G. Hagner, M.A., Lecturer in Foreign Languages
and Literatures.
A.B., University of California, Berkeley, 1954; M.A., 1957. (1960)
- Wilson Robert Haig, Ph.D., Associate Professor of Managerial
Sciences.
B.S., University of Alabama, 1942; M.B.A., University of Southern
California, 1947; Ph.D., University of Alabama, 1967. (1967-1968)
- Claire E. Hall, B.S., Research Assistant in Microbiology.
B.S., California State University, Long Beach, 1977. (1981)
- Edwin L. Hall, M.S.Ed., Assistant Basketball Coach.
M.S.Ed., Old Dominion University, 1975. (1980)
- Mark R. Hall, Ph.D., Associate Professor of Microbiology.
B.S., Western Michigan University, 1964; M.S., Wayne State, 1967;
Ph.D., 1971. (1977)
- Stephen Hall, M.D., Associate Professor of Internal
Medicine and Director of Hematology and Oncology.
B.S., Arizona State, 1967; M.D., University of Arizona, 1971.
(1978-1981)
- Thomas E. Hall, M.D., Clinical Associate Professor.
M.D., University of Southern California, 1956. (1976)
- Martin H. Halvorsen, M.D., Clinical Assistant Professor.
B.S., De Pauw University, 1941; M.B., Northwestern University,
1944; M.D., 1945. (1981)
- Harold E. Halvorsen, M.D., Clinical Associate Professor.
B.S., South Dakota State University, 1951; M.D., Temple Univer-
sity, 1955. (1971)
- John W. Hamlin, M.D., Clinical Associate Professor.
A.B., University of California, Berkeley, 1938; M.D., University of
California, San Francisco, 1942. (1975-1979)
- Lonnie N. Hammargren, M.D., Clinical Associate Professor.
B.A., University of Minnesota, 1958; M.A., 1960; B.M., 1964;
M.D., 1964, M.S., 1974. (1981)
- Robert W. Hammond, M.S., Field Laboratory Superinten-
dent and Area Extension Agent.
B.S., California State University, Humboldt, 1968; M.S., Oklahoma
State University, 1977. (1978)
- Ittah Han, M.B.A., Lecturer in Electrical Engineering.
B.A., University of Colorado, 1965; B.A.Ac., University of Nevada
Las Vegas, 1977; B.S.E., Walla Walla College, 1960; M.A., Univer-
sity of California at Berkeley, 1962; M.S.E., University of Michigan,
Ann Arbor, 1970; M.S., University of Colorado, 1961; M.S., Univer-
sity of Wisconsin-Madison, 1971; M.B.A., University of Miami,
1973; M.B.A., Golden Gate University, 1979, 1980. (1981)
- Jessica A. Hancock, M.S., Assistant Professor of Home
Economics.
B.S., Texas Tech University, 1970; M.S., 1975. (1979)
- John Handrich, M.Div., Adjunct Lecturer.
A.A., Concordia College, 1960; B.A., Concordia Senior College,
1962; M.Div., Concordia Seminary, 1966. (1980)
- Richard C. Hanes, Ph.D., Adjunct Assistant Professor.
B.S., Texas A & M University, 1970; M.S., University of Oregon,
1975; Ph.D., 1980. (1980)
- Donald R. Hanks, D.V.M., Assistant Professor of Veterinary
Medicine and Assistant Veterinarian.
B.S., Utah State University, 1967; D.V.M., Washington State
University, 1970. (1976)
- David A. Hansen, M.Ed., Assistant Dean of Students.
B.A., Slippery Rock State College, 1971; M.Ed., 1973. (1978)
- Elizabeth Hansot, Ph.D., Associate Professor of Political
Science.
B.A., Bryn Mawr College, 1960; Ph.D., Columbia University, 1967.
(1980)
- Donald Lynn Hardesty, Ph.D., Associate Professor of An-
thropology.
B.A., University of Kentucky, 1964; M.A., University of Oregon,
1967; Ph.D., 1972. (1968-1981)
- Wayne C. Hardwick, M.D., Clinical Assistant Professor.
M.D., Emory University, 1975. (1980)
- Hazel I. Hardy, M.A., Assistant Professor of Home Economics
and Experiment Station Researcher.
B.S., University of Nevada, 1952; M.A., 1963. (1964-1966)
- Mildred Harmon, M.S.N., Assistant Professor of Nursing.
B.S., University of Nevada, 1972; M.S.N., 1975. (1975-1978)
- Rodney E. Harrington, Ph.D., Professor of Chemistry.
B.A., University of South Dakota, 1953; Ph.D., University of
Washington, 1960. (1972)
- Thomas Lloyd Harrington, Ph.D., Associate Professor of
Psychology.
B.A., University of Montana, 1959; M.S., University of Oregon,
1964; Ph.D., 1967. (1969-1973)
- John B. Harris, M.D., Clinical Associate Professor.
B.A., University of Nevada Reno, 1954; M.D., University of
Southern California, 1962. (1980)
- Lauran D. Harris, M.D., Clinical Assistant Professor.
B.S., Baylor University, 1944; M.D., Southwestern University, 1951.
(1980)
- Thomas Harris, Ph.D., Assistant Professor of Agricultural
Economics and Assistant Economist.
B.B.A., University of Texas at Arlington, 1970; M.S., Texas Tech
University, 1972; Ph.D., Oklahoma State University, 1981. (1981)
- Steven D. Harrison, Ph.D., Director of University Develop-
ment.
B.S., University of Idaho, 1967; M.B.A., Sacramento State Univer-
sity, 1970; Ph.D., Arizona State University, 1975. (1979)
- Sydney L. Harrison, M.S.W., Assistant Professor of Social and
Health Resources.
B.A., University of Houston, 1973; M.S.W., 1976. (1980)
- Francis X. Hartigan, Ph.D., Associate Professor of History.
A.B., Providence College, 1965; M.A., University of Wisconsin-
Madison, 1966; Ph.D., 1970. (1970-1974)
- David Lee Harvey, Ph.D., Associate Professor of Sociology.
B.A., University of Illinois, 1961; M.A., 1966; Ph.D., 1970.
(1968-1973)
- Robert D. Harvey, Ph.D., Associate Professor of English.
B.A., Northwestern University, 1948; M.A., University of Chicago,
1949; Ph.D., 1965. (1962-1970)
- J. Christopher Hastings, M.D., Clinical Assistant Professor.
B.S., University of Illinois, 1964; M.D., 1968. (1978)
- Brian W. Hatoff, M.A., Adjunct Lecturer.
B.A., University of California, Davis, 1971; M.A., 1974. (1980)
- Robert H. Hatstrup, B.C.S., Assistant Controller.
B.C.S., Seattle University, 1955. (1981)
- John F. Havertape, Ed.D., Associate Professor of Cur-
riculum and Instruction.
B.S., University of Wisconsin, 1969; M.S., 1971; Ed.D., University
of Arizona, 1976. (1976-1981)
- Karl S. Hazeltine, M.D., Clinical Assistant Professor.
M.D., University of California, Berkeley, 1952. (1979)
- Thomas L. Hefflin, Ph.D., Associate Professor, Managerial
Sciences, and Director of the Statewide Insurance Program.
B.S., California State University, San Jose, 1964; M.S., 1966; Ph.D.,
University of Oregon, 1972. (1978)
- Charles R. Heisler, Ph.D., Professor and Biochemist, Division
of Biochemistry.
B.S., Monmouth College, 1948; Ph.D., University of Chicago, 1957.
(1965-1973)
- Mahlon D. Heller, M.S.E.E., Associate Professor of En-
gineering.
B.S.E.E., Southern Methodist University, 1961; M.S.E.E., 1967.
(1981)
- Harry O. Hendrick, M.D., Clinical Assistant Professor.
B.S., University of Cincinnati, 1943; M.D., 1945 (1975)
- Yoshiko T. Hendricks, M.L.S., Librarian.
B.A., University of Texas, 1960; M.L.S., 1970. (1970-1977)
- James L. Hendrix, Ph.D., Professor of Chemical Engi-
neering and Associate Chemical Engineer, Nevada Bureau
of Mines and Geology.
B.S., University of Nebraska, 1966; M.S., 1968; Ph.D., 1969.
(1969-1978)

- Rita S. Henschen, M.S., Adjunct Associate Professor.
B.S., University of Nevada Reno, 1966; M.S., University of California at San Francisco, 1969. (1966-1980)
- Cheryl Ann Hermerath, B.S., Research Assistant, Medicine.
B.S., Northern Arizona University, 1978. (1979)
- Leo P. Herndon, Ed.D., Professor of Agricultural and Industrial Mechanics.
B.S., Colorado State University, 1949; M.Ed., 1960; Ed.D., Cornell University, 1966. (1965-1972)
- George H. Hess, M.D., Clinical Assistant Professor.
B.S., University of the Pacific, 1964; M.D., University of Washington, 1968. (1975)
- Gregory P. Hetter, M.D., Clinical Assistant Professor.
A.M., Royal University of Uppsala, Sweden, 1961; M.D., University of Washington, 1963. (1981)
- David W. Hettich, Ph.D., Associate Professor of English.
B.S., Creighton University, 1954; M.A., Marquette University, 1956; Ph.D., Wayne State University, 1962. (1961-1967)
- Malcolm J. Hibbard, Ph.D., Professor of Geology.
B.A., Dartmouth College, 1958; M.S., University of Washington, 1960; Ph.D., 1962. (1962-1973)
- Julie M. Hickey, B.S.Ed., Women's Head Basketball Coach, Women's Cross Country Coach.
B.S.Ed., Stephen F. Austin State University, 1979. (1981)
- Gregory J. Highison, Ph.D., Assistant Professor of Anatomy.
B.S., Youngstown State University, 1973; Ph.D., Medical College of Ohio at Toledo, 1980. (1981)
- Judy F. Hilbish, M.D., Instructor, Family and Community Medicine.
B.S., University of Nevada Reno, 1969; M.S., 1974; M.D., University of Alabama, 1978. (1979-1981)
- George C. Hill, M.S., Assistant Professor of Agricultural and Industrial Mechanics.
B.S., University of Idaho, 1972; M.S., 1974. (1981)
- Kenneth R. Hill, M.S., Agent in Charge, Cooperative Extension Service.
B.S., Oregon State University, 1954; M.S., Utah State University, 1972. (1972-1981)
- Robert L. Hill, M.P.A., Acting Medical Librarian.
B.A., University of Maryland, 1968; M.L.S., University of Southern California, 1973; M.P.A., 1974. (1980)
- Robert E. Hiller, Ph.D., Clinical Assistant Professor.
A.B., University of North Carolina, 1964; Ph.D., University of Tennessee, 1969. (1980)
- Deborah C. Hines, M.A., Resident Director, Manzanita and Juniper Hall.
B.A., University of Nevada Reno, 1977; M.A., 1980. (1980)
- Patricia L. Hixson, Head Softball Coach, Assistant Volleyball Coach, Intercollegiate Athletics. (1979)
- David S. Hoffman, B.A.J., Lecturer in Speech and Theatre.
B.A.J., University of Nevada Reno, 1980. (1981)
- Piotr Hoffman, Ph.D., Associate Professor of Philosophy.
M.A., University of Warsaw, Poland, 1967; Ph.D., University of Paris, 1970. (1977-1981)
- Melba Holderman, R.N., Executive Director, Northern Nevada Cancer Council.
R.N., Holy Cross Hospital, Salt Lake City, Utah, 1948. (1978-1981)
- Howard Holderness, Jr., M.D., Clinical Assistant Professor.
A.B., University of North Carolina, 1961; M.D., 1965. (1975-1976)
- Paul M. Hollingsworth, Ed.D., Professor of Curriculum and Instruction.
B.S., Brigham Young University, 1953; M.A., Arizona State University, 1961; Ed.D., 1964. (1966-1970)
- Nancy R. Hooper, Ph.D., Director of English as a Second Language Program and Assistant Professor of English.
B.A., Anna Maria College, 1964; M.A., Wichita State University, 1967; Ph.D., University of Nevada Reno, 1972. (1973-1981)
- Robert Clark Hooper, Ph.D., Associate Professor of Mathematics.
B.A., Johns Hopkins University, 1961; Ph.D., University of Maryland, 1967. (1968-1972)
- Marilyn J. Horn, Ph.D., Professor of Home Economics.
B.S., Pratt Institute, 1946; M.S., Cornell University, 1947; Ph.D., 1953. (1955-1963)
- Mary Lou House, M.S., Associate Professor of Nursing.
B.S., University of Nebraska, 1956; M.S., University of Colorado, 1962. (1970)
- Willem Houwink, Dr.Ec., Professor of Economics.
Dr.Ec., Netherlands Economic University, 1947. (1957-1980)
- Anne B. Howard, Ph.D., Associate Professor of English.
B.A., University of Colorado, 1949; M.A., University of New Mexico, 1954; Ph.D., 1966. (1963-1971)
- Raymond J. Howard, Jr., M.S., Adjunct Assistant Professor.
B.A., Western Washington College, 1957; M.S., University of Tennessee, 1963. (1972)
- Shirley Howard, M.Ed., Associate Professor of Nursing.
B.S.N., University of Washington, 1953; M.Ed., University of Minnesota, 1957. (1967-1973)
- William Vaughan Howard, M.A., Associate Professor of Art.
B.F.A., University of New Mexico, 1950; M.A., 1953. (1963-1970)
- Daniel M. Howe, M.S., Instructor in Geology.
B.S., University of Nevada Reno, 1973; M.S., 1975. (1981)
- Fred E. Howe, B.S., Coordinator, Laboratory Animal Caretaker Training Program and Director of University Animal Care Service.
B.S., Michigan State University, 1952. (1981)
- Jo Deen Howe, M.S.N., Adjunct Professor.
B.S.N., St. Louis University, 1955; M.S.N., University of California, San Francisco, 1962. (1978-1980)
- Joseph E. Howland, Ph.D., Research Scientist, Plant, Soil and Water Sciences.
B.S., Rhode Island State University, 1940; M.S., Michigan State University, 1942; Ph.D., Cornell University, 1945. (1969-1979)
- Jerry A. Howle, M.D., Clinical Assistant Professor.
B.S., Furman University, 1967; M.D., Medical University of South Carolina, 1973; Ph.D., 1976. (1976-1981)
- James M. Hoyt, M.B.A., C.P.A., Professor of Accounting.
B.S., Miami University, 1947; M.B.A., Indiana University, 1948. (1948-1969)
- Liang-Chi Hsu, Ph.D., Professor of Geology and Associate Mineralogist, Nevada Bureau of Mines and Geology and Nevada Mining Analytical Laboratory.
B.S., National Taiwan University of China, 1956; M.S., 1961; Ph.D., University of California, Los Angeles, 1966. (1969-1978)
- Jerry Wayne Huber, Ph.D., C.E.P., Senior Research Consultant and Associate Director of Research and Educational Planning Center.
B.S., Southern Illinois University, 1969; M.S., 1970; Ph.D., Oregon State University, 1974. (1972)
- Donald M. Hudson, M.S., Instructor in Geology.
B.S., Marietta College, 1974; M.S., University of Nevada Reno, 1977. (1981)
- William J. Hudspeth, Ph.D., Associate Professor of Behavioral Science.
A.B., California State University, 1960; M.A., 1962; Ph.D., Claremont University Center, 1967. (1974)
- Richard E. Hughs, Ph.D., Professor of Managerial Sciences and Information Systems, and Dean of the College of Business Administration.
B.S., University of Rochester, 1957; M.S., Purdue University, 1959; Ph.D., 1962. (1977)
- James W. Hulse, Ph.D., Professor of History.
B.A., University of Nevada, 1952; M.A., 1958; Ph.D., Stanford University, 1961. (1962-1970)
- Robert C. Hulse, M.D., Clinical Assistant Professor.
M.D., University of Michigan, 1960. (1979)
- Roshan Hulugalle, M.D., Clinical Assistant Professor.
M.D., Colombo, Sri-Lanka, 1964. (1980)
- Steven B. Humphrey, M.D., Associate Professor of Medicine.
B.A., Stanford University, 1964; M.D., University of California at Irvine, 1968. (1981)

- Harry C. Huneycutt, M.D., Clinical Assistant Professor.
B.A., Virginia Military Institute, 1957; M.D., Duke University, 1961. (1971)
- Douglas A. Hunter, M.D., Clinical Assistant Professor.
B.S., University of Nebraska, 1956; M.D., Stanford University, 1966. (1979)
- Neil C. Hutten, B.S., Assistant Research Scientist, Renewable Natural Resources.
B.S., Humboldt State University, 1979. (1980)
- John Iliescu, D.D.S., M.D., Clinical Associate Professor.
B.S., University of Illinois, 1950; D.D.S., 1954; M.D., George Washington University, 1958. (1975-1979)
- Donald A. Jackson, Ph.D., Adjunct Instructor.
B.A., Lawrence University, 1966; M.A., Western Michigan University, 1968; Ph.D., University of Utah, 1973. (1978)
- Parvin M. Jacobs, M.D., Clinical Assistant Professor.
B.S., Barat College, 1950; M.D., New York Medical College, 1955. (1975)
- Theodore Jacobs, M.D., Clinical Professor.
B.S., Rutgers University, 1950; M.D., New York Medical College, 1955. (1975-1981)
- William H. Jacobsen, Jr., Ph.D., Professor of English.
A.B., Harvard University, 1953; Ph.D., University of California, Berkeley, 1964. (1965-1974)
- Rebecca Jankovich, Ph.D., Clinical Associate Professor.
B.A., University of California, Berkeley, 1970; M.A., University of Nevada, 1972; Ph.D., 1974. (1975-1981)
- Robert D. Jeffers, M.Ed., Director, Personnel Services.
B.S., University of Nevada, 1958; M.Ed., 1970. (1965-1974)
- John W. Jefferson, Master Sergeant, Chief Instructor, Military Science. (1980)
- Stephen H. Jenkins, Ph.D., Associate Professor of Biology.
A.B., Dartmouth College, 1968; A.M., Harvard University, 1972; Ph.D., 1975. (1974-1981)
- Edwin H. Jensen, Ph.D., Professor of Agronomy; Agronomist, Plant, Soil, and Water Sciences.
B.S., University of Wisconsin, 1949; M.S., 1950; Ph.D., 1952. (1952-1964)
- Paul R. Jensen, M.D., Clinical Associate Professor.
A.B., University of California, Berkeley, 1951; M.D., University of California, San Francisco, 1956. (1979)
- Jeanette M. Jesch, M.S. of A., Supervisor, Animal Care Facility.
B.S. of A., University of Nevada Reno, 1972; M.S. of A., 1977. (1979)
- Kenneth D. Jessup, M.S., Vice President of Business.
B.S., Central State College, 1955; M.S., Oklahoma State University, 1961. (1964-1980)
- Kenneth W. Johns, Ed.D., Associate Professor of Curriculum and Instruction.
B.A., University of Arizona, 1954; M.Ed., 1959; Ed.D., 1966. (1966-1970)
- Arthur W. Johnson, Jr., B.M., Director, Fleischmann Atmospherium/Planetarium.
B.M., University of Southern California, 1973. (1976-1978)
- Bruce P. Johnson, Ph.D., Professor of Electrical Engineering.
B.S., Bates College, 1960; M.S., University of New Hampshire, 1963; Ph.D., University of Missouri, 1967. (1974-1981)
- Michael C. Johnson, M.D., Clinical Assistant Professor.
M.D., Creighton University, 1972. (1978)
- Robert B. Johnson, B.A., 4-H Youth Agent & Camp Manager.
B.A., University of California, Santa Barbara, 1976. (1978)
- Wayne S. Johnson, Ph.D., Assistant Professor of Horticulture and Assistant Horticulturist in Plant, Soil, and Water Sciences.
B.S., Utah State University, 1970; M.S., Michigan State University, 1973; Ph.D., 1976. (1976)
- Michael A. Jonak, M.D., Clinical Assistant Professor.
B.A., St. Bonaventure University, 1969; M.A., State University of New York at Buffalo, 1971; M.D., Creighton University, 1975. (1981)
- Arthur R. Jones, Program Director, Office of Communications and Broadcasting. (1979)
- Bernard M. Jones, Ph.D., Dean of Agriculture; Professor of Animal Science, Max C. Fleischmann College of Agriculture.
B.S., Murray State University, 1956; M.S., University of Kentucky, 1960; Ph.D., 1965. (1982)
- Denny A. Jones, Ph.D., Associate Professor of Chemical and Metallurgical Engineering.
B.S., University of Nevada Reno; 1960; M.S., University of Arizona, 1962; Ph.D., Rensselaer Polytechnic Institute, 1966. (1979)
- H. Douglas Jones, M.D., Clinical Associate Professor.
B.S., Kansas State University, 1958; M.D., 1963. (1978)
- John S. Jones, B.A., Coordinator, Health Careers for American Indians.
B.A., University of Nevada, 1973. (1975-1978)
- Perry Jones, Ph.D., Professor of Music.
B.A., University of Iowa, 1957; M.A., 1965; Ph.D., 1968. (1978-1980)
- Richard B. Jones, M.S., Assistant Economic Geologist, Nevada Bureau of Mines and Geology.
B.S., Fresno State College, 1964; M.S., University of Nevada Reno, 1972. (1977)
- Timothy S. Jones, M.A., KUNR-FM Station Manager.
B.A., Washington State University, 1971; M.A., 1973. (1980)
- Russell T. Jordan, Ph.D., Adjunct Professor.
B.S., University of Arkansas, 1941; M.S., 1949; Ph.D., University of Michigan, 1953. (1975)
- Johannes P. Jorna, M.D., Clinical Assistant Professor.
M.D., University of Groningen, Netherlands, 1959. (1971)
- A.Z. Joy, M.S., County Extension Agent in Charge, Eureka and White Pine Counties and Sheep Specialist, Cooperative Extension Service.
B.S., University of Wyoming, 1955; M.S., 1957. (1959-1971)
- Pablo U. Joya, M.D., Clinical Assistant Professor.
M.D., Universidad Nacional Automa de Mexico, 1969. (1980)
- Richard W. Kaiser, M.D., Clinical Associate Professor.
M.D., University of California, Los Angeles, 1962. (1975)
- Joyce Kania, M.S.W., Clinical Instructor.
A.B., University of Illinois, 1973; M.S.W., University of Maryland, 1977. (1980)
- Gary Lee Kantor, M.D., Clinical Assistant Professor.
B.A., University of California, Los Angeles, 1960; M.D., University of California, Los Angeles, 1964. (1976)
- Daniel W. Kappes, Engineer of Mines, Adjunct Associate Professor.
Engineer of Mines, Colorado School of Mines, 1966. (1978)
- Steven B. Karch, M.D., Clinical Associate Professor.
A.B., Brown University, 1964; M.D., Tulane University, 1969. (1981)
- Marc Kashinsky, Ph.D., Clinical Associate Professor.
B.A., California State University, Long Beach, 1965; M.A., Clark University, 1968; Ph.D., 1973. (1980)
- Thomas W. Kavanagh, M.D., Clinical Assistant Professor.
M.D., St. Louis University, 1952. (1971)
- John B. Kaye, D.B.A., Lecturer in Managerial Sciences.
B.A., George Washington University, 1964; M.B.A., 1966; D.B.A., 1973. (1970-1979)
- George M. Kazlauskas, B.A., Assistant Basketball Coach.
B.A., Rutgers College, 1977. (1978)
- Martha E. Kearns, M.A., Writing Specialist, Special Programs.
B.A., University of Arizona, 1971; M.A., University of Nevada Reno, 1981. (1981)
- William R. Keeler, M.D., Clinical Assistant Professor.
B.A., University of Kansas, 1958; M.D., 1962. (1975)
- Sally S. Kees, M.S., Associate Professor and State Home Economics Extension Specialist.
B.S., University of Nevada, 1967; M.S., 1971. (1967-1978)
- Anthony Kehl, B.A., Assistant Football Coach, Intercollegiate Athletics.
B.A., Humboldt State University, 1968. (1979)

