

**EMPHASIS: Optics**

PHYS 370, Optics I.....	3
PHYS 470, Optics II.....	3
PHYS 471, Modern Experimental Optics.....	2
PHYS 478, Optical Sources, Detectors, and Radiometry.....	4
PHYS 479, Lasers and Applications.....	4

**EMPHASIS: Materials Science**

CH E 361, Engineering Materials.....	3
CHEM 461, Polymers, their Composites and Mechanical Behavior.....	3
PHYS 475, Advanced Physics Laboratory.....	2
PHYS 488, Condensed Matter Physics.....	3
PHYS 489, Introduction to Modern Materials.....	3

**EMPHASIS: Computational Physics**

C S 157, FORTRAN Programming, or C S 167, C Programming.....	3
C S 171, Algorithmic Computations.....	4
MATH 279, Introduction to Finite Mathematics.....	3
PHYS 476, Computational Physics.....	4

**EMPHASIS: Geophysics**

GEOL 111G, Survey of Geology.....	4
GPHY 330, Introduction to Geophysics.....	3
GPHY 451, Principles of Geophysics.....	3
GPHY 452, Exploration Geophysics.....	3

Students desiring to prepare to be high school physics teachers will find the specific requirements listed under the College of Education chapter. Geophysics courses are offered by the Department of Physics and are listed under "Geophysics" in the course description chapter of this catalog.

**DEGREE: Bachelor of Science in Engineering Physics****MAJOR: Physics**

The Bachelor of Science in Engineering Physics is a joint degree program of the Department of Physics and the College of Engineering. This degree is ideal preparation for technical careers in high-tech industries, research laboratories, and the public sector. It also provides an excellent preparation for graduate studies in physics or engineering. A full description of the program requirements can be found in the College of Engineering section of this catalog.

**MINOR: Physics**

A student cannot earn a B.A. or a B.S. in Physics and a minor in Physics.

PHYS 213, Mechanics, or PHYS 215, Engineering Physics I.....	3
PHYS 214, Electricity and Magnetism, or PHYS 216, Engineering Physics II.....	3
PHYS 217, Heat, Light and Sound.....	3
PHYS 315, Modern Physics.....	3
Six additional Physics credits, not including PHYS 350, Special Topics; PHYS 400, Undergraduate Research, PHYS 450, Selected Topics; or any Physics General Education courses.....	6

**Designated Minors**

In addition to the regular minor, the department offers several special designated minors, listed under "Academic Majors and Minors" in the "General Information" chapter. Any of these, together with an appropriate degree in another field, should give the student a background that is adequate to pursue graduate study in physics, along with the skills that physics bachelor's degree recipients have rated as among the most important in obtaining their current positions. Further information may be obtained from the department or its web page at [www.physics.nmsu.edu](http://www.physics.nmsu.edu).

A student cannot earn a B.A. or B.S. in Physics and any designated minor.

To earn a designated minor, students must pass:

PHYS 213, Mechanics, or PHYS 215, Engineering Physics I.....	3
PHYS 214, Electricity and Magnetism, or PHYS 216, Engineering Physics II.....	3
PHYS 217, Heat, Light and Sound.....	3
PHYS 315, Modern Physics.....	3
Six credits as listed below for each designated minor.....	6

**Classical Mechanics:** PHYS 451, Intermediate Mechanics I, and PHYS 480, Thermodynamics

**Computational Physics:** PHYS 476, Computational Physics, and PHYS 495, Mathematical Methods of Physics I

**Electromagnetism:** PHYS 461, Intermediate Electricity and Magnetism I, and PHYS 462, Intermediate Electricity and Magnetism II

**Materials:** PHYS 488, Condensed Matter Physics; and PHYS 489, Introduction to Modern Materials

**Optics:** PHYS 370, Optics I, and PHYS 470, Optics II

**Quantum Mechanics:** PHYS 454, Intermediate Modern Physics I, and PHYS 455, Intermediate Modern Physics II

## PSYCHOLOGY

**Professor Douglas J. Gillan, department head**

**Professors** Gregory, Thompson, Trafimow; **Associate Professors** Foltz, Lee, Madson, McDonald; **Assistant Professors**, Guynn, Ketelaar, Kroger, Simon; **Adjunct Professors** Cooke, **Emeriti** Johnston, Paap, Stephan  
(505) 646-2502

**DEGREE: Bachelor of Arts****MAJOR: Psychology****MINOR: Psychology**

Students may take a major in psychology either as an area of emphasis in a liberal arts program or in preparation for further graduate education leading to professional careers in psychology. A major in psychology may be appropriate for the liberal arts student who wishes to pursue a career involving extensive social interaction and requiring solutions to people-related problems. Such careers include law, business, parenting, government, education, and management. Professional careers in psychology generally require some postbaccalaureate education. These careers include provision of clinical and counseling services, conducting research, applying research findings in industrial or government settings, and doing teaching and research in colleges and universities. Students planning to apply to graduate school are encouraged to take PSY 311, Advanced Research Seminar, no later than the Fall semester of their senior year.

