Department of Religious Studies

Chair (ECA Third Floor) 602/965-7145

PROFESSORS

CADY, FELDHAUS, WENTZ

ASSOCIATE PROFESSORS FOARD, GEREBOFF,

FOARD, GEREBOFF, MOORE, MORRISON, SWANSON, WOODWARD

ASSISTANT PROFESSORS
CLAY, FESSENDEN, SCHOBER

RELIGIOUS STUDIES—B.A.

The B.A. in Religious Studies consists of 45 semester hours, 30 of which must be in religious studies (including 21 in upper-division courses) and 15 of which must be in related fields. In order for the student to become acquainted with the character and role of religions across a wide spectrum of social and historical contexts, the 30 semester hours in religious studies must include the following courses:

- 1. REL 305 Ritual, Symbol, and Myth (3):
- at least one course from each of the following distribution areas: Religion in the Americas, Religion and Asian Cultures, and Religion and Western Cultures;
- two research seminars, including REL 405 Problems in Religious Studies (3), which may be repeated for credit.

In place of a second seminar, a student may take REL 499 in order to write an undergraduate thesis.

The Religious Studies major is an appropriate choice for students wishing to explore such areas as African/African-American Studies; Islamic Studies; Myth, Ritual, and the Arts; Native American Studies; and Religion and Politics. All majors must plan their programs in consultation with a departmental advisor. A minimum GPA of 2.50 is required in the 30 semester hours of religious studies courses.

Asian Studies Emphasis. Students majoring in Religious Studies may elect to pursue an Asian Studies emphasis or East Asian Studies emphasis combining courses from the major with selected outside courses of wholly Asian content. For more information, see "Asian Studies," pages 110–111.

Jewish Studies Emphasis. Students majoring in Religious Studies may elect to pursue a Jewish Studies emphasis combining courses from the major with selected outside courses in the area of Jewish Studies. See "Jewish Studies," page 111.

Latin American Studies Emphasis.

Students majoring in Religious Studies may elect to pursue a Latin American Studies emphasis combining courses from the major with selected outside courses of wholly Latin American content. See "Latin American Studies," page 111.

Russian and East European Studies. Students majoring in Religious Studies may elect to earn a certificate in Russian and East European Studies by successfully completing one of the options mentioned in the section on "Russian and East European Studies," pages 111–112.

Southeast Asian Studies Emphasis.

Students majoring in Religious Studies may elect to earn a certificate in Southeast Asian Studies by successfully completing the requirements described in the section on "Southeast Asian Studies," page 112.

Women's Studies. Students majoring in Religious Studies may elect to earn a certificate in Women's Studies by successfully completing the requirements described in the section on "Women's Studies," page 112.

MINOR IN RELIGIOUS STUDIES

The minor in Religious Studies consists of 18 semester hours, at least 12 of which must be in the upper division. Both REL 305 and 405 are required. For minor verification, students must consult a department advisor.

GRADUATE PROGRAM

The Department of Religious Studies offers a graduate program leading to the degree of Master of Arts for those who wish to seek the Ph.D. in the study of

religions, for those who wish to teach at the community college level, and for those in nonacademic careers who desire general competence in the academic study of religions. Consult the *Graduate Catalog* for requirements.

RELIGIOUS STUDIES

REL 100 Religions of the World. (3) F, S An introduction to the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others. Not open to students who have completed REL 200. *General Studies: HU, G.*

200 The Study of Religious Traditions. (3)

A writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world. Not open to students who have completed REL 100. *General Studies: L1/HU, G.*

201 Religion and the Modern World. (3) A An introduction to the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world. *General Studies:* 1.1/H/I

210 Introduction to Judaism. (3) A The beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. The course presupposes no previous knowledge about Judaism. *General Studies:* L1/HU. H.

225 African-American Religion. (3) A Introduction to the history and development of the African-American religious tradition. Lecture, discussion. *General Studies: HU, C.*

240 Introduction to Southeast Asia. (3) F An interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia. Cross-listed as ASB 240/GCU 240/HIS 240/POS 240. *General Studies: G.*

270 Introduction to Christianity. (3) A The beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. The course presupposes no previous knowledge about Christianity. *General Studies: HU.*

305 Ritual, Symbol, and Myth. (3) A Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world. *General Studies*: 12/HU.

310 Western Religious Traditions. (3) F Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories. Lecture, discussion. *General Studies: HU, H.*

315 Hebrew Bible (Old Testament). (3) A The nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation. *General Studies: L2/HU, H.*

316 Types of Early Judaism. (3) A Developments in Judaism during the intertestamental period. *General Studies: HU, H.*

317 Introduction to Rabbinic Judaism. (3) A A historical analysis of the thought, literature, and institutions of rabbinic Judaism. *General Studies: HU, H.*

320 American Religious Traditions. (3) F, S Examination of the formation, development, and interaction of major American religious traditions (indigenous, African-American, Asian-American, and Euro-American). General Studies: HU. C/H.

321 Religion in America. (3) F, S

The history of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform General Studies: HU C/H

322 Malcolm and Martin. (3) F, S

This course examines and contrasts the lives. ministries, contributions and legacies of Malcolm X and Martin Luther King, Jr. General Studies: HU, C.

323 Black Religion: A Biographical Approach. (3) F, S

An examination of the experiences, motivations, and contributions of a number of figures associated with African-American religion. General Studies: HU, C.

330 Native American Religious Traditions.

World views and religious thought presented through the art, architecture, literature, music, mythology, ritual, and folklore of representative tribes in North America. General Studies: HU C

331 History of Native American Religious Traditions. (3) N

The role of religion in Native American history, including missionization, and religious adaptation; prophetic, messianic, and religious revitalization movements. General Studies: L2/

332 South American Indian Religions. (3) F,

An introduction to the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts. General . Studies: HU. G.