- J. Patrick Kelly, Ph.D., Professor of Curriculum and Instruction.
B.A., State University of Iowa, 1948; M.A., 1953; Ph.D., 1959. (1955-1964)
- John C. Kelly, Ph.D., Associate Professor of Philosophy.
B.A., Wooster College, 1956; Ph.D., University of Chicago, 1969. (1973)
- Kenneth C. Kemp, Ph.D., Professor of Chemistry.
B.S., Northwestern University, 1950; Ph.D., Illinois Institute of Technology, 1956. (1955-1974)
- Michael W. Kendall, Ph.D., Associate Professor of Biomedical Science.
B.A., University of Northern Iowa, 1965; M.S., University of Louisville, 1969; Ph.D., 1972. (1974-1977)
- Edward A. Kennard, Ph.D., Adjunct Professor.
A.B., Dartmouth College, 1929; Ph.D., Columbia University, 1936. (1974)
- Donald W. Kennedy, B.A., Superintendent, County Extension Agent, Agricultural Experiment Station.
B.A., University of Nevada Reno, 1979. (1979)
- John B. Kennedy, M.S., Assistant Professor of Laboratory Medicine.
A.B., Indiana University, 1957; M.S., St. Lawrence University, 1971. (1977)
- John C. Kepper, Jr., Ph.D., Associate Professor of Geological Sciences, Nevada Bureau of Mines.
B.S., Franklin and Marshall College, 1955; M.S., University of Washington, 1960; Ph.D., 1969. (1980)
- Robert L. Kersey, B.S., Sierra Nevada Job Corps Center, Recruitment and Special Facilities (Stead) Administrator.
B.S., Cornell University, 1949. (1958-1980)
- Earl W. Kersten, Jr., Ph.D., Professor of Geography.
B.A., Washington University, 1949; M.A., University of Nebraska, 1951; Ph.D., 1961. (1951-1971)
- Ikramullah Khan, B.S., Clinical Assistant Professor.
M.B., Dow Medical College, 1965; B.S., 1972. (1979)
- Wendy K. Kiehn, M.S., Assistant Professor of Medical Technology.
B.S., University of Michigan, 1964; M.S., University of Arizona, 1967. (1976-1981)
- John L. Kiley, M.D., Assistant Professor, Primary and Ambulatory Care; Director, Internal Medicine.
B.S., Le Moyne College, 1958; M.D., University of Buffalo, 1962. (1981)
- Henry M. Kilpatrick, M.S., Range Extension Specialist, Churchill County, Cooperative Extension Service.
B.S., Montana State College, 1949; M.S., Texas A & M College, 1955. (1955-1976)
- Yung Sam Kim, Ph.D., Associate Professor of Mining Engineering.
B.S., University of Idaho, 1963; M.S., Pennsylvania State University, 1964; Ph.D., 1969. (1974)
- Gerald Kimble, Ph.D., Professor of Mathematics.
A.B., University of California, Berkeley, 1949; M.A., University of California, Los Angeles, 1958; Ph.D., 1962. (1967-1975)
- Bruce W. Kimzey, Ph.D., Director, Center for Economic Education and Associate Professor of Economics.
B.S., Brigham Young University, 1964; Ph.D., Washington State University, 1970. (1980)
- Robert Gerry Kinney, Ed.D., Associate Dean of Students.
B.A., Texas Tech University, 1960; M.S., 1963; Ed.D., Washington State University, 1970. (1970)
- Jeffrey M. Kintop, M.A., Program Coordinator, Research and Educational Planning Center.
B.A., University of Minnesota, 1974; M.A., Mankato State University, 1977. (1979-1981)
- Lawrence M. Kirk, B.S., Extension Radio and Broadcast Editor in Agricultural Communications Services.
B.S., Colorado State University, 1952. (1965-1974)
- Donald A. Klebenow, Ph.D., Professor and Wildlife Management Specialist.
B.S., University of Montana, 1960; M.S., 1962; Ph.D., University of Idaho, 1968. (1971-1978)
- Barry R. Klein, M.D., Clinical Assistant Professor.
B.A., University of Pennsylvania, 1969; M.D., Thomas Jefferson University, 1971. (1980)
- Edgar Fox Kleiner, Ph.D., Associate Professor of Biology.
B.S., University of Illinois, 1950; M.S., University of Utah, 1967; Ph.D., 1968. (1969-1975)
- John Arthur Kleppe, Ph.D., Professor of Electrical Engineering, Engineering Research and Development Center.
B.S., University of Nevada, 1961; M.S., 1967; Ph.D., University of California, Davis, 1970. (1969-1979)
- James K. Kliwer, Ph.D., Professor of Physics.
B.S., University of Colorado, 1957; M.S., 1959; Ph.D., 1963. (1963-1975)
- John A. Knechel, Ph.D., Associate Professor of Agricultural and Resource Economics and Extension Specialist.
B.S., Rutgers University, 1960; M.S., University of Massachusetts, 1962; Ph.D., University of California, Berkeley, 1966. (1978)
- Paul Knoop, M.D., Clinical Assistant Professor.
M.D., University of Missouri, 1962. (1978)
- Owen A. Knorr, Ph.D., Director of Institutional Studies and Professor of Biology.
B.S., Colorado College, 1951; M.S., University of Colorado, 1953; Ph.D., 1956. (1980)
- Ted R. Knous, B.S., Assistant Professor of Plant, Soil, and Water Science and Extension Plant Pathologist.
B.S., University of Nevada Reno, 1979)
- George Knox, A.B., Executive Administrator, Family and Community Medicine.
A.B., Colorado State College, 1960. (1981)
- Harris W. Knudson, M.D., Clinical Associate Professor.
B.S., University of Minnesota, 1953; M.D., 1955. (1975)
- Kenneth Elville Knudson, Ph.D., Associate Professor of Anthropology.
B.S., University of Washington, 1956; Ph.D., University of Oregon, 1970. (1970-1973)
- Victor K. Knutzen, M.D., Clinical Associate Professor.
M.B.Ch.B., University of Cape Town, 1966; M.R.C.O.G., Royal College of Obstetrics, Gynecology, 1971; M.D., University of Cape Town, 1975. (1979)
- David L. Koch, Ph.D., Adjunct Professor of Biology.
B.S., Bethany College, 1966; M.S., Fort Hays State University, 1968; Ph.D., University of Nevada Reno, 1972. (1980)
- Brian A. Koenig, M.S., Research Associate of Mines.
B.S., University of Washington, 1973; M.S., University of Arizona, 1977. (1978)
- Stephen Kollins, M.D., Clinical Assistant Professor.
B.A., University of Minnesota, 1964; M.S., Rutgers University, 1965; M.D., University of Cincinnati, 1969. (1981)
- Fred J. Kosik, M.A., Associate Professor of Journalism.
B.S., Western Illinois University, 1967; M.A., University of Iowa, 1971. (1980)
- Eugene V. Kosso, M.S.E.E., P.E., Professor of Electrical Engineering.
B.S., Worcester Polytechnic Institute, 1945; M.S.E.E., Lafayette College, 1955. (1960-1974)
- Anthony J. Kotnik, M.D., Assistant Professor, Family and Community Medicine.
B.A., Harvard University, 1969; M.D., University of Minnesota, 1973. (1981)
- Thomas R. Kozel, Ph.D., Associate Professor of Biomedical Sciences.
B.A., University of Iowa, 1967; M.S., 1969; Ph.D., 1971. (1971-1976)
- Frank R. Krajewski, Ph.D., Associate Professor of Educational Foundations and Media.
B.A., Providence College, 1960; M.A., Michigan State University, 1964; Ph.D., 1969. (1969-1974)
- James Krall, M.S., Assistant Professor of Agronomy and Assistant Agronomist.
B.S., Montana State University, 1973; M.S., Kansas State University, 1975. (1979)

- Terrill J. Kramer, Ph.D., Assistant Professor of Geography.
B.A., Valparaiso University, 1965; M.A., University of Illinois, 1967; Ph.D., 1973. (1968-1974)
- Richard C. Kremp, M.D., Clinical Assistant Professor.
A.B., Indiana University, 1960; M.D., Indiana University Medical School, 1963. (1976)
- Karl W. Kreplin, Ph.D., Assistant Professor of Sociology.
B.A., University of California, Berkeley, 1963; M.A., 1966; Ph.D., 1977. (1973-1977)
- Alan Krinik, Ph.D., Assistant Professor of Mathematics.
B.A., University of California, Los Angeles, 1972; M.A., 1972; Ph.D., University of California, Riverside, 1978. (1980)
- Thomas M. Kubistant, Ed.D., Counselor, Counseling and Testing.
B.A., Bradley University, 1972; M.A., 1973; Ed.D., Northern Illinois University, 1977. (1977)
- John P. Kurlinski, M.D., Clinical Assistant Professor.
A.B., Williams College, 1970; M.D., Johns Hopkins University, 1974. (1981)
- Kenneth Kurtz, M.D., Assistant Professor of Internal Medicine & Family & Community Medicine.
B.A., Williams College, 1966; M.D., Cornell University Medical College, 1970. (1978)
- Zev Lagstein, M.D., Clinical Assistant Professor.
M.D., Hebrew University, 1975. (1981)
- Sam Joseph La Mancusa, M.D., Clinical Assistant Professor.
M.D., University of Buffalo, 1965. (1980)
- Karen L. Landers, B.A., Senior Graphic Designer.
B.A., University of Nevada Reno, 1972. (1981)
- R. Kenneth Landow, M.D., Clinical Assistant Professor.
M.D., University of California, Los Angeles, 1973. (1980)
- Curtis A. Langdon, B.A., Adjunct Instructor.
B.A., California State University, Northridge, 1976. (1980)
- Daphne D. La Pointe, M.S., Research Associate, Junior Geologist.
A.B., Smith College, 1973; M.S., University of Montana, 1977. (1981)
- Barbara W. Larsen, M.S.W., Associate Professor of Social Health Resources.
B.S., University of Utah, 1953; M.S.W., 1955. (1965-1973)
- Larry James Larsen, Ph.D., Professor of Economics.
B.S., Utah State University, 1954; Ph.D., University of Utah, 1967. (1960-1971)
- Laurie I. Larson, Adjunct Instructor. (1979)
- Lawrence T. Larson, Ph.D., Professor of Economic Geology.
B.S., University of Illinois, 1957; M.S., University of Wisconsin, 1959; Ph.D., 1962. (1975)
- Frederick A. Laubscher, M.D., Clinical Assistant Professor.
B.S., College of the Holy Cross, 1957; M.D., Georgetown University, 1961. (1971-1975)
- Robert W. Lauderdale, B.S., Extension Entomologist, Division of Biochemistry; Associate Professor of Entomology.
B.S., Oregon State College, 1949. (1955-1974)
- Robert J. Laughter, Ph.D., Professor of Physical Education.
B.S., Oregon State College, 1952; M.A., Ohio State University, 1955; Ph.D., 1963. (1957-1972)
- Alfred S. Lavorato, Ph.D., Associate Professor of Speech Pathology and Audiology.
B.S., Portland State University, 1969; M.S., 1970; Ph.D., University of Pittsburgh, 1976. (1979)
- Gary D. Lawrance, M.S., Area County Agent, Cooperative Extension Service.
B.S., Utah State University, 1974; M.S., Iowa State University, 1978. (1980)
- George M. Lawson, M.A., Director of Forensics.
B.A., University of New Mexico, 1974; M.A., Brigham Young University, 1979. (1979)
- Kenneth L. Learey, M.D., Clinical Associate Professor.
B.S., Ohio Wesleyan University, 1954; M.D., Ohio State University, 1958. (1971-1979)
- Ivan Edward Lee, M.S., Lecturer in Curriculum and Instruction.
B.S., Utah State University, 1950; M.S., 1955. (1966)
- Clark D. Leedy, Ph.D., Extension Soils Management Specialist.
B.S., Purdue University, 1955; M.S., New Mexico State University, 1964; M.A., 1967; Ph.D., Texas A & M University, 1974. (1976-1979)
- Dorothy Legarreta, Ph.D., Adjunct Professor.
B.S., University of California, Berkeley, 1945; M.A., 1969; Ph.D., 1975. (1979)
- John A. Legarza, M.Ed., Assistant Athletic Director of Women's Sports and Golf Coach, Intercollegiate Athletics.
B.S., University of Nevada, 1958; M.Ed., 1965. (1971-1981)
- Harold E. LeMay, Jr., Ph.D., Professor of Chemistry.
B.S., Pacific Lutheran University, 1962; M.S., University of Illinois, 1964; Ph.D., 1966. (1966-1979)
- Grant Francis Leneaux, Ph.D., Associate Professor of Foreign Languages and Literatures.
B.A., University of Oklahoma, 1964; M.A., 1966; Ph.D., University of Kansas, 1972. (1970-1979)
- John G. Lenz, M.M., Associate Professor of Music.
B.A., University of Nevada Reno, 1970; M.M., New England Conservatory, 1972. (1972-1981)
- Anthony Lesperance, Ph.D., Professor of Animal Science and Superintendent, Gund Research and Demonstration Ranch.
B.S., California State Polytechnic College, 1957; M.S., University of Nevada, 1959; Ph.D., Oregon State University, 1974. (1959-1975)
- Leslie Levin, M.A., Lecturer in Speech Pathology.
B.A., University of Maryland, 1976; M.A., University of Nevada Reno, 1977. (1978)
- Louis A. Levy, M.D., Clinical Associate Professor.
B.A., University of California at Santa Barbara, 1962; M.D., University of Southern California, 1964. (1975)
- Richard J. Lewin, M.D., Clinical Associate Professor.
B.A., University of California at Los Angeles, 1955; M.D., University of Southern California, 1962. (1981)
- Kathleen Lewis, B.S., Educational Program Assistant, School of Medicine.
B.S., Oregon State University, 1964. (1980)
- Roger Allen Lewis, Ph.D., Associate Professor of Biochemistry.
B.A., Phillips University, 1963; Ph.D., Oregon State University, 1968. (1969-1975)
- David A. Lightner, Ph.D., Professor of Chemistry.
A.B., University of California, Berkeley, 1960; Ph.D., Stanford University, 1964. (1974-1976)
- Sven S. Liljeblad, Ph.D., Hilliard Professor of Humanities.
F.K., Lund University, Sweden, 1922; F.L., 1927; Ph.D., 1927. (1966)
- Jeffrey M. Lilyhorn, D.D.S., Sierra Nevada Job Corps Center.
D.D.S., University of Nebraska, 1978. (1979)
- Luther E. Lindner, M.D., Assistant Professor of Laboratory Medicine.
B.S., University of Toledo, 1964; M.D., Case Western Reserve University, 1967; Ph.D., 1974. (1975)
- Cecile Lindsay, Ph.D., Assistant Professor of Foreign Languages and Literatures.
B.A., California State University at Fullerton, 1973; M.A., University of California, Irvine, 1975; Ph.D., 1980. (1981)
- Rosella Linskie, Ph.D., Professor of Curriculum and Instruction.
B.A., Our Lady of Victory, 1939; M.A., Catholic University of America, 1942; Ph.D., University of Texas, 1956. (1966)
- Joseph Lintz, Jr., Ph.D., Professor of Geology; Acting Dean, Mackay School of Mines.
A.B., Williams College, 1942; M.S., University of Oklahoma, 1947; Ph.D., Johns Hopkins University, 1956. (1951-1981)
- Patricia A. Little, M.S.N., Adjunct Assistant Professor.
B.S.N., West Virginia University, 1968; M.S.N., University of Texas, 1974. (1975-1978)