The requirements listed below should provide an adequate exposure to psychology for the liberal arts student and a basic foundation for students seeking a career in psychology. While all majors should consult with the department's advising center and with a faculty advisor, students wishing to prepare for a professional career in psychology are especially encouraged to work closely with an advisor, as early as possible. The advising center maintains several model programs that help prepare majors to fulfill various career goals.

**DEGREE: Bachelor of Arts****MAJOR: Psychology****General Requirements**

Students must receive a C or better in courses used to satisfy the departmental and nondepartmental requirements of the psychology major.

**Departmental Requirements**

PSY 201G, Introduction to Psychology, or	
HON 203G, Understanding the Science of Human Behavior.....	3
Three credits from the following core: PSY 212, Abnormal Psychology; PSY 350, Developmental Psychology: Conception through Childhood; PSY 440, History and Systems.....	3
Eight credits in research methods: PSY 310, Experimental Methods I; and PSY 311, Experimental Methods II, or PSY 453, Developmental Research Methods.....	8
The following requirements are to be met after the student has completed PSY 310:	
At least 3 credits in Basic Mechanisms from the following:	
PSY 301, Introduction to Psycholinguistics; PSY 375, Introduction to Biopsychology; PSY 376, Evolutionary Psychology; PSY 380, Perception.....	3-4
At least 3 credits in Acquisition and Use of Knowledge from the following: PSY 320, Learning; PSY 340, Cognitive Psychology; PSY 383, Memory; PSY 442, Thinking.....	3-4
At least 3 credits in Understanding Behavior from the following:	
PSY 315, Emotion and Motivation; PSY 217, Social Psychology; PSY 321, Personality; PSY 358, Individual and Group Differences.....	3
Additional electives to bring total credits in psychology to at least 34, with at least 24 credits being upper division.	

**Nondepartmental Requirements**

Three credits in quantitative methods from the following:

STAT 271, Statistics for Psychological Science is recommended; STAT 251, Statistics for Business and Behavioral Sciences, or E ST 311G, Statistical Applications are acceptable .....3

Three credits from any Philosophy course 300-level or above.....3

At least three credits of introductory biology. A course that includes a laboratory is highly recommended:

BIOL 101G, Human Biology, and BIOL 101L, Human Biology Laboratory, or BIOL 111G, Natural History of Life, and BIOL 111L, Natural History of Life Laboratory..... 3-4

BIOL 211G and 211L are also recommended (Prerequisite: Chem 110G or CHEM 111)

**MINOR: Psychology**

A student must pass at least 18 credits in Psychology courses with grades of C or higher, and at least 9 of those credits must be upper division. A student may not earn both a B.A. in Psychology and a minor in Psychology.

## SOCIOLOGY and ANTHROPOLOGY

**Professor Brenda R. Benefit, department head**

*Professors* Benefit, Rushforth, Staski, Trevathan; *Associate Professors* Alexander, Eber, Frehill, Lucero, McCrossin, Stanford, Walker; *Assistant Professors* Horowitz, Newby, Rice, Way; *College Associate Professor* O'Leary; *College Assistant Professors* Hamilton, Hoffman; *Adjunct Professors* Boaz, Loendorf, Long; *Adjunct Associate Professor* Hendricks; *Adjunct Assistant Professors* Lamb, Valverde  
(505) 646-3821

**DEGREE: Bachelor of Arts**

**MAJOR: Sociology**  
**MAJOR: Anthropology**

**MINORS: American Indian Studies**

**Anthropology**  
**Religious Studies**  
**Sociology**  
**Contemporary Social Studies**

**MAJOR: Sociology**

The undergraduate major in sociology is broad in scope. It prepares the student for a great variety of public and private sector employment opportunities including market research, personnel management, human relations, law enforcement, and health services. Successful students often use their major as preprofessional preparation for advanced degrees in law, business, education, counseling, and other social science based careers.