- Victor J. LoCicero, M.D., Clinical Associate Professor.
B.S., Long Island University, 1950; M.S., Temple University, 1958; M.D., Albany Medical College, 1955. (1975)
- Joan W. Logan, M.S., Reading Specialist, Sierra Nevada Job Corps Center.
B.E., Chicago Teachers College, 1943; M.S., Chicago State University, 1973. (1979)
- Robert F. Long, M.S., Extension Youth Agent, Clark County.
B.S., Western Illinois University, 1974; M.S., University of Illinois, 1976. (1978)
- Raymond K. Loper, M.S., Associate Professor of Recreation and Physical Education.
B.S., Colorado State University, 1950; M.S., University of Oregon, 1960. (1967-1974)
- Edward E. Loveless, Ed.D., Professor of Educational Administration and Higher Education.
B.S., Purdue University, 1940; M.S., 1941; Ed.D., Stanford University, 1961. (1965-1973)
- Frank S. Lucash, Ph.D., Associate Professor of Philosophy.
B.A., Southern Illinois University, 1959; M.S., University of Illinois, 1961; M.A., Southern Illinois University, 1966; Ph.D., 1970. (1968-1980)
- David Luke, Ph.D., Clinical Assistant Professor.
B.A., University of Minnesota, 1967; M.A., Southern Illinois University, 1969; Ph.D., 1972. (1980)
- David L. Lundberg, Ph.D., Program Manager of Research and Educational Planning Center.
A.B., University of California, Berkeley, 1964; M.A., San Francisco State University, 1974; Ph.D., University of California, Berkeley, 1975. (1979-1981)
- Geroline Lunsford, B.S.E., County Extension Home Economist, Cooperative Extension Service.
B.S.E., Henderson State Teachers College, 1953. (1955-1973)
- David M. Lupan, Ph.D., Associate Professor of Microbiology.
B.S., University of Arizona, 1967; M.S., University of Iowa, 1970; Ph.D., 1973. (1973-1981)
- Arthur Joel Lurie, M.D., Clinical Associate Professor.
B.A., Northwestern University, 1957; M.D., 1960. (1978)
- Edward J. Lynn, M.D., Professor of Psychiatry and Behavioral Sciences.
B.S., Brooklyn College, 1962; M.D., Yeshiva University, 1965; M.A., Michigan State University, 1972. (1975-1976)
- Ronald A. Macauley, Ph.D., Professor of Mathematics.
B.A., University of British Columbia, 1949; M.A., 1951; Ph.D., University of Illinois, 1955. (1960-1970)
- Scott L. Macdonald, Jr., B.S.M.E., Lecturer in Engineering Technologies.
B.S.E.E., University of Nevada, 1964; B.S.M.E., 1966. (1968-1981)
- F. Roy MacKintosh, M.D., Assistant Professor of Internal Medicine.
B.S., Massachusetts Institute of Technology, 1968; M.D., University of Miami, 1976. (1981)
- Kenneth Maclean, M.D., Clinical Professor.
B.S., University of Nevada Reno, 1935; M.D., McGill University, 1939. (1978-1979)
- Paul Macura, M.A., Lecturer in Foreign Languages and Literatures.
B.A., University of Washington, 1955; M.A., 1959. (1963)
- Kenneth T. Maehara, Ph.D., Assistant Professor of Laboratory Medicine, Medical Technology.
B.A., San Jose State College, 1965; M.A., 1969; Ph.D., Washington State University, 1972. (1977)
- Susan Maestretti, P.N.P., Nurse Practitioner.
B.S., University of Nevada Reno, 1969; P.N.P., University of Colorado, 1975. (1975-1977)
- Randy Magen, B.A., Assistant Coordinator, Social and Health Resources.
B.A., Michigan State University, 1979. (1980)
- Larry Magin, M.D., Clinical Instructor.
B.S., City College of New York, 1959; M.D., Tel Aviv University, 1971. (1980)
- Mark J. Magney, Ed.D., Associate Professor of Recreation and Physical Education.
B.S., University of Utah, 1957; Ed.D., Teachers College, Columbia University, 1967. (1966-1972)
- Clare N. Mahannah, M.S., Irrigation Specialist, Plant Soil, and Water Science.
B.S., University of Minnesota, 1958; M.S., University of California, Davis, 1961. (1965-1976)
- Lynn Mahannah, M.S., Coordinator, Suicide Prevention and Crisis Call Center.
B.S., University of California, Davis, 1964; M.S., University of Nevada Reno, 1968. (1979)
- Alfred J. Maher, M.D., Clinical Assistant Professor.
B.S., University of Nevada Reno, 1964; M.D., University of New Mexico, 1968. (1978)
- Margaret B. Maher, Ph.D., Program Manager, Research and Educational Planning Center.
B.S., Purdue University, 1959; M.S., 1960; Ph.D., 1963. (1977-1981)
- Samuel Males III, B.S., Operations Manager, Bureau of Business and Economic Research.
B.S., Westminster College, 1973. (1975-1981)
- Jacob Malin, M.D., Clinical Assistant Professor.
B.S., Idaho State University, 1944; M.D., Washington State University, 1948. (1981)
- Harry H. Malvin, M.D., Clinical Assistant Professor.
B.A., Washington Square College, 1948; M.D., Northwestern University, 1956. (1980)
- Robert E. Mammen, M.D., Associate Professor of Family and Community Medicine.
B.A., Montana State University, 1953; M.S., University of Oregon Medical School, 1958; M.D., 1958. (1979)
- Francesco Manca, Dott., Assistant Professor in Foreign Languages and Literatures.
Dott., University of Pisa, 1967. (1968-1981)
- Robert A. Manhart, Ph.D., P.E., Professor of Electrical Engineering.
B.S., Rose Polytechnic Institute, 1945; M.S., University of Illinois, 1947; Ph.D., Stanford University, 1961. (1961)
- George T. Manilla, M.D., Clinical Assistant Professor.
B.S., University of Utah, 1952; M.S., 1954; M.D., 1961. (1975)
- Lindley Manning, M.S., P.E., Associate Professor of Mechanical Engineering.
B.S.M.E., University of Cincinnati, 1958; M.S., University of Nevada, 1966. (1963-1974)
- Mary F. Maples, Ph.D., Counselor Educator, and Professor, Counseling and Guidance Personnel Services.
B.S.Ed., Salem State College, 1955; M.Ed., State College at Bridgewater, 1961; Ph.D., Oregon State University, 1977. (1977-1981)
- Donald W. Marble, D.V.M., Professor of Veterinary Science and Veterinarian, Experiment Station; Professor of Pathology.
B.S., Washington State College, 1950; D.V.M., 1951. (1956-1970)
- Barbara Jean Margerum, M.S., Associate Professor, Home Economics Extension State Specialist, and Agricultural Experiment Station Researcher.
B.S., University of Washington, 1944; M.S., University of Nevada, 1963. (1964-1981)
- John Marini, Ph.D., Assistant Professor of Political Science.
B.A., San Jose State College, 1966; M.A., Claremont Graduate School, 1971; Ph.D., 1978. (1981)
- Joseph H. Marion, M.Agr., Research Agronomist and Extension Agent, Plant Science.
B.A., University of Denver, 1948; B.S., North Carolina State, 1950; M.Agr., Colorado State University, 1965. (1973-1980)
- John P. Marschall, Ph.D., Assistant to the President and Associate Professor of History.
B.A., Loyola University, 1956; M.A., St. Louis University, 1961; Ph.D., Catholic University of America, 1965. (1969-1980)
- David P. Marsh, Ph.D., Associate Professor of Physics.
B.A., DePauw University, 1957; Ph.D., University of California, Berkeley, 1962. (1963-1969)

- Craig Marshall, B.S.M.E., Mechanical Engineer, Physical Plant.
B.S.M.E., University of Nevada Reno, 1981. (1981)
- Emory L. Marshall, B.S., County Extension Agent in Charge, Carson City, Cooperative Extension Service.
B.S., University of Nevada, 1955. (1967-1979)
- Shirley J. Marshall, R.N., Registered Nurse, Internal Medicine. (1981)
- Algis Martell, M.D., Clinical Assistant Professor.
B.A., Brown University, 1955; M.D., Dalhousie Medical School, 1960. (1978)
- Betty J. Martin, B.S. in H.E., EFNEP Supervisor, Washoe County Extension, Cooperative Extension Service.
B.S. in H.E., Mississippi State College for Women, 1956. (1981)
- L. Robert Martin, M.D., Professor of Family and Community Medicine.
B.A., Stanford University, 1941; M.D., 1945. (1978)
- Marianne Martin, Associate Director for Publications. (1978)
- Edward Worden Martinez, Jr., M.A., Associate Professor of Art.
B.A., University of Nevada, 1964; B.S., 1965; M.A., University of Iowa, 1969. (1968-1975)
- Jeff W. Mast, M.D., Clinical Associate Professor.
B.A., University of Colorado at Boulder, 1963; M.D., Wayne State University, 1967. (1978-1979)
- David H. Mathis, M.A., Communications Specialist and Extension News Editor, Agricultural Communications Services.
B.A., University of Nevada, 1954; M.A., 1973. (1966-1978)
- John E. Maxfield, Ph.D., Associate Professor of Plant Pathology and Associate Plant Pathologist.
B.S., University of Wyoming, 1961; M.S., 1962; Ph.D., Cornell University, 1967. (1967-1972)
- Patrick N. Maxon, Ph.D., Assistant Professor of Agronomy and Assistant Agronomist.
B.S., University of Arizona, 1975; M.S., Purdue University, 1977; Ph.D., 1978. (1979)
- Jerry R. May, Ph.D., Associate Professor of Behavioral Science and Assistant Dean for Medical School Admissions.
B.A., Western Washington State College, 1966; M.A., Bowling Green State University, 1968; Ph.D., 1974. (1974-1981)
- Paul Maynard, B.S., Agricultural Communications Technical Specialist.
B.S., University of Arizona, 1975. (1980)
- William John Mayville, Ph.D., Adjunct Assistant Professor.
B.A., Eastern Michigan University, 1964; M.A., Western Michigan University, 1967; Ph.D., University of Utah, 1972. (1976)
- Ernest Mazzaferri, M.D., Professor of Internal Medicine.
B.S., John Carroll University, 1958; M.D., Ohio State University, 1962. (1978)
- J. Kent McAdoo, M.S., Lecturer and Research Assistant in Wildlife Habitat Management.
B.S., University of Idaho, 1972; M.S., University of Nevada Reno, 1975. (1977)
- Laurence R. McClish, M.D., Clinical Associate Professor.
B.A., University of California, Davis, 1962; M.D., University of California, San Francisco, 1966. (1978-1979)
- Hilda Jane McCormick, M.A., Assistant Professor of Nursing.
B.A., C.W. Post College of Long Island, 1973; M.A., New York University, 1976. (1978)
- James C. McCormick, Jr., M.A., Professor of Art.
B.A., University of Tulsa, 1958; M.A., 1960. (1960-1972)
- Edna DeChambeau McCoy, M.A., Assistant Professor in Social and Health Resources and Coordinator of Health Careers Advisement.
B.A., University of California, Davis, 1966; M.A., University of Nevada Reno, 1977. (1980-1981)
- Thomas McCoy, Ph.D., Adjunct Professor.
B.S., University of Wisconsin, 1973; M.A., 1976; Ph.D., 1980. (1981)
- Charles F. McCuskey, Jr., M.D., Clinical Associate Professor.
A.B., Stanford University, 1954; M.D., University of Southern California, 1958. (1975-1979)
- Kathryn McFadden, M.S., Instructor of Nursing.
B.S.N., B.A., Widener University, 1975; M.S., University of Maryland at Baltimore, 1977. (1981)
- Stephen C. McFarlane, Ph.D., Associate Professor of Speech Pathology and Audiology.
B.S., Portland State College, 1967; M.S.T., Portland State University, 1969; Ph.D., University of Washington, 1975. (1975-1980)
- A. Graydon McGrannahan, III, D.M.A., Assistant Professor of Music and Director of Marching Band.
B.M.E., Murray State University, 1973; M.M., North Texas State University, 1974; DMA, 1981. (1975-1980)
- Ann McGuinness, M.A., Assistant Professor of Speech Pathology.
B.S. in Educ., New Jersey State Teachers College, 1941; A.M., University of Michigan, Ann Arbor, 1950. (1978)
- Robert B. McKee, Jr., Ph.D., P.E., Professor of Mechanical Engineering.
B.S., Montana State College, 1948; M.S., University of Washington, 1952; Ph.D., University of California, Los Angeles, 1967. (1957-1973)
- Trevor J. McMinn, Ph.D., Professor of Mathematics.
B.A., University of Utah, 1942; Ph.D., University of California, Berkeley, 1954. (1963-1969)
- John G. McNeely, Jr., Ph.D., Associate Professor and Associate Agricultural and Resource Economist.
B.S., Texas A & M University, 1962; M.S., New Mexico State University, 1963; Ph.D., Oklahoma State University, 1969. (1967-1973)
- Robert McQueen, Ph.D., Professor of Psychology and Director of Scholarships.
B.A., University of Denver, 1949; M.A., 1950; Ph.D., University of Texas, 1955. (1955-1972)
- Paul Wyatt McReynolds, Ph.D., Professor of Psychology.
B.S., Central Missouri State College, 1940; M.A., University of Missouri, 1946; Ph.D., Stanford University, 1949. (1969)
- Robert Warren Mead, Ph.D., Professor of Biology.
B.S., Colorado State University, 1962; M.S., 1963; Ph.D., 1968. (1970-1981)
- Richard O. Meeuwig, Ph.D., Adjunct Professor.
B.S., University of California, Berkeley, 1951; M.S., 1960; Ph.D., Utah State University, 1964. (1966-1979)
- Raymond J. Megquier, D.D.S., Clinical Associate Professor.
B.S., University of Nevada Reno, 1961; D.D.S., University of the Pacific, 1965; M.S., University of Michigan, Ann Arbor, 1968. (1975)
- Wilton N. Melhorn, Ph.D., Adjunct Professor.
B.S., Michigan State University, 1942; M.S., New York University, 1943; M.S., Michigan State, 1951; Ph.D., University of Michigan, 1955. (1973)
- Alice J. Meloy, Clinical Instructor. (1980)
- Robert F. Merchant, Jr., M.D., Assistant Professor of Surgery.
M.D., University of California, Davis, 1972. (1980)
- Stephanie Merchant, Ph.D., Lecturer in Foreign Languages.
B.A., University of Nevada Reno, 1970; M.A., 1972; Ph.D., University of Arizona, 1979. (1980)
- Robert W. Merrill, Ph.D., Associate Professor of English.
B.A., University of Utah, 1966; M.A., University of Chicago, 1967; Ph.D., 1971. (1971-1977)
- William C. Metz, M.S., Associate Professor of Journalism.
B.A., University of Redlands, 1943; M.S., University of California, Los Angeles, 1961. (1969-1973)
- Joseph V. Metzgar, Ph.D., Associate Professor of History.
B.A., University of New Mexico, 1960; M.A., 1962; Ph.D., 1965. (1966-1972)
- William T. Mewaldt, M.A., Lecturer in Biology.
B.A., San Jose State College, 1973; M.A., San Jose State University, 1975. (1976)

- Franklin Delano Meyers, Ed.D., Professor of Counseling and Guidance Personnel Services.
B.S., North Dakota State University, 1956; M.S., 1960; Ed.D., University of Northern Colorado, 1967. (1968-1974)
- Thomas A. Michalski, M.Ed., Continuing Education Specialist.
B.S.S., Fordham College, 1960; M.A., Fordham Graduate School, 1966; M.Ed., State University of New York at Buffalo, 1980. (1980)
- Roger D. Miercort, M.D., Clinical Associate Professor.
B.A., University of Colorado, 1960; M.D., 1964. (1971-1979)
- James K. Mikawa, Ph.D., Professor of Psychology.
B.A., University of Colorado, 1959; Ph.D., University of Texas, 1963. (1966-1979)
- Alvin Earl Miller, M.S., County Extension Agent, Churchill County, Cooperative Extension Service.
B.S., California State Polytechnic College, 1961; M.S., Oregon State University, 1963. (1972-1975)
- Elwood LaVerne Miller, Ph.D., Associate Professor of Forestry and Recreation; Associate Forester.
B.S., Northern Arizona University, 1963; M.F., Oregon State University, 1965; Ph.D., Michigan State University, 1970. (1970-1974)
- Eugene Miller, Ph.D., Professor of Chemical Engineering.
B.Ch.E., City College of New York, 1944; M.Ch.E., Polytechnic Institute of Brooklyn, 1947; Ph.D., University of Delaware, 1949. (1973)
- Glenn C. Miller, Ph.D., Assistant Professor of Biochemistry and Entomology.
B.A., University of California, Santa Barbara, 1972; Ph.D., University of California, Davis, 1977. (1978-1979)
- Grant D. Miller, M.D., Assistant Professor of Psychiatry and Behavioral Sciences, and Family Medicine; Assistant Dean of Student Affairs.
B.A., University of Minnesota, 1964; M.D., 1968. (1978-1981)
- Harvey S. Miller, M.D., Clinical Assistant Professor.
B.S., University of California, Los Angeles, 1960; M.D., 1964. (1980)
- James I. Miller, M.S., Clinical Instructor.
B.S., Brigham Young University, 1967; M.S., University of Utah, 1974. (1980)
- Watkins W. Miller, Ph.D., Associate Professor of Plant, Soil, and Water Sciences and Associate Plant, Soil, and Water Scientist.
B.S., California State Polytechnic College, San Luis Obispo, 1968; Ph.D., University of California, Riverside, 1973. (1973-1978)
- Wayne L. Miller, M.S., Assistant Professor of Chemical and Metallurgical Engineering.
B.S., Oregon State College, 1950; M.S., University of Tulsa, 1954. (1961)
- Linnis C. Mills, M.S., Area County Agent — Clark County, Cooperative Extension Service.
B.S., Utah State University, 1966; M.S., 1968. (1981)
- Stephen R. Missall, M.D., Assistant Professor of Pediatrics.
B.S., Stanford University, 1963; M.D., Baylor College of Medicine, 1967. (1980)
- Charles Mohr, B.S., Assistant Baseball Coach and Ticket Manager.
B.S., University of Nevada Reno, 1971. (1979-1980)
- Donald A. Molde, M.D., Clinical Assistant Professor.
B.A., University of Oregon, 1963; M.S., 1966; M.D., 1966. (1971)
- Ali Akbar Monibi, M.D., Assistant Professor of Pediatrics.
B.S., Mt. Union College, 1964; M.D., University of Geneva Medical School, 1971. (1978)
- Michael B. Mooney, M.S., Area Community Resource Agent, Cooperative Extension Service.
B.A., Texas A & M University, 1956; M.S., University of New Hampshire, 1973. (1973)
- E. Neal Moore, Ph.D., Associate Professor of Physics.
B.S., Southern Methodist University, 1957; M.S., Yale University, 1958; Ph.D., 1962. (1962-1967)
- Kathleen L. Moore, M.S., Instructor of Home Economics.
B.S., University of Nebraska, 1976; M.S., 1979. (1980)
- Richard T. Moore, M.D., Clinical Assistant Professor.
M.D., Washington University, 1960. (1971-1976)
- Bruce T. Moran, Ph.D., Assistant Professor of History.
B.A., University of California, Los Angeles, 1970; M.A., 1971; Ph.D., 1978. (1976-1977)
- Harold G. Morehouse, M.L.S., Director of Libraries.
B.A., University of California, Berkeley, 1955; M.L.S., 1956. (1961-1970)
- Robert J. Morelli, M.D., Clinical Assistant Professor.
B.S., University of San Francisco, 1950; M.S., 1952; M.D., Creighton University, 1956. (1975)
- Ronald J. Moroni, M.A., Assistant Professor of Art.
B.S., University of Nevada Reno, 1964; M.A., Humboldt State University, 1971. (1978)
- Martha S. Morrison, M.A., Lecturer in English.
B.A., Southern Oregon College, 1976; M.A., University of Nevada Reno, 1979. (1979)
- Robert James Morrison, M.A., Associate Professor of Art.
B.A., Fresno State College, 1963; M.A., Stanford University, 1964. (1968-1975)
- Joy S. Morros, M.A., Assistant Professor of Speech Pathology and Audiology.
B.S., Washington University, 1968; M.A., Northwestern University, 1971. (1976-1978)
- N. Joseph Mortensen, B.S., S Bar S Ranch Manager.
A.S., University of Nevada Reno, 1974; B.S., 1976. (1980)
- Stephen A. Moscoe, Ph.D., Professor of Accounting and Information Systems.
B.S., University of Illinois, 1965; M.S., 1966; Ph.D., Oklahoma State University, 1971. (1980)
- Atif B. Moussa, Ph.D., Assistant Professor of Engineering.
B.S., Cairo University, 1972; B.S., Ain Shams University, 1974; Ph.D., Ohio State University, 1980. (1980)
- Donald K. Mousel, M.D., Clinical Professor.
B.A., Whitman College, 1954; M.D., McGill University, 1958. (1971-1979)
- Pierre F. Mousset-Jones, M.S., Associate Professor of Mining Engineering.
B.Sc., Royal School of Mines, 1961; M.S., Stanford University, 1967. (1968)
- Hugh N. Mozingo, Ph.D., Professor of Biology and Experiment Station Biologist.
B.S., University of Pittsburgh, 1946; M.S., 1947; Ph.D., Columbia University, 1950. (1959-1968)
- David A. Mulkey, M.D., Clinical Assistant Professor.
B.S., University of Arkansas, 1962; M.D., University of Arkansas, 1964. (1978)
- Tom N. Mullis, M.D., Clinical Assistant Professor.
M.D., University of Louisville, 1945. (1978)
- Allen V. Mundt, M.S., Resource Assistant in Education.
B.S., University of Michigan, 1947; M.S., University of Nevada Reno, 1974. (1966-1976)
- Joseph Murphy, M.D., Clinical Assistant Professor.
A.B., Dartmouth College, 1929; M.D., 1932. (1978)
- Mary Lou Murphy, M.S., Adjunct Instructor.
B.A., College of Great Falls, 1956; M.S., Oregon College of Education, 1972. (1980)
- Charles T. Muse, Ed.D., Assistant Dean of Continuing Education, Conferences and Institutes.
B.A., Catawaba College, 1968; M.B.A., East Tennessee State University, 1969; Ed.D., North Carolina State University, 1978; A.A.S., Coastal Carolina Community College, 1980. (1980)
- Marilyn C. Muzychenko, M.B.A., Clinical Instructor.
B.S., Pepperdine University, 1977; M.B.A., 1979. (1981)
- Gordon Myer, Ph.D., Assistant Farm Manager, Marketing Specialist, and Assistant Professor of Farm Management and Marketing.
B.S., North Dakota State University, 1965; M.S., 1972; Ph.D., University of Missouri, 1976. (1976-1978)
- Patricia A. Myer, M.S., Extension Home Economist.
B.S., Texas A & I University, 1973; M.S., University of Nevada Reno, 1977. (1975)

- Barry L. Myers, B.S., Grants and Contracts Administrator.
B.S., University of Nevada Reno, 1971. (1974-1981)
- Robert K. Myles, M.D., Clinical Professor.
A.B., Stanford University, 1948; M.A., 1950; M.D., 1955.
(1971-1978)
- M.N. Nagy, M.D., Clinical Assistant Professor.
B.S., Punjab University, 1963; M.D., King Edward Medical College, 1967. (1978)
- Diane E. Nassir, M.A., Manuscript Assistant, Library.
B.A., California State University, Los Angeles, 1966; M.A., University of California, Santa Barbara, 1977. (1981)
- Terrie Nault, M.A., Director, Office of Information.
B.A., University of Detroit, 1969; M.A., University of Nevada Reno, 1976. (1976-1978)
- Kalo E. Neidert, M.S.B.A., C.P.A., Lecturer in Accounting and Information Systems.
B.S.B.A., Washington University, 1949; M.S.B.A., 1950. (1962-1966)
- John E. Nellor, Ph.D., Dean of the Graduate School and Professor of Biology.
B.S., University of California, Los Angeles, 1950; Ph.D., 1955. (1976)
- Berger B. Nelson, B.S., Engineering Chief.
B.S., Stanford University, 1964. (1971-1981)
- John Henry Nelson, Ph.D., Professor of Chemistry.
B.S., University of Utah, 1964; Ph.D., 1968. (1970-1979)
- Myron Lee Newell, M.S., Lecturer in Recreation and Physical Education.
B.S., Iowa State University, 1955; M.S., Washington State University, 1963. (1963)
- Linda P. Newman, M.L.S., Librarian.
B.A., University of South Carolina, 1964; M.L.S., Indiana University, 1969. (1969-1978)
- Michael Newmark, M.D., Clinical Assistant Professor.
B.S., Rutgers, 1968; M.D., University of Pennsylvania, 1972. (1978)
- Maggi E.R. Nicholson, Ph.D., Adjunct Professor.
B.A., Beloit College, 1959; M.A., University of Minnesota, 1961; Ph.D., 1968. (1979)
- Thomas J. Nickles, Ph.D., Professor of Philosophy.
B.A., University of Illinois, 1965; B.S., 1965; Ph.D., Princeton University, 1969. (1976-1981)
- Charles E. Nielsen, M.D., Clinical Assistant Professor.
M.D., Loyola University, 1969. (1976)
- Earl S. Nielson, Adjunct Assistant Professor.
B.S., Brigham Young University, 1971; Ph.D., University of Nevada Reno, 1979. (1980)
- Jerry P. Nims, Ph.D., Clinical Associate Professor.
B.S., University of Utah, 1950; Ph.D., University of Southern California, 1958. (1976)
- LuAnn Nissen, M.A., Assistant Professor of Home Economics.
B.S., University of Nebraska, 1969; M.A., Iowa State University, 1972. (1973)
- Gordon L. Nitz, M.D., Clinical Assistant Professor.
M.D., University of Michigan, 1960. (1971)
- Donald C. Noble, Ph.D., Professor of Geology.
B.S., Cornell University, 1958; M.S., Stanford University, 1961; Ph.D., 1962. (1980)
- Larry M. Noble, M.D., Assistant Professor of Internal Medicine.
B.A., University of Nevada Reno, 1971; M.D., University of California, Los Angeles, 1975. (1980)
- Emma C. Nolan, M.A., Lecturer in Foreign Languages and Literatures.
B.A., University of Nevada Reno, 1976; M.A., 1978. (1976-1978)
- Milton L. Nolin, Ph.D., Associate Professor of Home Economics.
B.A., Otterbein College, 1951; B.D., McCormick Theological Seminary, 1954; M.Th., Princeton Theological Seminary, 1959; M.S., Purdue University, 1972; Ph.D., 1975. (1973-1975)
- Alfred W. Norman, Ph.D., Extension and Research Dairy Specialist.
B.S., Pennsylvania State University, 1961; M.S., Virginia Polytechnic Institute and State University, 1975; Ph.D., 1978. (1977)
- Gary M. Norris, Ph.D., Assistant Professor of Civil Engineering.
B.S., University of California, Berkeley, 1969; M.S., 1971; Ph.D., 1977. (1979)
- Sherry W. O'Brien, B.S., Program Coordinator, Research and Educational Planning Center.
B.S., University of Nevada Reno, 1978. (1979-1980)
- Gwenyth G. O'Bryan, Ph.D., Adjunct Assistant Professor.
B.A., Washington State University, 1958; M.Ed., College of William and Mary, 1960; Ph.D., University of Nevada Reno, 1972. (1972)
- Ronald W. Ogilvie, B.S., Accountant.
B.S., University of California, Los Angeles, 1961. (1972)
- James Olivas, Boxing Coach, Intercollegiate Athletics. (1959)
- Dorothy E. Oklowski, M.A., Lecturer in Philosophy.
M.A., Duquesne University, 1978. (1981)
- Harold S. Orchow, M.D., Clinical Assistant Professor.
A.B., Pennsylvania State University, 1953; M.D., Jefferson Medical College of Philadelphia, 1957. (1979)
- Richard G. Orcutt, Ph.D., P.E., Professor of Civil Engineering.
B.S., University of New Mexico, 1945; M.S., University of California, Berkeley, 1951; Ph.D., 1956. (1956-1966)
- Roberta Kiefer Orcutt, B.L.S., Librarian.
A.B., University of California, Los Angeles, 1950; B.L.S., University of California, Berkeley, 1951. (1968-1975)
- Dermot A. O'Rourke, M.D., Clinical Assistant Professor.
M.D., University College, Dublin, 1968. (1979)
- Carol Ann Ort, Ph.D., Assistant Professor of Biology.
B.S., Michigan State University, 1969; Ph.D., University of California, Berkeley, 1974. (1977)
- William P. O'Shaughnessy, M.D., Clinical Assistant Professor.
M.D., Creighton University, 1971. (1979)
- Sandra J. Ott, D.Phil., Adjunct Professor.
B.A., Pomona College, 1973; D.Phil., Wolfson College, University of Oxford, 1979. (1979)
- Arleen C. Otto, D.Ed., Professor of Home Economics.
B.A., Washington State University, 1942; B.Ed., 1947; M.A., Columbia Teachers College, 1951; D.Ed., 1957. (1969)
- Howard W. Owen, M.D., Clinical Associate Professor.
M.D., University of Chicago, 1946. (1979)
- James Lee Owen, Ph.D., Professor, Speech and Theatre.
B.A., University of Denver, 1956; M.A., 1960; Ph.D., 1967. (1972-1981)
- Paul A. Page, Ph.D., Dean of Arts and Science and Associate Professor of Speech and Theatre.
B.S., Kansas State College, 1962; M.S., 1964; Ph.D., University of Kansas, 1973. (1966-1981)
- James R. Pagliarini, M.Ed., Educational Resource/Operations Manager, Office of Communications and Broadcasting.
A.B., Princeton University, 1975; M.Ed., Temple University, 1976. (1980-1981)
- Richard M. Palcanis, B.S.L.S., Librarian.
B.A., College of William and Mary, 1949; B.S.L.S., University of North Carolina, 1951. (1959-1977)
- Keith G. Papke, M.S., Economic Geologist and Assistant Director, Nevada Bureau of Mines and Geology.
B.S., South Dakota School of Mines, 1948; M.S., University of Arizona, 1952. (1966-1981)
- Ronald S. Pardini, Ph.D., Professor of Biochemistry, Biochemist in Experiment Station.
B.S., California State Polytechnic College, 1961; Ph.D., University of Illinois, 1965. (1968-1977)
- Lois J. Parker, Ph.D., Counselor, Counseling and Testing.
B.A., University of Florida, 1968; M.R.C., 1970; Ph.D., 1978. (1979)

- Carol Ann Parkhurst, M.L.S., Librarian.
B.A., Washington State University, 1972; M.L.S., University of Washington, 1974. (1979-1980)
- Ira B. Pauly, M.D., Professor of Psychiatry.
B.A., University of California, Los Angeles, 1954; M.A., 1959; M.D., 1958. (1978)
- Deborah Lee Payne, M.S., County Extension Agent-Communications and Public Information.
B.A., University of Hawaii, 1977; B.S., 1977; M.S., University of Nevada Reno, 1979. (1980)
- John H. Peacock, M.D., Associate Professor of Internal Medicine.
B.A., Harvard University, 1960; M.S., Northwestern University, 1963; Ph.D., 1965; M.D., 1967. (1980)
- Maurice D. Pearlman, M.D., Clinical Associate Professor.
M.D., University of Illinois, 1939. (1980)
- Catherine S. Pearson, B.A., Adjunct Instructor.
B.A., University of California, Los Angeles, 1963. (1981)
- Daniel Lee Pease, B.S., Controller.
B.S., University of Nevada, 1959. (1968-1980)
- Donald E. Peck, M.S., Soil & Water Scientist, County Extension Agent.
B.S., California State Polytechnic College, 1973; M.S. University of California, Riverside, 1977. (1978)
- Owen C. Peck, M.D., Professor of Medicine, Associate Dean for Student Affairs in Medical Sciences and Director of Continuing Medical Education.
B.A., University of Kansas, 1948; M.D., 1951. (1972-1981)
- Gary L. Peltier, Ph.D., Professor of Educational Foundations and Media.
B.A., Michigan State University, 1958; M.A., University of Illinois, 1959; Ph.D., University of Denver, 1965. (1965-1974)
- Fred L. Perriera, B.A., Assistant Dean of Students.
B.A., Chico State College, 1968. (1968-1975)
- Albert F. Peterman, M.D., Clinical Assistant Professor.
B.S., University of Wisconsin, 1948; M.D., Washington University, 1952; M.S., University of Minnesota, 1958. (1978)
- Roy M. Peters, M.D., Clinical Assistant Professor.
B.S., University of Nebraska, 1940; M.D., 1943. (1975-1976)
- Gerald Wegener Petersen, Ph.D., Associate Professor of Foreign Languages and Literatures.
B.A., Brigham Young University, 1961; M.A., University of Illinois, 1963; Ph.D., 1967. (1970-1971)
- Frederick F. Peterson, Ph.D., Professor of Plant, Soil, and Water Science and Soil Scientist.
B.S., University of Wisconsin, 1950; M.S., Cornell University, 1953; Ph.D., Washington State University, 1961. (1967-1973)
- Linda W. Peterson, M.N., Associate Professor of Pediatrics.
B.S., University of Washington, 1962; M.N., 1965. (1971-1975)
- Robert F. Peterson, Ph.D., Professor of Psychology.
B.S., University of Washington, 1961; M.S., 1964; Ph.D., 1965. (1971-1976)
- Wallace J. Peterson, M.S., County Extension Agent, Douglas County.
B.S., Colorado State University, 1954; M.S., 1961. (1965-1977)
- John H. Pettas, M.S., Assistant Football Coach, Intercollegiate Athletics.
B.S., California State Polytechnic Institute, 1974; M.S., University of Colorado, 1977. (1979)
- Donald C. Pfaff, Ph.D., Associate Professor of Mathematics.
B.A., University of California, Berkeley, 1957; M.A., 1959; Ph.D., 1969. (1961-1972)
- Arthur T. Phelps, Ed.D., Professor of Curriculum and Instruction.
A.B., Canisius College, 1937; M.A., 1940; M.A., Columbia University, 1950; Ed.D., 1956. (1965-1968)
- David A. Phelps, M.S., Lecturer and Assistant Research Scientist in Animal Physics.
B.S., Washington State University, 1973; M.S., University of Nevada Reno, 1975. (1975-1979)
- William D. Phillips, B.S. in M.E., Plant Engineer.
B.S. in M.E., University of Nevada Reno, 1950. (1973)
- Larry Pickard, M.S.W., Assistant Professor of Social and Health Resources.
B.A., University of Iowa, 1970; M.S.W., University of Kentucky, 1974. (1978)
- Doris E. Pierce, M.A.T., Adjunct Instructor.
B.A., Wheaton College, 1951; M.A.T., Whitworth College, 1970. (1973)
- Keith A. Pierce, Ed.D., Professor of Counseling and Guidance Personnel Services.
B.A., Wheaton College, 1952; M.Ed., University of Oregon, 1958; Ed.D., 1965. (1973-1977)
- Ellen F. Pillard, M.S.W., Associate Professor of Social and Health Resources.
A.B., Antioch College, 1950; M.S.W., University of Washington, 1967. (1977)
- Karen L. Pinkham, Ph.D., Visiting Assistant Professor in Accounting and Information Systems.
B.A., Adrian College, 1971; M.E.-P.D., University of Wisconsin, 1976; Ph.D., Ohio University, 1980. (1980-1981)
- Barbara J. Pleasants, B.S., Health Educator, Sierra Nevada Job Corps Center.
B.S., University of Nevada Reno, 1977. (1979)
- Olena K. Plummer, B.S., Assistant Professor of Recreation and Physical Education.
B.S., University of Nevada Reno, 1972. (1974-1979)
- Michael Pokroy, M.D., Assistant Professor of Pediatrics.
M.D., Cape Town University, South Africa, 1965. (1980)
- Richard L. Post, M.S., Associate Professor of Horticulture and Extension Horticulturist.
B.S., Montana State College, 1963; M.S., 1964. (1964-1980)
- I. Marshall Postman, M.D., Clinical Associate Professor.
A.B., University of California, Los Angeles, 1962; M.D., University of Southern California, 1966. (1971-1978)
- Alan R. Pratt, M.D., Clinical Associate Professor.
B.S., University of Tulsa, 1959; M.A., Indiana University, 1961; M.D., University of Utah College of Medicine, 1969. (1975-1981)
- Edwin W. Prentice, M.D., Clinical Assistant Professor.
B.A., Marquette University, 1938; M.D., 1942. (1971)
- John I. Pretto, M.D., Clinical Assistant Professor.
B.S., University of Illinois, 1954; M.D., University of Illinois at the Medical Center, 1958. (1975)
- Robert G. Proctor, M.D., Clinical Assistant Professor.
B.A., University of Richmond, 1951; M.D., Medical College of Virginia, 1955. (1978)
- H. Malin Prupas, M.D., Clinical Assistant Professor.
B.S., University of Nevada Reno, 1971; B.S., 1973; M.D., Tufts University, 1975. (1980)
- Don C. Prusso, Ph.D., Associate Professor of Biology.
B.S., University of Nevada, 1958; M.S., Washington State University, 1960; Ph.D., University of California, Davis, 1963. (1965-1971)
- George W. Prutzman, Jr., M.D., Clinical Associate Professor.
M.D., Hahnemann Medical College, 1964. (1971-1979)
- Merle E. Puffer, M.M., Professor of Music.
B.M., Eastman School of Music, 1950; M.M., 1956. (1966-1972)
- John H. Purcel, M.S., County Extension Agent in Charge, Lyon County, Cooperative Extension Service.
B.S., University of Nevada, 1958; M.S., Oregon State College, 1962. (1960-1972)
- Joseph M. Quagliana, M.D., Clinical Associate Professor.
M.D., University of Buffalo, 1959. (1975)
- R. Edward Quass, M.D., Clinical Associate Professor of Psychiatry and Behavioral Sciences.
M.D., University of Oregon, 1966. (1979)
- Virginia C. Quirk, M.A., Adjunct Instructor.
B.A., University of California, Berkeley, 1939; M.A., University of Nevada, 1966. (1975)
- Nawaz Ahmed Qureshi, M.D., Clinical Assistant Professor.
M.D., Nishtar Medical College, Pakistan, 1968. (1980)
- Clayton B. Rabedeaux, B.A., Assistant Director, Promotions, Intercollegiate Athletics.
B.A., Iowa Wesleyan College, 1954. (1975-1979)

- Hazel D. Ralston, B.A., Special Services Counselor, Special Programs.
A.A., Piney Woods College, 1955; B.A., American Baptist Theological Seminary, 1961. (1979)
- William D. Ramos, M.D., Clinical Assistant Professor.
A.B., Dartmouth College, 1966; M.D., Downstate Medical Center, State University of New York, 1970. (1978-1981)
- Aldo Ranallo, B.S., Financial Aid Officer.
B.S., University of Nevada Reno, 1974. (1976-1980)
- Kanatur Bhaskara Rao, Ph.D., International Student Adviser/Counselor.
B.A., University of Mysore, 1948; M.A., University of Nagpur, 1951; Ph.D., University of Iowa, 1957. (1979)
- William E. Rasmussen, M.Ed., Director of Financial Aids, Student Placement and Veterans Services.
B.A., Hamline University, 1952; M.Ed., University of Alaska, 1958. (1960-1969)
- Andrea Rassuchine, B.S., Accountant, Controller's Office.
B.S., University of Nevada Reno, 1979. (1981)
- Mujahid Rasul, M.D., Clinical Assistant Professor.
M.D., King Edward Medical College, 1960. (1978)
- John Read, M.D., Clinical Associate Professor.
A.B., Stanford University, 1940; M.D., 1944. (1979)
- Marsha Read, Ph.D., Associate Professor of Home Economics.
B.S., University of Nevada, 1968; M.S., 1969; Ph.D., Utah State University, 1977. (1969-1981)
- Brian W. Reagan, M.D., Clinical Assistant Professor.
B.S., Washington State University, 1966; M.D., University of Washington, 1970. (1980)
- Tey Diana Rebolledo, Ph.D., Assistant Professor of Foreign Languages and Literatures.
B.A., Connecticut College, 1959; M.A., University of Mexico, 1962; Ph.D., University of Arizona, 1979. (1978)
- Charles V. Records, M.Ed., Associate Registrar.
B.A.Ed., Western Washington State College, 1972; M.Ed., 1973. (1976-1979)
- Ramana G. Reddy, M.Tech., Associate Professor of Metallurgical Engineering.
B.E., Osmania University, 1973; M.Tech., Indian Institute of Technology, Bombay, 1975. (1980-1981)
- Howard M. Reed, Ph.D., Associate Professor of Economics.
B.A., San Jose State College, 1968; Ph.D., University of Utah, 1974. (1972-1978)
- Thomas A. Reed, M.A., Assistant Athletic Manager, Business Manager, Intercollegiate Athletics.
B.S., University of Nevada Reno, 1970; M.A., 1972. (1972)
- Randall C. Reid, Ph.D., Professor of English.
B.A., San Francisco State College, 1959; M.A., Stanford University, 1961; Ph.D., 1966. (1975-1977)
- Elsi Reinhardt, M.S., Assistant Professor of Engineering Technologies.
B.S., University of Nevada Reno, 1971; M.S., 1977. (1971-1977)
- Joseph A. Reinkemeyer, M.D., Clinical Associate Professor.
M.D., St. Louis University, 1961. (1979)
- Ronald C. Reitz, Ph.D., Professor of Biomedical Sciences.
B.S., Texas A & M University, 1961; Ph.D., Tulane University, 1966. (1975-1981)
- Marianne Retfalvy, Ed.D., Adjunct Assistant Professor.
B.S., School of Arch., Budapest, Hungary, 1960; M.S., West Virginia University, 1971; Ed.D., 1976. (1980)
- Dorothy F. Rice, B.S.L.S., Librarian.
B.A., North Texas State College, 1947; B.S.L.S., 1950. (1971-1974)
- Philip Rich, M.D., Clinical Assistant Professor.
B.A., Florida State University, 1971; M.D., Medical College of Georgia, 1976. (1981)
- James T. Richardson, Ph.D., Professor of Sociology.
B.A., Texas Technological College, 1964; M.A., 1965; Ph.D., Washington State University, 1968. (1968-1977)
- Sarah E. Richert, N.P., Clinical Adjunct Instructor.
B.S.N., University of Nevada Reno, 1969; N.P., University of California, San Francisco, 1972. (1980)
- Louis Richnak, M.D., Medical Director, Lakes Crossing.
B.S., Pennsylvania State University, 1957; M.D., Georgetown University, 1962. (1979)
- Jacqueline Ridgeway, Ph.D., Assistant Professor of English.
B.A., California State University, Los Angeles, 1963; M.A., 1968; Ph.D., University of California, Riverside, 1977. (1980-1981)
- Patrick W. Riley, M.D., Clinical Assistant Professor.
B.S., Loyola University of Los Angeles, 1963; M.Ed., University of Southern California, 1967. (1978)
- Thomas P. Ringkob, Ph.D., Associate Professor and Meats Specialist of Animal Sciences.
B.S., Iowa State University, 1962; M.S., University of Missouri, 1964; Ph.D., Cornell University, 1970. (1968-1973)
- Kenneth K. Ritchie, M.D., Clinical Assistant Professor.
A.B., University of California, Berkeley, 1967; M.D., University of California, Los Angeles, 1972. (1976)
- John N. Ritenhouse, M.S.L.S., Librarian.
B.A., Southern Illinois University, 1963; M.S.Ed., 1964; M.S.L.S., University of Kentucky, 1966. (1967-1977)
- Roger Ritzlin, M.D., Clinical Assistant Professor.
B.S., University of Illinois, 1970; M.D., University of Illinois at the Medical Center, 1974. (1981)
- Arthur C. Roberto, B.S., Assistant to Controller, Controller's Office.
B.S., University of Nevada Reno, 1974. (1977-1981)
- David L. Roberts, M.D., Clinical Associate Professor.
B.S., Northwestern University, 1953; M.D., 1956. (1971)
- Frank E. Roberts, M.D., Clinical Assistant Professor.
M.D., University of Southern California, 1953. (1971)
- James S. Roberts, Ph.D., Professor of Political Science.
B.S., Harvard University, 1946; M.S., University of Southern California, 1950; Ph.D., University of North Carolina, 1955. (1956-1969)
- Gayland D. Robison, Ph.D., Superintendent, Southern Nevada Field Laboratory.
B.S., Utah State University, 1957; M.S., 1958; Ph.D., University of Arizona, 1966. (1958-1973)
- Alan J. Roche, M.D., Clinical Assistant Professor.
B.S., Creighton University, 1932; M.D., 1936. (1971-1975)
- Jorge N. Rojas, Ph.D., Associate Professor of Foreign Languages and Literatures.
B.A., University of Chile, Valparaiso, 1964; M.A., University of Washington, 1967; Ph.D., 1971. (1973-1977)
- Rogelio R. Rojas, M.D., Associate Professor of Laboratory Medicine.
M.D., Universidad Nacional A. de Mexico, Mexico, 1967. (1975)
- Donald K. Rolston, M.S., State 4-H and Youth Development Leader and Assistant to Director.
A.A., Sheridan Junior College, 1955; B.S., University of Wyoming, 1957; M.S., 1969. (1980-1981)
- Margaret Ann Ronald, Ph.D., Associate Professor of English.
B.A., Whitman College, 1961; M.A., University of Colorado, 1966; Ph.D., Northwestern University, 1970. (1970-1977)
- Charles Buckley Rose, Ph.D., Associate Professor of Chemistry.
B.S., Brigham Young University, 1960; M.A., Harvard University, 1963; Ph.D., 1966. (1966-1973)
- William C. Rose, Ph.D., Research Associate of Engineering.
B.S., University of Nevada Reno, 1962; M.S., 1965; Ph.D., University of Washington, 1972. (1977-1978)
- William E. Rosen, Ph.D., Assistant Professor of Economics.
B.A., Boston University, 1973; M.A., University of California, Davis, 1975; Ph.D., 1978. (1979)
- Howard Rosenberg, M.Ed., Professor of Art.
B.S.Ed., Massachusetts College of Art, 1962; M.Ed., Harvard University, 1965. (1967-1979)
- Ronald J. Rothstein, M.D., Clinical Assistant Professor.
B.S., University of Florida, 1962; M.D., 1966. (1975)
- Bruce Arnold Roundy, M.S., Adjunct Lecturer.
B.A., University of Nevada Reno, 1973; M.S., 1976. (1978)