**Departmental Requirements**

SOC 101G, Introductory Sociology.....3  
SOC 251, Sociological Imagination .....3  
SOC 351, Sociological Theory.....3  
SOC 352, Social Research:Methods.....3  
SOC 353, Social Research:Analysis.....3  
SOC 401, Introduction to Sociological Practice .....3

Electives in sociology to bring total credits in major to 33, including 24 upper-division of which 6 credits must be 400 level. Directed readings will not satisfy this requirement, however, a maximum of six credits of Directed Readings (SOC 449 or SOC 449H) is allowed.

Criminal Justice/Sociology double majors may be permitted to substitute CJ 300 for SOC 352 and CJ 301 for SOC 353 upon approval of appropriate substitution/waiver forms. Government/Sociology double majors may be permitted to substitute GOVT 300 for SOC 352 upon approval of appropriate substitution/waiver forms. Other substitution/waivers for courses may be available upon consultation with the sociology undergraduate advisor. In all cases, the total number of sociology credits (courses with SOC prefix) must be a minimum of 33.

**Online Degree Students**

SOC 251 is not required of students enrolled as majors in the online sociology bachelor of arts degree program. However, total sociology credits in the major must equal 33.

**Nondepartmental Requirements**

(A grade of C or better must be earned.)

MATH 120, Intermediate Algebra (or above, except MATH 210).....3

C S 110G, Computer Literacy .....3

**Electives:** Sufficient to bring total credits to 128, including 54 upper-division.

**MAJOR: Anthropology**

The major in anthropology provides a broadly based education in the social and biological sciences. The undergraduate program prepares students for careers in many areas, such as cultural resource management (or contract archaeology), archaeological research, forensic sciences, health services, cross-cultural field work, community development programs, and museum work. Anthropology students can continue for advanced degrees in teaching, museology, other social sciences, and anthropology.

**Departmental Requirements**

ANTH 301, Cultural Anthropology.....3

ANTH 315, Introduction to Archaeology.....3

ANTH 320, Anthropological Linguistics .....3

ANTH 350, Anthropological Theory .....3

ANTH 355, Physical Anthropology .....3

ANTH 406, Introduction to Anthropological Practice .....3

Additional electives in anthropology to bring total credits in major to 33, including 27 upper-division.

**Nondepartmental Requirements**

(A grade of C or better must be earned.)

ENGL 218G, Technical and Scientific Communication, or ENGL 318G, Advanced Technical and Professional Communication.....3

MATH 120 or above .....3

**Electives:** Sufficient to bring total credits to 128, including 54 upper-division.

**MINOR: American Indian Studies**

Students must pass a total of 18 credits of which at least 9 of which must be upper division. A grade of "C" or better must be obtained for each course. Students may count S grades only in courses in which all grades are S/U, and no more than 6 hours of "S" credit can be accepted. Students can count no more than 3 credits in independent studies, readings, or special topics courses. Such courses, marked below with an asterisk (\*), must focus upon American Indians and must be approved in advance by the director of the minor program, specifying the semester during which a student takes such a course. Please contact the Department of Sociology and Anthropology regarding the minor advisor. Students may count no more than 9 credits in Anthropology (except that ANTH/SOC 330G, Introduction to Religious Studies, may be included above this limit) and no more than 6 credits in History.

ANTH 115, Native Peoples of North America.....3

ART 310, Native American Art, and/or ENGL 341G, American Indian Literature .....3-6

Twelve to 15 additional credits from among ANTH 110, New World Prehistory; ANTH 116, Native Peoples of the American Southwest; ANTH 305G, Contemporary Native Americans; ANTH 405, Native Cultures of North America; \*ANTH 449H, Directed Reading Honors; ANTH 467, Archaeology of the American Southwest; \*ANTH 497, Special Topics; \*ART 300, Special Topics in Art History; \*C J 432, Issues in Criminal Justice; EDUC 315, Multicultural Education; \*GOVT 406, Independent Studies; GOVT 454, Native American Politics; HIST 365, American Indian History I; HIST 366, American Indian History II; \*HIST 449, Readings; \*HIST 489, Projects in History; HL S 460, American Indian Health; S WK 464, Social Work with American Indian Communities; and \*W S 250, Special Topics..... 12-15

**MINOR: Anthropology**

Students who earn a B.A. in Anthropology may not also earn a minor in Anthropology. Students earning the minor must pass 18 credits with grades of C or higher. Nine of the credits must be upper division. Students may count S grades only in courses in which all grades are S/U.

Three of: ANTH 301, Cultural Anthropology; ANTH 315, Introduction to Archaeology; ANTH 320, Anthropological Linguistics; ANTH 350,