- Rose M. Rowe, B.S., Clinical Instructor.
B.S., University of Nevada Reno, 1975. (1980)
- Beverley D. Rowley, M.A., Program Coordinator and Health Analyst.
A.A., Casper College, 1961; B.S., Colorado State University, 1963; M.A., University of Nevada Reno, 1975. (1975-1978)
- William D. Rowley, Ph.D., Associate Professor of History.
B.A., University of Puget Sound, 1961; M.A., University of Nebraska, 1963; Ph.D., 1966. (1967-1971)
- Garry E. Rubinstein, M.A., Project Director, Alcohol Prevention Replication Program.
B.A., Rockford College, 1970; M.A., Eastern New Mexico University, 1972. (1979)
- Frank V. Rueckl, M.D., Clinical Assistant Professor.
B.S., West Virginia University, 1942; M.D., Tulane University, 1944. (1978)
- Elmer R. Rusco, Ph.D., Professor of Political Science.
B.A., University of Kansas, 1951; M.A., 1952; Ph.D., University of California, Berkeley, 1960. (1963-1975)
- Mary Rusco, M.A., Adjunct Lecturer.
B.A., University of Kansas, 1953; M.A., University of Nebraska, 1956. (1973-1980)
- Willis M. Russell, M.D., Clinical Assistant Professor.
B.S., University of Florida, 1954; M.D., Tulane University, 1958. (1980)
- Richard W. Rust, Ph.D., Associate Professor of Biology.
B.S., Utah State University, 1965; M.S., 1968; Ph.D., University of California, Davis, 1972. (1978-1981)
- Alan S. Ryall, Ph.D., Professor of Seismology and Geological Sciences, Director of Seismological Laboratory.
B.A., University of California, Berkeley, 1956; M.A., 1959; Ph.D., 1962. (1964-1970)
- Floriana D. Ryall, B.S., Research Associate, Seismological Laboratory.
B.S., University of California, Berkeley, 1957. (1979)
- Philip C. Rymers, Ph.D., Professor of Mechanical Engineering.
B.I.E., General Motors Institute, 1952; M.S., University of Toledo, 1960; Ph.D., Michigan State University, 1968. (1966-1971)
- Fred Ryser, Jr., Ph.D., Professor of Biology.
B.S., University of Wisconsin, 1947; M.S., 1948; Ph.D., 1952. (1953-1966)
- Roderick D. Sage, M.D., Clinical Professor.
B.A., State University of Iowa, 1949; M.D., Stanford University, 1954. (1971-1981)
- Mehdi Saïidi-Movahhed, Ph.D., Assistant Professor of Civil Engineering.
M.S., Tehran University, 1973; M.S., University of Illinois, 1977; Ph.D., 1979. (1979)
- Cecelia Mae St. John, M.Ed., Director of Alumni Relations and Records.
B.A., University of Nevada, 1963; M.Ed., University of Washington, 1967. (1967-1981)
- Kenneth Sakurada, M.S., County Extension Agent in Charge, Humboldt County, Cooperative Extension Service.
B.S., University of Wyoming, 1954; M.S., University of Nebraska, 1966. (1976)
- John P. Sande, Jr., M.D., D.D.S., Clinical Associate Professor.
B.S., University of Minnesota, 1949; D.D.S., 1944; M.D., 1950. (1971-1979)
- Jack P. Sargent, M.D., Clinical Assistant Professor.
M.D., University of Southern California, 1949. (1975)
- Stephen V. Savran, M.D., Clinical Associate Professor.
B.A., Swarthmore College, 1964; M.D., Thomas Jefferson University, 1968. (1976-1981)
- Vernon E. Scheid, Ph.D., Professor of Mineral Economics.
A.B., Johns Hopkins University, 1928; M.S., University of Idaho, 1940; Ph.D., Johns Hopkins University, 1946. (1951-1971)
- Steven Schiff, M.D., Clinical Associate Professor.
B.A., University of Virginia, 1966; M.D., New York Medical College, 1970. (1979-1981)
- John H. Schilling, M.S., Director, Nevada Bureau of Mines and Geology and Nevada Mining Analytical Laboratory.
B.S., Pennsylvania State University, 1951; M.S., New Mexico Institute of Mining and Technology, 1952. (1960-1973)
- James E. Schneider, Ph.D., Assistant Professor of Electrical Engineering.
B.S.E.E., University of Nevada Reno, 1968; Ph.D., 1973. (1973)
- Lawrence K. Schneider, Ph.D., Professor of Anatomy.
B.A., University of Washington, 1960; Ph.D., 1966. (1973-1976)
- Michael J. Schoenfeld, M.A., S BAR S Learning Center Superintendent.
B.A., William Penn College, 1966; M.A., University of New Mexico, 1971. (1977-1981)
- A.A. Schonder, M.D., Clinical Assistant Professor.
B.A., Washington University, 1961; M.D., 1965. (1975)
- Julie Schorr, M.S.N., Assistant Professor of Nursing.
B.S.N., Northern Michigan University, 1972; M.S.N., Wayne State University, 1977. (1981)
- William A. Schrader, M.D., Clinical Assistant Professor.
B.S., Lawrence College, 1950; M.D., University of Wisconsin, 1954. (1976)
- Florence J. Schroeder, M.A.T.E., Adjunct Instructor.
B.S., University of Nevada, 1967; M.A.T.E., 1971. (1976)
- Marion M. Schrum, Ed.D., Dean, Orvis School of Nursing.
B.S.N.E., St. Louis University, 1945; M.S.N.E., Catholic University of America, 1953; Ed.D., Stanford University, 1958. (1981)
- Cindy N. Schultz, B.S., Coordinator, Family and Community Medicine.
B.S., University of Wisconsin, 1976. (1980)
- Robert P. Schultz, M.D., Clinical Associate Professor.
B.S., University of Santa Clara, 1956; M.D., Creighton University, 1960. (1971)
- John R. Schuon, B.S., Director of Central Office Services.
B.S., Western Michigan University, 1968. (1977)
- Susan Schweitzer, M.S., Adjunct Instructor.
B.S.N., St. Louis University, 1976; M.S., University of Nevada Reno, 1980. (1981)
- Lawrence T. Scott, Ph.D., Professor of Chemistry.
A.B., Princeton University, 1966; A.M., Harvard University, 1968; Ph.D., 1970. (1975-1980)
- Thomas J. Scully, M.D., Professor of Pediatrics.
B.A., Colgate University, 1954; M.D., Albany Medical College, 1958. (1971-1977)
- Rupert G. Seals, Ph.D., Associate Dean and Professor of Animal Science.
B.S., Florida A & M University, 1953; M.S., University of Kentucky, 1956; Ph.D., Washington State University, 1960. (1976)
- Pacita Manalo Sears, M.D., Associate Professor of Laboratory Medicine.
M.S., Northwestern University, 1963; M.D., University of Santo Tomas, Manila, 1955. (1975)
- John B. See, Ph.D., Associate Professor of Chemical and Metallurgical Engineering.
B.S., University of New South Wales, 1965; Ph.D., 1971. (1978)
- Michael L. Segall, M.D., Neonatologist, Assistant Professor of Pediatrics.
M.D., University of Cape Town, 1969; F.C.P., College of Physicians, South Africa, 1974. (1979)
- David R. Seibert, Ph.D., Associate Professor of Speech and Theatre.
B.A., University of California, Berkeley, 1962; M.A., San Francisco State University, 1968; Ph.D., University of Denver, 1973. (1975-1979)
- Harold S. Sekiguchi, Ph.D., Professor of Managerial Sciences.
B.A., University of Hawaii, 1951; M.Ed., Oregon State University, 1957; Ph.D., University of Iowa, 1964. (1969-1973)
- Frances Selsnick, Ch.M., Clinical Associate Professor.
B.A., New York University, 1938; L.R.F.P.S.G., L.R.C.S.Ed., L.R.C.P.Ed., Royal College of Surgeons of Scotland, 1943; F.R.C.S., 1956; Ch.M., University of Liverpool, 1959. (1972-1979)

- Edward L. Senner, Ph.D., Director of Off-Campus Programs.
B.A., Biola College, 1954; B.A., Washington State University, 1960; M.S., University of Wisconsin, 1968; Ph.D., 1971. (1980-1981)
- Anthony B. Serfustini, M.D., Clinical Assistant Professor.
M.D., State University of New York, Buffalo, 1966. (1980)
- Gordon B. Severance, Ph.D., J.D., Professor of Managerial Sciences.
A.A., Sacramento Community College, 1941; A.B., Stanford University, 1943; M.A., 1945; J.D., University of Southern California, 1946; Ph.D., 1949. (1980)
- G. Thomas Sewell, M.D., Clinical Assistant Professor.
B.A., Antioch College, 1967; M.D., University of California, San Francisco, 1971. (1980)
- Ronald L. Shane, Ph.D., Assistant Professor of Agricultural and Resource Economics and Assistant Agriculture Economist.
B.S., University of Nevada, 1968; M.S., 1971; Ph.D., North Carolina State University at Raleigh, 1976. (1975)
- Stewart W. Shankel, M.D., Associate Professor of Internal Medicine.
B.A., Walla Walla College, 1954; M.D., Loma Linda University, 1958. (1980)
- Leonard Shapiro, M.D., Clinical Assistant Professor.
A.B., Temple University, 1963; M.D., 1967. (1975)
- Kenneth J. Sharigian, Ph.D., Adjunct Assistant Professor.
B.A., San Francisco State College, 1969; Ph.D., University of Nevada Reno, 1972. (1973)
- Steven P. Shearing, M.D., Clinical Assistant Professor.
B.A., Cornell University, 1956; M.A., Brandeis University, 1959; M.D., Boston University, 1964. (1978)
- Thomas F. Sheehan, Ph.D., Clinical Assistant Professor.
B.A., St. Patrick's College, 1969; M.A., California School of Professional Psychology, 1975; Ph.D., 1977. (1978)
- Wilbur S. Shepperson, Ph.D., Professor of History.
B.S., Northeast Missouri State College, 1941; M.A., University of Denver, 1947; Ph.D., Western Reserve University, 1951. (1951-1963)
- Geoffrey Sher, F.C.O.G., Clinical Associate Professor.
M.B.Ch.B., Stellenbosch University, 1968; M.R.C.O.G., Royal College of Obstetrics/Gynecology, 1973; F.C.O.G., South African College of Obstetrics/Gynecology, 1973. (1979-1980)
- James C. Shields, Ph.D., Adjunct Professor.
B.A., University of Florida, 1964; M.A., 1967; Ph.D., 1971. (1980)
- Hyung Kyu Shin, Ph.D., Professor of Chemistry.
B.S., University of Utah, 1959; Ph.D., 1961. (1965-1970)
- Jack H. Shirley, Ed.D., Director of Admissions and Registrar.
B.S., University of Oklahoma, 1951; M.S., 1955; Ed.D., 1960. (1959-1969)
- Clairbourne Shonnard, M.D., Clinical Associate Professor.
M.D., University of Louisville, 1952. (1971-1979)
- Robert W. Shreck, M.D., Clinical Assistant Professor.
B.S., University of Nebraska-Lincoln, 1970; M.D., 1974. (1979)
- Richard L. Siegel, Ph.D., Professor of Political Science and Assistant Director of Bureau of Governmental Research.
B.A., Brandeis University, 1961; Ph.D., Columbia University, 1967. (1965-1978)
- Jules A. Silver, M.D., Clinical Assistant Professor.
M.D., Catholic University, Louvain, Belgium, 1972. (1979)
- Mark Simkin, Ph.D., Professor of Accounting and Information Systems.
A.B., Brandeis University, 1965; M.B.A., University of California, Berkeley, 1968; Ph.D., 1972. (1980)
- Harvinder Singh, M.S., Assistant Professor of Electrical Engineering.
B.S., Punjabi University, 1973; M.S., University of Oklahoma, 1975. (1981)
- Clarence M. Skau, Ph.D., Professor of Forestry and Watershed Management.
A.B., University of Michigan, 1950; B.S., Michigan State University, 1953; M.S., 1956; Ph.D., 1960. (1964-1970)
- Dorothy A. Skovgard, M.S., County Extension Home Economist, Food and Nutrition, Cooperative Extension Service.
B.S., California State University, Chico, 1977; M.S., Ohio State University, 1979. (1979)
- Ronald J. Slaughter, M.D., Clinical Assistant Professor.
B.A., Occidental College, 1963; M.S., M.D., University of Chicago, 1967. (1980)
- David B. Slemmons, Ph.D., Professor of Geology and Geophysics.
B.S., University of California, Berkeley, 1947; Ph.D., 1953. (1951-1963)
- Christian Olaf Smeland, M.B.A., Assistant Football Coach, Intercollegiate Athletics.
B.S., California State Polytechnic Institute, 1974; M.B.A., University of Colorado, 1976. (1979)
- Benjamin J. Smith, M.B.A., C.P.A., Professor of Accounting and Information Systems.
B.A., Marietta College, 1948; M.B.A., University of Maryland, 1950. (1961-1973)
- Catherine P. Smith, D.M.A., Associate Professor of Music.
B.A., Smith College, 1954; M.M., Northwestern University, 1957; D.M.A., Stanford University, 1969. (1969-1979)
- Douglas G. Smith, M.S., Extension Agricultural Engineering Specialist.
B.S., Montana State University, 1957; M.S., 1980. (1980-1981)
- Harry G. Smith, Jr., Ph.D., Professor of Entomology; Extension Pesticide Specialist in Biochemistry and Head of Pest Management Unit.
B.S., California State Polytechnic College, 1964; M.S., Oregon State University, 1968; Ph.D., 1969. (1970-1977)
- LaMar R. Smith, M.L.S., Librarian.
B.A., University of Nevada, 1950; M.L.S., University of Oklahoma, 1955. (1955-1969)
- Lindsay B. Smith, M.D., Clinical Associate Professor.
B.S., DePauw University, 1956; M.D., Northwestern University, 1961. (1978-1979)
- Peggy L. Smith, B.S., Research Associate, Junior Geologist in Nevada Bureau of Mines and Geology.
B.S., Eastern Washington University, 1980. (1981)
- Ronald L. Smith, M.D., Clinical Assistant Professor.
B.A., Pacific Lutheran University, 1968; M.A., University of California, San Francisco, 1971; Ph.D., 1973; M.D., University Autonoma, Mexico, 1977. (1981)
- Ross W. Smith, Ph.D., Professor of Chemical and Metallurgical Engineering.
B.S., University of Nevada, 1950; M.S., Massachusetts Institute of Technology, 1955; Ph.D., Stanford University, 1969. (1968-1969)
- Anton P. Sohn, M.D., Clinical Associate Professor.
B.A., Indiana University, 1958; M.D., 1961. (1971)
- Adele Somers, Ed.D., Coordinator, Continuing Education.
B.S., New York University, 1943; M.S., University of Southern California, 1972; Ed.D., 1979. (1979)
- William K. Sonnemann, Jr., B.A., Publications Specialist, Agricultural Communications Services.
B.A., Washington State College, 1951. (1959-1971)
- Colin Soong, M.D., Clinical Assistant Professor.
B.A., University of Hawaii, 1963; M.D., University of Colorado, Denver, 1967. (1978)
- Carla Sousa, B.S., Extension Home Economist, White Pine County.
B.S., California State Polytechnic University, 1976. (1977)
- Jackson M. Spencer, M.A., Assistant Basketball Coach, Intercollegiate Athletics.
B.S., State University of Iowa, 1949; M.A., 1965. (1959-1966)
- Charles F. Speth, M.S., Associate Professor and Associate Animal Nutritionist.
B.S., California State Polytechnic College, 1959; M.S., University of Nevada, 1961. (1963-1975)
- Lucius R. Squier, B.S., Special Projects/Mechanical Engineer.
B.S., U.S. Naval Academy, 1952. (1979)

- Ronald E. Squires, Ph.D., Professor of Industrial and Agricultural Mechanics.
B.S., California State Polytechnic College, 1950; M.A., 1955; Ph.D., Colorado State University, 1975. (1970-1979)
- Leslie Vaughn Stablein, M.S., Instructor of Nursing.
B.S., University of Florida, 1968; M.S., University of Maryland, 1972. (1980)
- Waive D. Stager, M.S., Assistant Research Scientist, Renewable Natural Resources.
B.S., California Polytechnic State University, 1974; M.S., University of Nevada Reno, 1977. (1980)
- Miles L. Standish, Ph.D., Associate Professor of Physiology, Assistant Dean.
M.S., Tulane University of Louisiana, 1968; Ph.D., Indiana University, 1970. (1973-1981)
- Thomas L. Standlee, M.D., Clinical Assistant Professor.
B.A., University of California, Santa Barbara, 1963; M.D., St. Louis University, 1967. (1975-1981)
- Robert Stanzler, M.D., Clinical Assistant Professor.
A.B., Howard University, 1954; M.D., University of Pennsylvania, 1958. (1978)
- Donna Lee Stauffer, M.N., Adjunct Instructor.
B.S., University of San Francisco, 1967; M.N., University of California, Los Angeles, 1973. (1980)
- David D. Stephan, A.S., Coordinator, State Fire Service Training Program.
A.S., Western Nevada Community College, 1976. (1979-1981)
- Edward R. Stevens, M.D., Clinical Assistant Professor.
B.S., Muhlenberg College, 1962; M.D., Temple University, 1966. (1978)
- Marjorie F. Stevenson, M.A., Home Economics Extension Specialist.
A.D., Bradford Junior College, 1948; B.S., Iowa State University, 1951; M.A., San Francisco State College, 1962. (1965-1975)
- Robert L. Stewart, M.D., Clinical Assistant Professor.
B.S., University of Utah, 1947; M.D., Temple University, 1951. (1971)
- Robert N. Stitt, M.D., Clinical Assistant Professor.
B.S., Pennsylvania State University, 1969; M.D., Medical College of Virginia, 1973. (1980)
- G. Michael Stoker, D.D.S., Clinical Assistant Professor.
D.D.S., University of the Pacific, 1974. (1981)
- Stuart W. Stoloff, M.D., Clinical Assistant.
B.A., University of Arizona, 1968; M.D., Temple University, 1975. (1981)
- Lorena L. Stookey, M.A., Lecturer in English.
B.A., University of Washington, 1969; M.A., University of Nevada Reno, 1972. (1979)
- Frances J. Stortie, Ph.D., Associate Professor of Nursing.
A.A., Clark College, 1962; B.S., University of Oregon, 1964; M.S.N., 1967; Ph.D., Portland State University, 1976. (1979)
- Colleen Evalyn Stotler, M.A., Lecturer in Social and Health Resources.
B.A., University of Nevada, 1962; M.A., 1972. (1970)
- Donald J. Stouder, M.D., Clinical Assistant Professor.
M.D., University of Colorado, School of Medicine, 1960. (1975)
- Michael D. Stouder, M.D., Instructor of Family and Community Medicine.
B.S., University of Nevada Reno, 1975; M.D., University of Alabama, 1978. (1979)
- Robert Stovall, M.D., Clinical Professor.
B.S., Idaho State University, 1948; M.D., University of Utah, 1952. (1981)
- Gareth W. Strand, M.D., Clinical Assistant Professor.
B.S., Augustana College, 1964; M.D., University of Illinois, 1968. (1975)
- Clifford J. Stratton, Ph.D., Associate Professor of Anatomy.
B.S., Northern Arizona University, 1968; M.S., 1971; Ph.D., Brigham Young University, 1973. (1974-1977)
- John M. Strefeler, Ph.D., Associate Professor of Accounting and Information Systems.
B.S., Kent State University, 1969; Master of Accounting, University of Arizona, 1975; Ph.D., 1977. (1981)
- Murton D. Strimling, M.D., Clinical Assistant Professor.
B.S., University of Illinois, 1955; M.D., University of Illinois College of Medicine, 1959. (1978)
- Paul R. Stuart, B.A., Sports Information Director, Intercollegiate Athletics.
B.A., University of New Mexico, 1975. (1981)
- Felix F. Stumpf, LL.B., Adjunct Professor of Speech Communications.
A.B., Harvard College, 1938; LL.B., Harvard Law School, 1941. (1977)
- Gerhart T. Svare, M.D., Clinical Assistant Professor.
B.S., University of Washington, 1947; M.D., 1951. (1971)
- Lydia Svetich, M.N., Associate Professor of Nursing.
B.S.N., Far Eastern University, Manila, 1958; M.N., Montana State University, 1962. (1973)
- Sandra N. Swinney, Ph.D., Program Manager and Lecturer, Research and Educational Planning Center.
B.S., University of Arizona, 1963; M.S., Oklahoma State University, 1971; Ph.D., Texas A & M University, 1978. (1979-1981)
- Frank J. Sykes, M.D., Clinical Assistant Professor.
M.D., Medical College of Virginia, 1949. (1979)
- Gail C. Szecody, B.S., Research Associate and Engineering Geologist in Nevada Bureau of Mines and Geology.
B.S., California State University at Sacramento, 1975. (1981)
- William A. Tappan, M.D., Clinical Associate Professor.
A.B., Hope College, 1942; M.D., University of Michigan, 1945. (1971-1981)
- James V. Taranik, Ph.D., Dean and Professor of Geology, Mackay School of Mines.
B.Sc. Geology, Stanford University, 1964; Ph.D. Geology, Colorado School of Mines, 1974. (1982)
- Barbara M. Taylor, Ed.D., Senior Research Consultant, Research and Educational Planning Center.
B.A., University of Nevada Reno, 1968; M.A., 1974; Ed.D., Brigham Young University, 1976. (1979)
- Danny L. Taylor, M.S., Assistant Professor of Mining Engineering, Assistant Mining Engineer, Nevada Bureau of Mines and Geology.
M.E., Colorado School of Mines, 1968; M.S., 1973. (1979)
- Robert E.L. Taylor, D.V.M., Professor of Veterinary Medicine and Virology; Veterinarian.
A.B., University of Southern California, 1952; B.S., University of California, Davis, 1955; D.V.M., 1957. (1965-1972)
- William A. Teipner, M.D., Clinical Associate Professor.
B.S., University of Oregon, 1947; M.D., 1950. (1971-1979)
- James M. Tenney, M.D., Clinical Assistant Professor.
LL.B., LaSalle Extension University, 1967; M.D., Medical College of South Carolina, 1960. (1971)
- William Terry, M.D., Assistant Professor of Psychiatry and Behavioral Sciences.
B.A., Stanford University, 1965; M.D., Tulane University, 1969. (1978)
- Peter S. Test, M.S., County Extension Agent, Lyon County, Cooperative Extension Service.
B.S., University of Nevada Reno, 1970; M.S., Texas Tech University, 1972. (1974-1980)
- David H. Thomas, Ph.D., Adjunct Associate Professor.
B.A., University of California, Davis, 1967; M.A., 1968; Ph.D., 1971. (1980)
- Leslie B. Thompson, M.A., Clinical Instructor.
B.S., University of Utah, 1973; M.A., University of Nevada Reno, 1978. (1979)
- Newton L. Thompson, M.D., Clinical Associate Professor.
B.S., University of Oregon, 1960; M.D., 1962. (1971-1979)
- Barbara Thornton, Ph.D., Assistant Professor of Social and Health Resources.
M.A., University of Nevada, 1967; Ph.D., University of Utah, 1976. (1976)

- William Thornton, M.D., Associate Professor of Family and Community Medicine.
B.A., Western Michigan University, 1962; M.D., Vanderbilt University, 1966. (1981)
- Diana F. Thran, M.S., Assistant Professor of Soil Science and Assistant Soil and Water Scientist.
B.S., University of Nevada, 1962; M.S., 1972. (1976-1979)
- Billy D. Thyra, Ph.D., Adjunct Professor of Plant Pathology.
B.A., Ottawa University, 1959; Ph.D., Washington State University, 1964. (1974)
- Carol Tibbals, M.A., Lecturer in English.
B.A., University of California, Los Angeles, 1959; M.A., University of Toronto, 1966. (1980)
- F. Donald Tibbitts, Ph.D., Professor of Biology and Anatomy.
B.A., Eastern Washington College of Education, 1951; M.A., Oregon State College, 1955; Ph.D., 1958. (1959-1970)
- James L. Tigner, Ph.D., Professor of History.
A.B., University of Redlands, 1948; A.M., Stanford University, 1949; Ph.D., 1956. (1959-1969)
- Joseph Tingley, M.S., Assistant Economic Geologist, Nevada Bureau of Mines and Geology.
B.S., University of Idaho, 1960; M.S., University of Nevada Reno, 1963. (1978)
- Susan L. Tingley, B.A., Editor, Cartographer, Nevada Bureau of Mines and Geology.
B.A., University of California, Los Angeles, 1966. (1978)
- Frank J. Tobin, Ph.D., Professor of Foreign Languages and Literatures.
L.Ph., Berchmanskolleg, Germany, 1960; M.A., Marquette University, 1964; Ph.D., Stanford University, 1968. (1975-1980)
- Robert N. Tompson, Ph.D., Professor of Mathematics.
B.S., Adrian College, 1941; M.S., University of Nevada, 1949; Ph.D., Brown University, 1953. (1956-1966)
- Daniel Tone, M.A., Director, Office of Communications and Broadcasting.
B.S., Montana State University, 1967; M.A., University of Denver, 1968. (1970-1980)
- William C. Torch, M.D., Child Neurologist and Assistant Professor of Pediatrics; Director, Division of Child Neurology, School of Medicine.
B.S., Brooklyn College, 1964; M.S., University of Rochester, 1969; M.D., 1970. (1979)
- David J. Torell, B.S., County Agent in Charge, Eureka County and Lander County South.
B.S., University of Nevada Reno, 1977. (1979)
- Kathryn M. Totton, M.A., Oral History Editor, Interviewer.
B.A., University of Nevada Reno, 1976; M.A., 1979. (1979)
- Teddy Roger Tower, Ph.D., Professor of Curriculum and Instruction.
B.A., Kansas State Teachers College, 1957; M.Ed., University of Oklahoma, 1964; Ph.D., 1965. (1967-1974)
- Richard M. Trachok, M.A., Director of Intercollegiate Athletics.
B.A., University of Nevada, 1949; M.A., 1956. (1959-1973)
- Walter Treanor, M.D., Clinical Associate Professor.
M.D., National University of Ireland, 1947. (1976-1980)
- John H. Trent, Ed.D., Professor of Curriculum and Instruction.
B.A., Hendrix College, 1943; B.E., University of Southern California, 1949; M.S., 1950; Ed.D., Stanford University, 1965. (1968-1973)
- Vada E. Trimble, M.Ed., Director of Housing Programs.
B.A., University of North Dakota, 1972; M.Ed., South Dakota State University, 1976. (1975-1977)
- Patricia A. Tripple, Ed.D., Professor and Experiment Station Researcher, Home Economics.
B.S., University of Washington, 1946; M.A., Teachers College, Columbia University, 1952; Ed.D., 1955. (1974-1979)
- Len Lawrence Trout, Jr., Ed.D., Director, Research and Educational Planning Center.
B.A., Bowling Green State University, 1938; M.Ed., University of Nevada, 1964; Ed.D., University of Pacific, 1968. (1968-1979)
- Marjory Tsuda, B.S. in Nursing, Clinical Instructor,
B.S. in Nursing, University of Nevada Reno, 1972. (1974)
- Scott B. Tucker, M.D., Clinical Assistant Professor.
B.S., University of Nevada Reno, 1972; M.D., University of Colorado, 1976. (1979)
- Paul T. Tueller, Ph.D., Professor of Range Ecology; Range Ecologist.
B.S., Idaho State College, 1957; M.S., University of Nevada, 1959; Ph.D., Oregon State University, 1962. (1962-1973)
- Yeou-Kuang Tung, Ph.D., Assistant Professor of Civil Engineering.
B.S., Tamkang College of Sciences and Arts, 1976; M.S. in Engineering, University of Texas at Austin, 1978; Ph.D., 1980. (1981)
- Donald Raymond Tuohy, A.B., Adjunct Lecturer.
A.B., San Francisco State University, 1952. (1979)
- Kenneth E. Turner, M.D., Clinical Associate Professor.
B.A., Walla Walla College, 1948; M.D., Loma Linda University, 1952. (1980)
- Richard B. Turner, M.A., Lecturer in English.
B.A., San Francisco State University, 1965; M.A., 1967. (1980)
- George R. Twardokens, Ph.D., Professor of Recreation and Physical Education.
B.S., University of Warsaw (Poland), 1953; M.P.E., 1958; Ph.D., University of Utah, 1975. (1963-1978)
- Carrie Ulm, B.S., Clinical Instructor.
B.A., Texas Tech University, 1964; B.S., University of Nevada Reno, 1976. (1980)
- Chris Christian Unterseher, M.A., Associate Professor of Art.
B.A., San Francisco State College, 1966; M.A., University of California, Davis, 1967. (1970-1976)
- Margaret Ann Urie, M.A., Lecturer in English.
B.A., Marquette University, 1967; M.A., 1969. (1979)
- Barbara J. Uriu, M.S., Director of School Relations.
B.S., University of Wyoming, 1973; M.S., Kansas State University, 1974. (1981)
- Condido Vaia, Resident Manager, College Inn. (1978)
- William E. Van Buren, M.D., Clinical Assistant Professor.
B.S., Central State College, 1957; M.D., University of Oklahoma, 1961. (1980)
- Emile C. Van Remoortere, M.D., Professor of Pharmacology.
Dipl. University of Liege, Belgium, 1941; M.D., 1945. (1970)
- William Van Tassel, M.S., P.E., Professor of Mechanical Engineering.
B.S., University of Nevada, 1943; M.S., University of Colorado, 1950. (1947-1965)
- Duane Leon Varble, Ph.D., Professor of Psychology; and Director of Psychological Service Center.
B.A., Southern Illinois University, 1959; M.A., Michigan State University, 1961; Ph.D., 1964. (1968-1981)
- William Vaught, Ph.D., Assistant Professor of Animal Sciences, Sheep Production.
B.S.A., University of Arkansas, 1972; M.S., 1974; Ph.D., Utah State University, 1976. (1978)
- Tracy Lee Veach, M.A., Director, Office of Evaluations, Behavioral Sciences.
B.A., San Francisco State College, 1966; M.A., 1970. (1976-1981)
- James L. Verdi, Ph.D., Clinical Assistant Professor.
B.S., Southern Connecticut State College, 1963; M.S., University of Nevada Reno, 1965; Ph.D., 1971. (1976)
- Ute R. Vetter, Ph.D., Research Seismologist and Lecturer in Geological Sciences.
M.S., Mining Academy of Freiberg/Sazonia, 1961; Ph.D., Institute of Geophysics, 1973. (1981)
- Baldev K. Vig, Ph.D., Professor of Biology.
B.S., Kalsa College (India), 1957; M.S., Punjab University, 1961; Ph.D., Ohio State University, 1965. (1968-1978)
- Gary L. Vinyard, Ph.D., Assistant Professor of Biology.
B.A., University of Kansas, 1972; Ph.D., 1977. (1978)

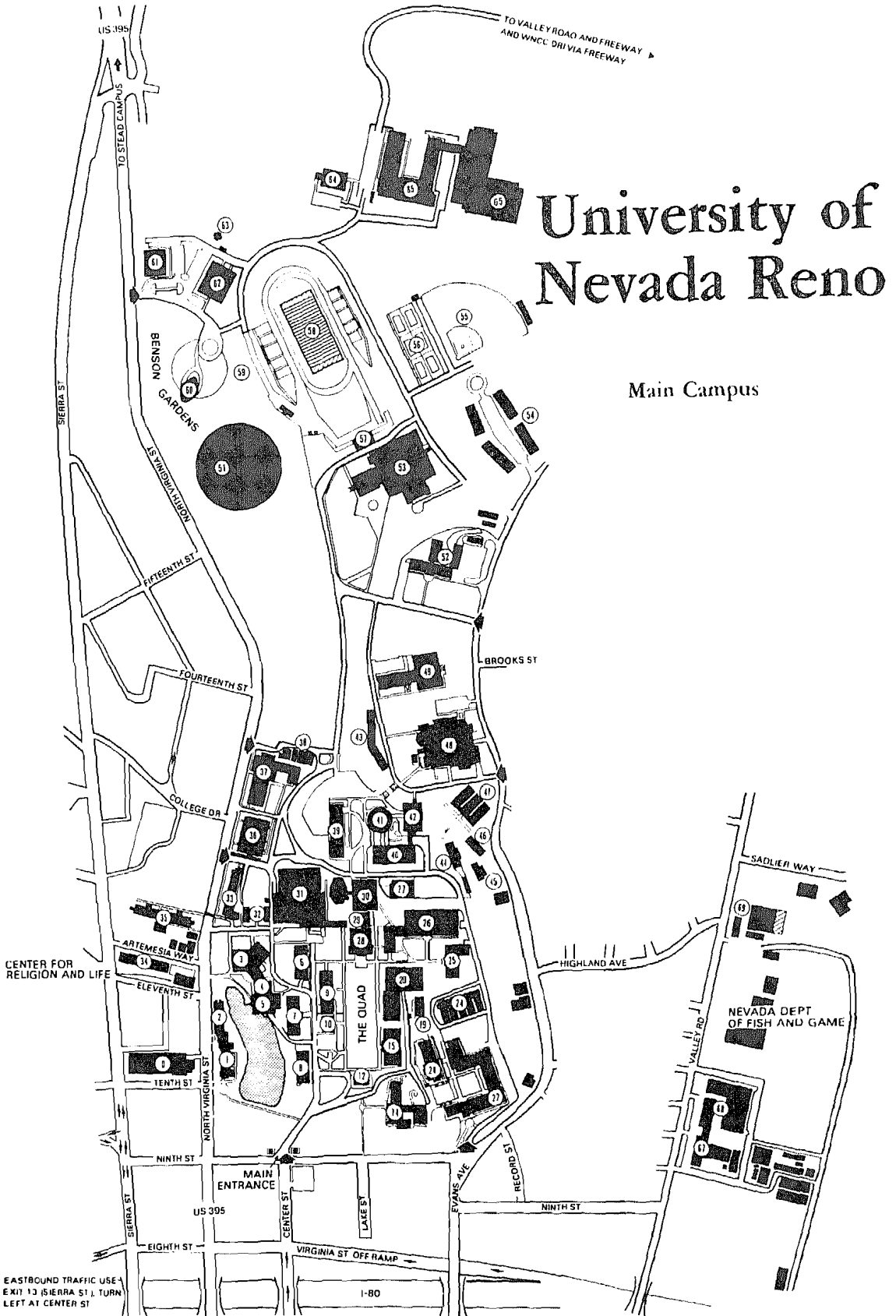
- Kim Vivian, Ph.D., Lecturer in Foreign Languages and Literatures.
B.A., University of California, Santa Barbara, 1974; M.A., 1976; Ph.D., 1979. (1981)
- Virginia L. Vogel, M.F.A., Assistant Professor of Speech and Theatre.
B.A., Albion College, 1973; M.F.A., Texas Christian University, 1975. (1978)
- Keith O. Vowles, D.D.S., Clinical Assistant Professor.
D.D.S., Northwestern University, 1959; M.S., University of Nebraska, 1964; M.A., California State University, San Francisco, 1971. (1975)
- Ihor Voyevodka, M.D., Clinical Assistant Professor.
B.A., Carroll College, 1963; M.S., Catholic University of America, 1965; M.D., University of Vienna, 1971. (1979)
- Victoria L. Wade, M.S., Research Assistant in Physiology.
B.A., Southern Illinois University at Edwardsville, 1976; M.S., 1980. (1981)
- Guy H. Wagener, Ph.D., Assistant Professor of Foreign Languages.
Vorprüfung Zum Dolmetscher, Gutenbert Universitat, Mainz, 1970; B.A., California State University, Long Beach, 1971; M.A., 1973; Ph.D., University of California, Irvine, 1980. (1980)
- Edwin F. Wagner, Ph.D., Associate Professor of Mathematics.
B.S., University of Nevada, 1958; M.S., 1960; Ph.D., University of New Mexico, 1965. (1965-1969)
- J. Edgar Wakayama, M.S., Assistant Professor of Medical Technology.
B.A., Northeastern University, 1967; M.S., University of Oregon, 1974. (1979)
- Caroline L. Wakefield, Ph.D., Associate Professor of Anatomy.
B.A., Long Beach State College, 1960; M.S.C., University of Ottawa, 1968; Ph.D., 1972. (1975-1979)
- Allen R. Walker, M.D., Assistant Professor of Pediatrics and Director of Ambulatory Care.
B.A., Amherst College, 1968; M.D., University of Connecticut, 1972. (1979-1980)
- Charles R. Walker, Ph.D., Assistant Professor of Internal Medicine.
B.S., University of California, Davis, 1967; M.S., Oregon State University, 1970; Ph.D., University of California, Davis, 1975. (1981)
- James L. Walker, Ph.D., Associate Professor of Economics and Director of Bureau of Business and Economic Research.
B.A., LaVerne College, 1962; M.A., University of California, Los Angeles, 1969; Ph.D., University of Texas, 1974. (1976)
- Joseph R. Walker, M.D., Clinical Assistant Professor.
M.D., Creighton University, 1968. (1978)
- Lloyd L. Walker, B.S. in Ed., Assistant Professor of Engineering Technologies.
B.S. in Ed., University of Nevada Reno, 1971. (1972)
- William Paul Wallace, Ph.D., Professor of Psychology, and Acting Associate Dean of Arts and Science.
B.S., University of Redlands, 1962; M.A., Northwestern University, 1964; Ph.D., 1966. (1966-1981)
- Larry Walters, M.F.A., Assistant Professor of Speech and Theatre.
B.A., Central Washington State College, 1974; M.F.A., University of Oregon, 1981. (1981)
- Jack Walther, D.V.M., Adjunct Assistant Professor.
D.V.M., University of California, Davis, 1963. (1977)
- Lyle Gordon Warner, Ph.D., Associate Professor of Sociology.
B.A., University of Arizona, 1963; M.A., 1964; Ph.D., University of Kentucky, 1967. (1969-1971)
- Robert J. Watters, Ph.D., Associate Professor of Geological Engineering.
B.S., University of Strathclyde, 1969; M.S., University of London, 1970; Ph.D., 1972. (1978-1980)
- Rosaline H. Weaver, M.B.A., Accountant in Controller's Office.
B.S., Brigham Young University, 1953; M.B.A., University of Nevada Reno, 1969. (1981)
- Harry Weigel, M.D., Clinical Assistant Professor.
B.S., University of Nebraska, 1953; M.D., University of Nebraska Medical Center, 1958. (1978-1981)
- Richard G. Weiher, Ph.D., Clinical Assistant Professor.
B.A., University of Wisconsin, 1971; M.S., Eastern Washington State College, 1973; Ph.D., Utah State University, 1975. (1976-1979)
- Leonard B. Weinberg, Ph.D., Professor of Political Science.
A.B., Syracuse University, 1961; M.A., University of Chicago, 1962; Ph.D., Syracuse University, 1967. (1967-1978)
- Richard Weisberg, M.S.S.W., Clinical Assistant Professor.
B.S., University of Tennessee, 1973; M.S.S.W., 1975. (1979-1980)
- Malcom Weiss, M.D., Assistant Professor of Family and Community Medicine.
A.B., Columbia University, 1954; M.D., Chicago Medical School, 1958. (1981)
- William H. Welch, Jr., Ph.D., Associate Professor of Biochemistry; Associate Biochemist.
B.A., University of California, Berkeley, 1963; Ph.D., University of Kansas, 1969. (1970-1976)
- Bud West, M.D., Clinical Assistant Professor.
B.S., Utah State University, 1964; M.D., University of Utah, 1968. (1976)
- John Pettigrew West, Ph.D., Clinical Psychologist, Sierra Nevada Job Corps Center.
B.A., University of Colorado, 1961; Ph.D., University of Nevada Reno, 1978. (1979)
- Elizabeth B. Wever, B.A., Clinical Instructor.
B.A., Carleton College, 1948. (1980)
- Terry C. Weyl, Ph.D., Adjunct Assistant Professor.
B.A., University of Denver, 1965; M.A., 1968; Ph.D., University of Nevada Reno, 1972. (1972)
- Brian Joseph Whalen, B.S.C.E., P.E., Director of Physical Plant.
B.S.C.E., University of Nevada, 1957; P.E., 1966. (1958-1974)
- Boyce E. Wheeler, M.S., County Extension Agent, Churchill County, S Bar S Field Laboratory.
B.S., Idaho State University, 1969; M.S., University of Nevada Reno, 1972. (1972-1979)
- Norman L. Whisler, Ph.D., Associate Professor of Educational Administration and Higher Education.
B.S., Eastern Michigan University, 1950; M.A., University of Michigan, 1957; Ph.D., Ohio State University, 1965. (1981)
- Eric S. White, M.S., P.E., Assistant Professor of Engineering Design Technology.
B.M.E., Georgia Institute of Technology, 1952; M.S., University of Nevada Reno, 1972. (1969-1973)
- Georgia Kenyon White, M.B.A., Assistant Professor of Managerial Sciences.
B.S., Arizona State University, 1974; M.B.A., University of Oregon, 1975. (1980)
- Sam E. White, Ph.D., Associate Professor of Managerial Sciences.
B.S., California State University, San Jose, 1968; M.B.A., University of Washington, 1969; Ph.D., 1976. (1980)
- Judith A. Whitenack, M.A., Assistant Professor of Foreign Languages and Literatures.
B.S., University of Wisconsin, 1966; M.A., 1970. (1979)
- Donald D. Wicker, M.D., Clinical Assistant Professor.
B.S., University of Wisconsin, 1957; M.D., 1961. (1975-1976)
- Stephen Wiel, Ph.D., Assistant Professor of Mechanical Engineering.
B.S., Stanford University, 1960; M.S., 1961; Ph.D., University of Pittsburgh, 1972. (1980)
- William F. Wilborn, Ph.D., Associate Professor of English.
B.A., Stanford University, 1966; Ph.D., Cornell University, 1976. (1971-1981)
- John Wilburn, Director, Surgical Laboratory. (1980)
- Allen Robert Wilcox, Ph.D., Professor of Political Science and Director of the Bureau of Governmental Research.
B.A., University of Chicago, 1962; M.A., Northwestern University, 1964; Ph.D., 1970. (1967-1979)

- John D. Wilkes, M.D., Clinical Associate Professor.
B.S., University of Washington, 1952; M.D., George Washington University, 1956. (1975)
- Sharon M. Willans, M.S.W., Assistant Professor of Social and Health Resources.
B.S.E., Kansas State Teacher's College, 1968; M.S.W., University of Wisconsin, 1976. (1979-1980)
- Pearl A. Williams, M.D., Clinical Assistant Professor.
A.B., University of California, Berkeley, 1929; M.D., Meharry Medical College, 1935. (1976)
- Ronald R. Williams, D.Mus., Professor of Music.
B.M., DePauw University, 1949; M.M., Indiana University, 1952; M.M., 1955; D.Mus., 1963. (1959-1969)
- Sherry Ann Williams, M.Ed., Athletic Trainer.
B.S., Colorado State University, 1978; M.Ed., Utah State University, 1980. (1981)
- John Williamson, M.D., Clinical Assistant Professor.
A.B., Stanford University, 1968; M.D., 1972. (1981)
- Graham M. Wilson, M.B.Bch., Clinical Assistant Professor.
B.S., Tulane University, 1968; M.B.Bch., University of Witwatersrand, Johannesburg, South Africa, 1975. (1980)
- Richard E. Wilson, Ph.D., Associate Professor of Economics.
B.A., Stanford University, 1955; M.A., 1956; Ph.D., 1969. (1959-1969)
- Lynn K. Winer, B.S., Junior Animal Scientist.
B.S., University of Nevada Reno, 1978. (1981)
- Ilga B. Winicov, Ph.D., Assistant Professor of Biochemistry and Biology.
A.B., University of Pennsylvania, 1956; M.S., University of Wisconsin, 1958; Ph.D., University of Pennsylvania, 1971. (1979-1980)
- Peter Winkler, Ph.D., Associate Professor of Physics.
B.S., University of Frankfurt, Germany, 1962; M.S., 1966; Ph.D., University of Erlangen-Nurnberg, 1969. (1979)
- Donald W. Winne, LL.B.-J.D., Assistant Professor of Managerial Sciences.
B.S., Olivet College, 1952; A.B., 1953; LL.B.-J.D., University of Illinois, 1955. (1973)
- Robert Lee Winzeler, Ph.D., Associate Professor of Anthropology.
B.A., Kent State University, 1963; M.A., University of Chicago, 1966; Ph.D., 1970. (1969-1976)
- Jack DeWitt Wise, M.Ed., Area County Extension Agent, Cooperative Extension Service.
B.S., Kansas State University, 1948; M.Ed., Arizona State University, 1968 (1968-1980)
- Sarah A. Wise, Ph.D., Program Director and Associate Professor of Medical Technology.
B.S., University of Colorado, 1945; M.S., University of Vermont, 1969; Ph.D., University of Utah, 1979. (1981)
- Edward F. Wishart, Ph.D., Associate Professor of Mathematics.
B.S., University of Nevada, 1959; M.S., Florida State University, 1961; Ph.D., 1965. (1965-1970)
- Harry J. Wolf, M.Ed., Director of Career Planning and Placement.
B.S., University of Wyoming, 1954; M.Ed., University of Nevada Reno, 1964. (1964-1981)
- Milton T. Wolf, A.M.L.A., Librarian.
B.A., Penn State University, 1968; A.M.L.A., University of Michigan, 1969. (1977)
- J.D. Wood, Ph.D., Professor of Physiology.
B.S., Kansas State University, 1964; M.S., 1966; Ph.D., University of Illinois, 1969. (1979)
- Samuel Dees Wood, B.A.L.S., Librarian.
B.S., University of Oklahoma, 1949; B.A.L.S., 1951. (1961-1977)
- Yvonne Wood, M.A., Associate Professor of Psychology.
A.B., Occidental College, 1973; M.A., University of Hawaii, 1975. (1981)
- Terry S. Woodin, Ph.D., Associate Professor of Biochemistry.
B.A., Alfred University, 1954; M.A., University of California, Davis, 1964; Ph.D., 1967. (1968-1977)
- Lexie Lee Woodruff, M.S., Clinical Associate Professor.
B.S., University of California, San Francisco, 1960; M.S., 1961. (1973-1980)
- Marvin W. Woodruff, M.D., Clinical Professor.
M.D., New York University, 1955. (1979)
- Hernando J. Woods, Jr., Ph.D., Associate Professor of English.
B.A., University of South Carolina, 1947; M.A., 1948; Ph.D., University of Florida, 1952. (1957-1962)
- Sandra Lee Workman, B.A., Interpreter for the Deaf/Sign Language Instructor.
B.A., California State University, Northridge, 1978. (1979)
- Arnold Wright, Ph.D., Assistant Professor of Accounting and Information Systems.
B.S., University of Colorado, 1969; M.B.A., University of Southern California, 1973; Ph.D., 1978. (1978)
- Marvin R. Wycoff, B.S., Accountant, Controller's Office.
B.S., University of Nevada Reno, 1969. (1974)
- John Yanagida, Ph.D., Assistant Professor and Assistant Agriculture Economist.
B.A., University of Hawaii, 1971; M.A., University of Illinois, 1975; Ph.D., 1978. (1979)
- Emma Yancy, M.A., County Home Economist and Human Development and EFNEP.
B.S., University of Arkansas, 1971; M.A., Atlanta University, 1975. (1978)
- James D. Yoakum, M.S., Adjunct Professor.
B.S., Humboldt State University, 1954; M.S., Oregon State University, 1957. (1979)
- Lawrence G. Yori, B.S.E.E., Principal Investigator for U.S. Navy Project on Automated Testing, Engineering Research and Development Center.
B.S.E.E., University of Nevada Reno, 1972. (1979)
- David G. Young, Jr., M.D., Clinical Associate Professor.
B.S., Elizabethtown College, 1944; M.D., Hahnemann Medical College, 1946; M.S., University of Pennsylvania, 1962. (1975)
- Felicita Young, B.A., Managing Editor, Bureau of Governmental Research.
B.A., University of the Pacific, 1978. (1980)
- James A. Young, Ph.D., Adjunct Professor.
B.S., Chico State College, 1960; M.S., North Dakota State University, 1962; Ph.D., Oregon State University, 1965. (1967-1972)
- Ralph A. Young, Ph.D., Professor of Soil Science and Associate Director of Experiment Station.
B.S., Colorado State University, 1942; M.S., Kansas State University, 1947; Ph.D., Cornell University, 1953. (1963)
- Wesley M. Young, D.P.A., Assistant Professor of Criminal Justice.
A.B., San Jose State University, 1942; M.P.A., University of Southern California, 1974; D.P.A., 1978. (1981)
- Zora O. Young, M.D., Clinical Assistant Professor.
B.S., University of Arizona, 1947; M.D., University of Southern California, 1951. (1978)
- Truman Odell Youngblood, A.B., Head Baseball Coach, Intercollegiate Athletics.
A.A., Reedley J.C., 1954; A.B., Fresno State College, 1960. (1979)
- Edward A. Zane, Ph.D., Professor of Accounting.
B.B.A., University of Alaska, 1951; M.B.A., Boston University, 1954; Ph.D., University of Massachusetts, 1964. (1965-1970)
- Sally S. Zanjani, Ph.D., Adjunct Assistant Professor.
B.A., New York University, 1964; M.A., 1967; Ph.D., 1974. (1980)
- Jerry N. Zebrack, M.D., Clinical Assistant Professor.
B.A., University of Southern California, 1961; M.D., University of California, Los Angeles, 1965. (1972-1974)
- Joan S. Zenan, M.L.S., Librarian, Medical School Library.
B.A., University of California, Los Angeles, 1965; M.L.S., 1967. (1976)
- Gordon I. Zimmerman, Jr., Ph.D., Associate Professor of Speech and Theatre.
B.S., University of Oregon, 1965; M.A., University of Arizona, 1966; Ph.D., University of Minnesota, 1973. (1967-1977)

William E. Zimmerman, M.S., County Extension Agent
—Clark County.
B.A., Arizona State University, 1974; B.S., Utah State University,
1979; M.S., 1980. (1980)

Steven D. Zink, M.L.S., Librarian.
B.S., Indiana State University, 1974; M.A., University of Wisconsin,
1975; M.L.S., Louisiana State University, 1979. (1980)
Reuben Zucker, M.D., Clinical Associate Professor.
B.A., Yale University, 1941; M.D., 1944. (1976)





Alphabetical Legend

AIM	67	Agricultural & Industrial Mechanics
AA	38	Art Annex
	55	Baseball Field
B	3	Bookstore
BB	30	Business Building
	45	Buildings & Grounds Garage & Storage
BG	47	Buildings & Grounds Office & Shops
	44	Buildings & Grounds Repair Garage & Shops
BR	10	Visitors Center
CHP	27	Central Heating Plant
	46	Central Stores
CB	40	Chemistry Building
CFA	37	Church Fine Arts
CA	8	Clark Administration
CC	62	Computing Center
CI	0	College Inn
DC	5	Dining Commons
EB	48	Education Building
ERF	63	Environmental Research Facility
EC	69	Equestrian Center
FA	22	Fleischmann Agriculture
FAP	60	Fleischmann Atmospherium/Planetarium
FG	24	Fleischmann Greenhouses
FHE	14	Fleischmann Home Economics
FH	7	Frandsen Humanities
GL	31	Getchell Library
G	36	Gymnasium
HH	43	Hartman Hall
	64	Health Lab., State of Nevada
HS	2	Health Service
JTU	4	Jot Travis Student Union
JC	49	Judicial College
JH	2	Juniper Hall
LB	41	Lecture Building
LC	51	Lawlor Special Events Center*
LP	42	Leifson Physics
LH	32	Lincoln Hall
LR	53	Lombardi Recreation
MB	20	Mines Building*
MM	28	Mackay School of Mines
MSS	39	Mack Social Science
MS	15	Mackay Science
S	58	Mackay Stadium
	57	Mackay Stadium Field House
MAH	1	Manzanita Hall
M	65	School of Medicine
MG	12	Morrill Hall
	61	Nevada Historical Society
NH	35	Nye Hall
OSN	21	Orvis School of Nursing
PE	25	Palmer Engineering
PP	29	Physical Plant
PO	5	Post Office
RH	9	Ross Hall
RRC	68	Renewable Resources Center
RBA	9	Ross Business Administration
SEM	26	Scrugham Engineering-Mines
	59	Soccer Field
	56	Tennis Courts
TSS	6	Thompson Student Services Center
UP	46	University Police
USC	34	University Services Center
UV	54	University Village
	52	U.S. Bureau of Mines
V	19	Veterinary Sciences
VC	10	(Projected) Visitors' Center
WPH	33	White Pine Hall

Numerical Legend

0.	College Inn
1.	Manzanita Hall
2.	Juniper Hall
2.	Health Service
3.	Bookstore
4.	Jot Travis Student Union
5.	Dining Commons
5.	Post Office
6.	Thompson Student Services Center
7.	Frandsen Humanities
8.	Clark Administration
9.	Ross Hall
10.	(Projected) Visitors' Center
12.	Morrill Hall
14.	Fleischmann Home Economics
15.	Mackay Science
19.	Veterinary Science
20.	Mines Building*
21.	Orvis School of Nursing
22.	Fleischmann Agriculture
24.	Fleischmann Greenhouses
25.	Palmer Engineering
26.	Scrugham Engineering-Mines
27.	Central Heating Plant
28.	Mackay School of Mines
29.	Physical Plant
30.	Business Building
31.	Getchell Library
32.	Lincoln Hall
33.	White Pine Hall
34.	University Services Center
35.	Nye Hall
36.	Gymnasium
37.	Church Fine Arts
38.	Art Annex
39.	Mack Social Science
40.	Chemistry Building
41.	Lecture Building
42.	Leifson Physics
43.	Hartman Hall
44.	Buildings & Grounds Repair Garage & Shops
45.	Buildings & Grounds Garage & Storage
46.	University Police
46.	Central Stores
47.	Buildings & Grounds Office & Shops
48.	Education Building
49.	Judicial College
51.	Lawlor Special Events Center*
52.	U.S. Bureau of Mines
53.	Lombardi Recreation
54.	University Village
55.	Baseball Field
56.	Tennis Courts
57.	Mackay Stadium Field House
58.	Mackay Stadium
59.	Soccer Field
60.	Fleischmann Atmospherium/Planetarium
61.	Nevada Historical Society
62.	Computing Center
63.	Environmental Research Facility
64.	Health Lab., State of Nevada
65.	School of Medicine
	Anderson Health
	Phase III
	Phase IV*
	Manville Health
67.	Agricultural & Industrial Mechanics
68.	Renewable Natural Resources Center
69.	Equestrian Center

Who Are They?

Campus Buildings and Names

Anderson Medical Sciences

Fred M. Anderson, M.D., (1906–), Reno physician and surgeon, member of the Board of Regents, 1956-1978.

Church Fine Arts

James Edward Church (1869-1959), professor of Latin, German, classical art, and history, 1892-1959. Developed the first snow surveying techniques, which led to the science of evaluating regional water storage. Also developed system of analyzing avalanche hazards. Brought worldwide scientific honor to the University of Nevada.

Clark Administration

Alice McManus Clark, native Nevadan, wife of William A. Clark, Jr., son of a Montana senator who built railroads in southern Nevada. Mrs. Clark gave several scholarships to the university. After her death, her husband donated the Clark Library in her name (1926). This building was the cultural and research center of the university for more than three decades before the move to Getchell in 1962.

Fleischmann Agriculture (Fleischmann College of Agriculture)

Fleischmann Greenhouse

Fleischmann Life Science

(See also: Fleischmann Atmospherium/Planetarium and Fleischmann Home Economics)

Max C. Fleischmann (1877-1951), Nevada philanthropist, food industry millionaire (Standard Brands), benefactor of the university with gifts of land, scholarships and endowments. From the Max C. Fleischmann Foundation established by Fleischmann for the purpose of distributing his wealth, came the funds to construct the College of Agriculture and School of Home Economics, and, later, the life science wing of the agriculture building. The Fleischmann Foundation has contributed further millions to the university in gifts, scholarships, and assistance in establishing the Computing Center, Laboratory in Environmental Patho-Physiology, Atmospherium/Planetarium, Desert Research Institute, the Water Resources Building, and the Judicial College Building.

Fleischmann Atmospherium/Planetarium (Charles and Hettiette Fleischmann Atmospherium/Planetarium) Named for the parents of Max C. Fleischmann.

Fleischmann Home Economics (Sarah Hamilton Fleischmann School of Home Economics) Named for Mrs. Max C. Fleischmann.

Frandsen Humanities (Formerly Agriculture Building)

Named for *Peter Frandsen*, (1876-1967), founder of the biology department; professor of biology, zoology, embryology, anatomy, bacteriology, 1900-1942.

Getchell Library

Noble H. Getchell (1875-1960), Nevada mining man, state senator.

Hartman Hall

Leon W. Hartman (1876-1943), professor of physics, 1908-1938; President of the University of Nevada, 1938-1943.

Jot Travis Student Union

Ezra "Jot" Travis, early Western stagecoach company manager. His son, Wesley E. Travis, born in Hamilton, Nevada, bequeathed funds (1952) to the university for a student facility to be named for his father.

Leifson Physics

Sigmund W. Leifson (1897–), professor of physics, 1925-1963; Chairman of the Physics Department, 1938-1963. Nationally recognized nuclear physicist; pioneer in the theory of atomic energy.

Lincoln Hall

Abraham Lincoln (1809-1865), sixteenth President of the United States.

Lombardi Recreation

Louis E. Lombardi, M.D. (1907–), Reno physician and surgeon; member of the Board of Regents, 1951-1980.

Mack Social Science

Effie Mona Mack (1888-1969), Nevada historian and educator; university benefactor.

Mackay School of Mines

Mackay Stadium

Mackay Stadium Field House

John W. Mackay (1831-1902), one of the "Big Four" successful mining men of the bonanza days on the Comstock, Virginia City, Nevada. Buildings, land, and endowments were presented to the university in his honor by his widow, Marie Louise, and son, Clarence H. Mackay.

Mackay Science (Mackay Science Hall)

Clarence H. Mackay (1874-1938), New York financier, son of John W. Mackay (see above). Mackay Science Hall, dedicated in 1930, was one of numerous gifts made to the university by Clarence H. Mackay. "Mackay Day," celebrated each spring, is named in his honor.

Manville Medical Sciences

H. Edward Manville, Jr. (1906–), industrialist, philanthropist, civic leader. Benefactor and Chairman of the Advisory Board of the School of Medicine.

Morrill Hall

Named for the Morrill Land Grant Act of 1862 after *Justin S. Morrill* (1810-1898), U.S. Senator from Vermont. The act established the system of land-grant colleges, including, in 1864, the University of Nevada. Completed in 1886, Morrill Hall was the first building erected on the Reno campus of the university. Until 1889 it was the University of Nevada.

Nye Hall

Named for Nye County, Nevada, after *James W. Nye* (1814-1876), Nevada Territorial Governor, 1861-1864; U.S. Senator from Nevada, 1864-1873.

Orvis School of Nursing

Arthur E. Orvis (1888-1965), Nevada adoptive resident, who, with his wife, Mrs. Mae Zenke Orvis, contributed sizable cash sums to the university, making possible the construction (1965-1966) of the School of Nursing.

Palmer Engineering

Stanley G. Palmer (1887-1975), professor of electrical engineering, 1915-1941; Dean, College of Engineering, 1941-1957.

Ross Business Administration

Silas E. Ross (1887-1975), professor of chemistry, 1909-1914; Reno mortician; member of the Board of Regents, 1942-1956.

Scrugham Engineering-Mines

James G. Scrugham (1880-1945), professor of mechanical engineering, 1903-1914; first Dean, College of Engineering, 1914-1916; State Engineer; Governor of Nevada, 1923-1925; U.S. Representative in Congress, 1933-1942; U.S. Senator, 1942-1945; newspaper editor; historian.

Thompson Student Services Center (Formerly Education Building)

Reuben C. Thompson (1878-1951), professor of ancient languages, literature, and philosophy, 1908-1939; founded department of philosophy; Dean of Men, 1932-1939.



Index

For general information concerning degrees, requirements, and programs within specific colleges and schools, please refer to the Table of Contents. Students are advised to read carefully the rules and regulations which may affect them, as listed in various sections of this catalog. All courses offered at the University of Nevada-Reno are contained in the Course Offerings section.

A

Abbreviations—
 Course Descriptions, 176
 Grades and Marks, 38, 39
 Absences, 53
 Academic—
 Distinction, 41
 Semester Honor Roll, 41
 Standards, Regulations, 41
 Advisement Center, 52
 Accident Insurance, 51, 55
 Accounting—
 and Information Systems, 119, 177
 Accounts, Clearance of, 36
 Accounts Receivable Card, 50
 Accreditation (see also College and School sections), 11
 ACT (American College Test) Proficiency Examination Program, 22, 23, 26, 30, 37, 52
 Addition of Courses, 38
 Administration, 3, 4, 5
 Admission Information, 22
 Advanced Standing, 25
 Applications, 22
 Associate Degree Programs, 23
 Baccalaureate Programs, 23
 Credit by Examination, 26
 Credit for Non-Traditional Learning, 26
 Early Admission, 23
 Graduate School Admission, 32
 Evaluation, 22
 Filing Dates, 22
 Institutions Within System, 32
 International Students, 24
 Probation, 24
 Records, 46
 Requirements—
 General, 22
 Graduate, 32, 168
 Undergraduate, 23
 Tests, 22, 23, 26
 Advanced—
 Degrees (see also College and School sections), 164
 Placement Examinations, 26
 Standing, 25
 Advertising (JOUR), 100
 Advisement, 36
 Advisory Committee (Graduate School), 169
 Agricultural—
 and Industrial Mechanics, 77, 81, 178

and Resource Economics, 77, 80, 85, 180
 Biochemistry, 85
 Economics, 85
 Experiment Station, 15, 76
 Journalism, 79, 101
 Mechanics, 78, 81
 Research Service, 21
 Agriculture—
 Associate Degree Programs, 77, 78
 Baccalaureate Degree Programs, 77, 79
 Graduate Programs, 77, 84
 Major, 79
 U.S. Department of, Cooperative Extension Service, 15
 Agriculture, Max. C. Fleischmann College of, 15, 76
 Agriculture, School of, 76
 Alumni Association, Inc., 19
 Alumni Relations and Records, 19
 American—
 College Test (ACT), 22, 23, 26, 30, 37, 52
 Anatomy, 150, 181
 Animal Science, 77, 81, 85, 182
 Anthropology, 97, 183
 Application—
 Fee, 49
 for Admission, 22
 for Advanced Degree, 164
 for Graduate School, 32, 164
 for Graduation, 43
 for Residence Halls, 54
 Applied Music, 105
 Architectural Engineering Design Technology, 140, 185
 Army—
 Active Duty, 103
 Reserve, 103, 104
 Art, 92, 186
 Arts and Science, College of, 16, 88
 Associate Degrees (see specific College and School sections)
 Admission for, 23
 Associated Women Students (AWS), 66
 ASUN (Associated Students of the University of Nevada), 65
 Membership fee, 49
 Athletics (see also Intercollegiate, Recreation and Physical Education), 12
 Atmospheric Sciences Center, 20
 Atmospherium/Planetarium, 19
 Audiology, 147, 279
 Auditor, 39
 Auditing, 38

Awards, 59
 Gold Medal, 41

B

Baccalaureate Degrees
 (see Undergraduate Degrees)
 Basque Studies, 97, 220
 Beliefs and Values Program, 68, 188
 Biochemistry, 77, 85, 92, 148, 150, 188
 Bioclimatology, 262
 Biology, 92, 189
 Bioresources Center, 20
 Black American Studies, 69
 Board and Room Charges, 51
 Board of Regents, 3
 Book Store, 55
 Botany, 93
 Broadcasting Facilities, 13
 Broadcast News (JOUR), 100
 Buildings, Names of, 314
 Bureau of—
 Business and Economic Research, 16
 Indian Affairs, 55
 Governmental Research, 16
 Mines, U.S., 21
 Mines and Geology, Nevada, 16
 Business Administration—
 Degree Requirements, 118
 Business Administration, College of, 16, 117

C

Cadet Battalion, 103
 Calendar, 6
 Campus Description, 10
 Campus Buildings and Names, 314
 Campus Map, 312
 Cancellation of—
 Admission, 22
 Courses, 38
 Housing, 51
 Registration, 22
 Career Planning and Placement, 64
 Categories of Students—
 Auditor, 39
 Nondegree, 39
 Regular, 39
 CBAPE (College Board Advanced Placement Examination), 26, 27
 Center for Economic Education, 16
 Central Services, 17
 Ceramics (see Art)

- Change of—
 Address, 53
 Adviser, 38
 College, 38
 Grade, 40
 Major, 38
 Name, 38
- Chemical and Metallurgical Engineering, 153, 193
- Chemistry, 94, 194
- Child Development and Family Life (H EC), 143
- Chinese, 97, 220
- City of Reno, 10
- Civil—
 Engineering, 136, 196
 Technology, 198
- Class Conduct, 41
- Classes, Planning and Scheduling, 36
- Classification of Students, 39
- Clearance of Accounts, 36
- CLEP (College Level Examination Program), 26, 28
- Clothing and Textiles, 143
- Coed Residence Halls, 53
- College—
 (University Colleges are listed by name)
 Board Advanced Placement Examination (CBAPE), 26, 27
 Level Examination Program (CLEP), 26, 28
 of Juvenile Justice, 21
 National Judicial, 21
 Service and Research Divisions, 15
- Colone's Coeds, 103
- Communications and Broadcasting, Office of, 13
- Commissioning Programs for Military Services, 12
- Community Development Program, 14
- Comparative Politics (see Political Science)
- Composition and Communication, 215
- Computer Science—
 Minor, 68
 Option (MATH), 101
- Computing—
 Center, 13
 Courses, 211, 236, 242
- Conduct—
 Class, 41
 Code, 66
- Conferences and Institutes, 14
- Congressional Intern Program, 108
- Constitution Course Requirements, 36
- Continuing Education, 13, 26
- Cooperative—
 Extension Service, 15, 76
 Programs in Engineering, 134
- Correspondence Study (see also Independent Study), 14, 26
- Counseling and Guidance Personnel Services (EDUC), 131, 199
- Counseling and Testing Center and Services, 52
- Course—
 Abbreviations, 176
 Addition of, 38
 Changes, 177
 Dropping, 38
 Numbering System, 176
 Precedence, 37
 Prerequisites (see individual course listings)
 Requirements, 37, 43
 Symbols, 176
- Course Information, 176
- Course Offerings, 177
- Credit—
 by Examination, 26
 for Nontraditional Learning, 26
 Load, 37
 Graduate, 169, 170
 Requirements, 44
 Graduate, 170
 Transfer, 25
- Criminal Justice, 95, 201
- Criminalistics, 95
- Crop Science, 82, 262
- Crops and Soils Management, 82
- Curriculum and Instruction (EDUC), 132, 202
- ## D
- Dance (RPED), 111
- DANTES, 26
- Data Processing (see Computing)
- Degrees—
 (see also College, School and Graduate sections), 11, 44
- Dental School transfer, 90, 93, 112
- Department Chairmen (see Organization of the University, and College and School sections)
- Department Examinations, 31
- Desert Research Institute, 10, 20
- Development, University, 19
- Dining Commons, 17, 54
- Disqualification, 42
- Dissertation Regulations, 170
- Distinction at Graduation, 41
- Distribution of Registration Materials, 37
- Doctoral Degrees (see Advanced Degrees)
- Drawing (see Art)
- Dropping of Courses, 38
- Dual Undergraduate Degrees, 45
- ## E
- Early Admission, 23
- Earth Science, 98, 155
- Ecology, 93
- Economic Education, Center for, 16
- Economics, 121, 206
- Economic Research Service, 21
- Education, College of, 127
- Education—
 Courses, 208
 Specialist Certificate, 131
- Educational—
 Administration and Higher Education, 132, 208
 Counseling and Guidance Personnel Services, 131, 199
- Curriculum and Instruction, 132, 202
- Foundations and Media, 132, 209
- Opportunity Program, 55
- Service Division, 133
- Electrical Engineering, 137, 211
- Electronics Engineering Technology, 139, 214
- Elementary—
 Education, 132
 Teaching, 127, 129
- Eligibility Review Committee for Financial Aid, 57
- Employment, 58
- Energy Systems Center, 20
- Engineering, College of, 16, 134
- Engineering—
 Courses, 215
 Mathematics and Science Entrance Requirements, 135
 Research and Development Center, 16
 Engineering Science, 143
- Engineering Technologies, 139
- Design, 140
- Electronics, 139, 214
- English—
 Courses, 215
 Language and Literature, 95, 96
 Requirements, 37
- Environment Courses, 219
- Environmental Studies, 69
- Ethnic Studies, 69
- European Studies, 70
- Examinations—
 Credit by, 26
 Departmental, 31
 Entrance, 22
 Final, 40
 Grades and, 40
 Special, 26, 31
- Examining Committee (Graduate School), 166
- Expenses (see Fees and Expenses)
- ## F
- Facilities for Study and Research, 13
- Faculty Listing, 282
- Failed Courses, 37
- Family and Community Medicine, 150, 219
- Farm and Ranch Management, 78
- Fashion—
 Merchandising, 143
 Trades, 141
- Federal Agencies, 21
- Fee—
 Refunds, 50
 Waivers, 50
- Fees and Expenses, 49
- Filing Dates for Admission, 22
- Final—
 Examinations, 40
 Grades, 40
- Finance (MGRS), 122

Financial Aid, 56
 Calendar, 63
 Fire Service Training Program, 20
 Fleischmann Atmospherium/
 Planetarium, 19
 Fleischmann College of Agriculture, 76
 Fleischmann School of Home Economics,
 141
 Food—
 and Nutrition (H EC), 143
 Services, 17, 54
 Foreign—
 Affairs, 109
 Language Option for Speech and
 Theatre, 116
 Language Requirements (see also
 College and School sections), 22,
 88, 97
 Languages and Literatures, 97, 220
 Study, 70
 Foreign Students
 (see *International Student listing*)
 Forest Service, 21
 Forestry, 83
 Fraternities, 66
 French, 97, 220
 Freshman on Probation, 24
 FTE, 39
 Full-Time Students, 39

G

General—
 Agriculture, 79
 Education Development Test,
 (GED), 25
 Music, 104
 Psychology, 109
 Requirements for Admission, 22
 General Information, 3
 Geography, 98, 224
 Geological Engineering, 156, 158
 Geological Sciences, 155
 Geology, 155, 158, 226
 Geometry, 242
 Geophysics, 157
 German, 97, 221
 GMAT (Graduate Management
 Admission Test), 124, 165
 Global Studies, 72
 Governmental Research, Bureau of, 16
 Gold Medal, 41
 GPA Requirements for Freshman
 Admission, 24
 Grade-Point—
 Average, 23
 Deficiency, 41
 Values, 9, 39
 Grades—
 and Examinations, 39
 and Marks, 39
 Changes and Appeals of, 40
 Graduate—
 Admission, 42, 164
 Awards, 63
 Career Planning, 64
 Course Requirements, 171
 Courses, 168

Degrees (see *Advanced Degrees*)
 Examinations, 165
 Fees, 167
 Placement, 64
 Programs (see *Graduate School and
 College and School sections*)
 Programs in Hydrology and
 Hydrogeology, 71
 Registration, 167
 Regulations, 170
 School, 164
 Special, 39, 166
 Courses, 168
 Standing, 39, 165
 Students, 39
 Thesis (see *Thesis Requirements*)
 Graduate School, 164
 Graduate Students Association, 167
 Graduation—
 Applications, 43
 Fees, 49
 Requirements, 43
 Grants, 58
 Grants-in-Aid, 63
 Greek, 97, 220
 GRE (Graduate Record Examination),
 165
 Gynecology, 150

H

Handicapped, Special Programs for, 56
 Health—
 Careers for American Indians, 70,
 151
 Fee, 50
 Insurance, 51
 Service, 50
 Hebrew, 97, 220
 Higher Education (EDUC), 132, 208
 High School Preparatory Requirements,
 24
 Historic Preservation Program, 70, 229
 History, 99, 229
 History and Social Theory, 70
 History of the University, 10
 Home Economics—
 Courses, 232
 Education and Community Service,
 144
 in Business, 144
 Home Economics, Sarah Hamilton
 Fleischmann School of, 141
 Honor Roll, 41
 Honors Study, 71
 Board, 71
 Courses, 235
 Horticulture, 262
 Housing—
 General Policy, 53
 Information, 53
 Married Students, 54
 Off-Campus, 54
 Residence Halls, 53, 54
 Hydrogeology, 71, 229
 Hydrology, 71, 159

I

Inactive Courses, 177
 Incompletes, 40
 Independent Study, 14
 Indian Affairs, Bureau of, 55
 Indian (Native American) Studies, 70
 Indians, American, Health Careers for,
 70, 151
 Industrial Mechanics, 81
 Information Services, 53
 Information Systems, 119, 120, 236
 Insurance, 55
 Institute of European Studies (ES), 70
 Integrated Pest Management, 77
 79, 86, 236
 Intercampus Transfers, 32
 Intercollegiate Athletics, 12
 Admission to Athletic Events, 50
 Interdisciplinary and Special Programs,
 12, 68
 Interfraternity Council, 66
 Internal Medicine, 150, 237
 International—
 Admissions, 22
 Student Counseling, 52
 Students, 52
 Study, 70
 Italian, 97, 223

J

Japanese, 97, 220
 Job Corps Center, 19
 Jot Travis Student Union, 54
 Journalism, 100, 237
 Agricultural, 79
 Teaching, 100
 Judicial College, the National, 21
 Juvenile Justice, National College of, 21

K

KUNR-FM Radio, 13

L

LSAT (Law School Admission Test), 52
 Laboratory Medicine, 150
 Language and Linguistics (ENGL), 96
 Late Registration, 36
 Fees, 49
 Latin, 97, 220
 Law Enforcement
 (see *Criminal Justice*)
 Law School (see *Prelegal*)
 Learning and Resource Center (EDUC),
 133
 Libraries, 14
 Library Science, 101, 239
 Linguistics, 96
 Literature (see *English Language and
 Literature; Foreign Languages and
 Literatures*)
 Courses, 220

Little Valley Outdoor Laboratory, 13
Loans, 57

M

MCAT, 52
Mackay School of Mines, 16, 152
Mail, 18
Majors Offered, 11, 45
Management, 123
Managerial Sciences, 122, 240
Map, 312
Marketing, 123
Married Student Housing, 54
Master's Degrees
(see Advanced Degrees)
Second Degree, 171
Mathematics, 101
Computer Science, 101, 242
Courses, 242
Education, 242
Technical, 246
Marriculation Date, 33
Mechanical Design, 140
Mechanical Engineering, 138, 246
Technology, 248
Medical—
Fees, 49
Library, 151
Technology, 150, 248
Medicine, School of, 146
Medieval and Renaissance Studies, 72
Metallurgical Engineering, 153, 249
Metallurgy Research Center (Reno), 21
Microbiology, 93, 150, 250
Midsemester Reports, 40
Military—
Career Opportunities, 103
Services, Commissioning Programs
for, 12
Training Evaluation, 31
Military Science, 101, 250
Medals, 62
Mines and Geology, Nevada Bureau of,
16
Mines, Mackay School of, 16, 152
Mining Engineering, 159, 251
Minors, 45
Museology Minor, 73
Music, 104, 252
Applied, 105
General, 105
Performance Organizations, 104

N

National—
College of Juvenile Justice, 21
Judicial College, 21
Student Exchange Program, 73
Native American Studies, 70
Nevada—
Bureau of Mines and Geology, 16
Mining Analytical Laboratory, 17
News Bureau, 19
News Broadcasting (JOUR), 100

Newspapers and Other Print Media
(JOUR), 100
Noncollegiate Learning Experiences, 31
Nondegree Students, 39
Nonresident—
Status, 33
Tuition, 33, 49
Nontraditional Learning, 26
Norwegian, 97, 220
Numbering System for Courses, 176
Nursing, Orvis School of, 161
Courses, 255

O

Obstetrics, 150, 256
Off-Campus—
Housing, 54
Office Administration, 256
Organization of the University, 3
Orvis School of Nursing, 161
Out-of-State Tuition, 33, 49
Grants-in-Aid, 63
Outdoor Recreation Management, 83

P

Painting (see Art)
Panhellenic Council, 66
Parking, 17
Part-Time Students, 39
Pathology, 257
Payment of Accounts, 36, 49
Pediatrics, 150, 257
Penalty for Late Registration, 49
Personal Checks, 50
Pest Management, 77, 79
Pharmacology, 151, 257
Philosophy, 105, 257
Physical Education
(see Recreation and Physical Education)
with Emphasis in Dance, 111
Physical-Environmental Studies, 98
Physics, 106, 259
Physiology, 151, 261
Placement—
Services, 64
Tests, 22, 25, 26
Plan A/B Thesis,
(see also College and School sections),
165, 170
Planning Classes, 36
Plant Science, 82
Plant, Soil and Water Science, 77, 82, 86,
262
Police, 18
Political—
Science, 107, 263
Theory, 264
Portuguese, 96, 220
Postal Services, 18
Precedence of Certain Courses, 37
Prenatal, 90, 112
Prekindergarten Education, 142
Prelegal, 90
Premedical, 90, 112
Preparatory Mathematics, 246

Prepharmacy, 113
Prephysical Therapy, 112
Preprofessional (SHR), 90, 117
Prerequisites, 177
(see also individual course listings)
Printing Services, 17
Printmaking (see Art)
Print Media (JOUR), 100
Prizes and Awards, 58, 62
Probation, 24, 42
Professional—
Counseling and Testing, 52
Degrees, 175
Education, 129
Paper, 171
Psychiatry and Behavioral Sciences, 151,
266
Psychology, 109, 266
Public—
Political Science, 108
Policy Courses, 264
Relations (JOUR), 100
Service and Research Divisions, 13
Works (ENGR), 140

Q

Qualifications for—
Admission, 22
Financial Aid, 56

R

Radio Station, KUNR-FM, 13
Ranch Management, 78
Range Management, 84
Reading Center, 133
Readmission, 42
Real Estate, 122
Records—
Registration and, 36
Retention and Disposition, 47
Recreation and Physical Education, 110,
269
Recreation Management, Outdoor, 83
Refund of Fees, 50
Regional Programs, 14
Registration and Records, 36
Registration Fees, 49
Regular Students, 39
Regulations for Student Records, 46
Regulations for Determining Residency
for Tuition, 33
Religious Studies, 74, 272
Reno, 10
Reno Metallurgy Research Center, 21
Renewable Natural Resources, 78, 82, 86,
273
Repeated Courses, 40
Required Courses, 37
Requirements for—
Admission, 22
Graduate Admission, 164
Graduation, 43
Readmission, 42

Research—
 and Development Center, 16
 and Educational Planning Center,
 133
 and Public Service Units, 13
 Divisions, 15
 Facilities, 13
 Services, 13
 Residence Halls, 53, 54
 Resident—
 Credit Requirements, 44
 Fees, 49
 Status, 33, 34
 Returning Students, 36
 Rifle Team, 103
 Room Charges, 51
 ROTC
 (see Military Science)
 Rural Health, 151
 Russian, 97, 223

S

SAT (Standard Achievement Test), 22,
 23, 24, 37
 Satisfactory/Unsatisfactory Grading, 41,
 92
 Scheduling Classes, 36
 Scholarships and Prizes, 58
 Sculpture (see Art)
 Secondary—
 Education, 128, 132
 Teaching, 128, 130
 Seismological Laboratory, 17
 Semester—
 Calendar, 6
 Honor Roll, 41
 Shelter and Environment (HEC), 144
 Sierra—
 Guard, 103
 Search and Rescue, 103
 Sierra Nevada Job Corps Center, 19
 Snack Bar, 54
 Social—
 Psychology, 109, 113
 Theory, 70
 Social and Health Resources, 111, 275
 Social Sciences Center, 20
 Social Work Program, 111
 Sociology, 113, 276
 Soil—
 Management, 82
 Science, 82, 86, 262
 Sororities, 66
 Spanish, 97, 223
 Spanish-speaking American Studies, 70
 Special—
 Education, 128, 129, 132
 Examination, 31
 Programs, 56
 Services, 13

Speech—
 and Theatre, 115, 278
 Communication, 116, 278
 Pathology and Audiology, 147, 279
 State Fire Service Training Program, 20
 Student—
 Activities, 52
 Associations, 49
 Categories, 39
 Classifications, 39
 Conduct Code, 66
 Counseling Services, 52
 Employment, 58
 Food Services, 54
 Fraternities and Sororities, 66
 Government and Organizations, 65
 Grants, 58
 Health Service, 55
 Housing, 53
 Judicial Council, 65
 Loan Funds, 57
 Mail, 18
 Officers, 65
 Parking, 17
 Publications, 65
 Records, 36, 46
 Scholarships and Prizes, 58
 Senate, 65
 Testing Services, 47, 52
 Union, Jot Travis, 54
 Student Services and Activities, 52
 Study Abroad, 70, 72
 Summer Session, 14
 Superior Student Program, 23
 Supervised Teaching (EDUC), 130
 Surgery, 151, 281
 Suspension, 42
 Symbols Used in Course Titles, 176

T

Teacher Certification, 74
 Terminology, 9
 Testing Services, 47, 52
 Tests, Placement, 22
 Theatre, 115, 278
 Thesis Requirements, 45, 170, 172
 173
 Topology, 243, 245
 Transcript of Record, 45
 Fee, 51
 Transfer—
 of Credits
 (see also College and School
 sections), 22, 25
 to Dental and Medical Schools
 within System, 32
 Tuition—
 Application of Regulations, 35
 Exceptional Cases, 35
 Charges, 33
 Purposes, 33
 Status, 33

U

Undergraduate—
 Academic Requirements, 23
 Degrees and Requirements
 (see also College and School
 sections), 44
 Fees, 49
 Students, 39
 Thesis, 45
 Uniforms, 104
 United States—
 Agricultural Research Service, 21
 Bureau of Mines, 21
 Economic Research Service, 21
 Forest Service, 21
 University—
 Accreditation, 11
 Faculty, 282
 General Information, 3, 10
 History, 10
 News Bureau, 19
 of Nevada System Services, 13
 of Nevada Reno Special Services, 13
 Organization of, 3
 Police, 18
 System, 3
 Terminology, 9
 University Calendar, 6
 University of Nevada Press, 13
 University Relations, 18
 University Research and Services, 13
 Urban Planning (GEOG), 225
 USAFI, 26

V

Veterans Service, Benefits, 63
 Veterinary Medicine, School of, 76, 87
 Courses, 281

W

Waivers, 50
 Water Resources Center, 20
 Water Science, 82, 86
 Watershed Management, 84
 Western Interstate Commission for
 Higher Education (WICHE), 74
 Wildlife Management, 84
 Withdrawal from the University, 38
 Women's Studies, 75, 281
 Work/Study Program, 58

Z

Zoology, 93, 281



**University of Nevada Reno
Admissions and Records
Clark Administration Building
Reno, Nevada 89557**