344 Religion and Values in Japanese Life.

Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture. Lecture, discussion. General Studies: HU, G.

345 Asian Religious Traditions. (3) F Introduction to the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism. Lecture, discussion. General Stud-

ies: HU, G.

350 Hinduism. (3) A

The study of diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture. General Studies: L2/HU, G/

351 Buddhism. (3) A

Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies. General Studies: L2/HU, G.

355 Japanese Cities and Cultures to 1800. (3) S

Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople. Cross-listed as HUM 310.

365 Islamic Civilization, 700-1300. (3) F An introduction to Islamic religion, culture, and societies from 700 to 1300. General Studies: HU, H.

366 Islamic Civilization, 1300 to Present. (3) F

Introduction to Islamic religion, culture, and societies from 1300 to present. Lecture, discussion.

371 New Testament. (3) A

Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament. General Studies: HU.

372 Formation of the Christian Tradition. (3) A

Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages. General Studies: HU, H.

373 Women in Judaism. (3) S

A study of the legal, social, and cultural status of Jewish women in various historical and contemporary societies. Cross-listed as WST

377 Religion in Russia. (3) F, S

Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective. General Studies: HU, H.

379 Religion, Nationalism, and Ethnic Conflict. (3) F, S

Examines the role of religion in national and ethnic conflict in the contemporary world. General Studies: HU, G.

381 Religion and Moral Issues. (3) A

The manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence. General Studies: L2/HU.

385 Contemporary Western Religious Thought. (3) A

Introduction to contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology. General Studies: L2/ HU.

390 Women and Religion. (3) A

The role of women in several organized religions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific religions. General Studies: HU, G.

405 Problems in Religious Studies. (3) F, S Selected topics in religious studies, involving students in research interests of instructor. May be repeated for credit when topics vary. Seminar. Prerequisite: at least 9 semester hours of REL courses or instructor approval.

410 Judaism in Modern Times. (3) N Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust. General Studies: HU, H.

415 The Jewish Mystical Tradition. (3) A Examination of some of the esoteric lore of Judaism. Movements and literature such as Hasidism and Kabalah are studied. General Studies: HU.

420 Religion in American Life and Thought. (3) A

The influence of religion on American society, culture, and ideas; the distinctive character of religion in America. Prerequisite: REL 320 or 321 or equivalent. General Studies: L2/HU.

426 American Preachers and Preaching: The Sermon in America. (3) N

The life and work of notable American preachers. The emergence of the preacher as representative of American religion. Prerequisite: REL 320 or 321 or equivalent. General Studies: L2/HU.

427 American Religious Thought. (3) N The thought of representative American religious thinkers, i.e., Jonathon Edwards, Will-

iam Ellery Channing, Horace Bushnell, and Reinhold Niebuhr. Prerequisite: REL 320 or 321 or equivalent. General Studies: HU, H.

444 Religion in Japan. (3) F

Religion in Japanese history, especially the development of Japanese Buddhism, and religion in the modern transformation of Japan. Prerequisite: instructor approval. General studies: HU, G/H.

454 Hindu Religious Thought. (3) A

Readings in classical systems, such as Samkhya and Vedanta, and in the works of modern Hindus, such as Aurobindo and Gandhi. REL 345 or 350 recommended.

460 Studies in Islamic Religion. (3) A Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. Prerequisites: REL 365 and Religious Studies major or instructor approval. General Studies: HU, G.

470 Religion in the Middle Ages. (3) A Religious aspects of medieval life and thought; variety of forms of dissent, heresv. and reform movements from the 4th to 13th centuries. General Studies: HU, H.

471 Reformation and Modern Christianity. (3) A

Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches. General Studies: HU, H.

486 Modern Critics of Religion. (3) A Major theories and critiques of religion among modern social, philosophical, and religious thinkers. General Studies: HU

494 Special Topics in Religious Studies. (3)

Open to all students, freshmen by instructor approval only. Topics may be selected from various areas.

498 Pro-Seminar in Religious Studies. (3) A For students with a major or minor emphasis in Religious Studies.

501 Research Methods in Religious Studies. (3) F

An exploration of the major themes and methods in the study of religion, with primary focus on classical texts. Lecture, discussion.

502 Research Methods in Religious Studies. (3) F, S

An exploration of the major themes and methods in the study of religion, with primary focus on contemporary texts. Lecture, discussion.

591 Seminar. (3) N

Topics on methodological issues in the study of religion. Prerequisite: Religious Studies graduate student or instructor approval.

598 Special Topics. (3) F, S

Topics are selected from the following areas:

- (a) Christianity, Greco-Roman Religion
- (b) Comparative Western, Ancient Near East, Judaism
- (c) Islam
- (d) Native American Religion
- (e) Problems in Religious Studies
- (f) Religion in America
- (g) Religion in East Asia
- (g) Religion in South Asia
- (i) Study of Religion, Comparative Religion
- (j) Western Religious Thought, Ethics

May be repeated for credit.

Department of Sociology

Robert Snow *Chair* (SS 321) 602/965–3546

PROFESSORS

GORDON, LANER, NAGASAWA, SNOW, THOMAS, WEITZ, WHITAM

ASSOCIATE PROFESSORS

BENIN, COBAS, HARDERT, KEITH, KULIS, MILLER-LOESSI, SULLIVAN

ASSISTANT PROFESSORS

BLAIR, ESPINOSA, JACOBSON, QIAN, ROLISON

LECTURER EVERTS

INSTRUCTOR WILLIAMS

PROFESSORS EMERITI

AXELROD, FARBER, HOULT, LINDSTROM, PFUHL, SEBALD

SOCIOLOGY-B.A.

The B.A. in Sociology requires 45 semester hours, of which 30 must be in sociology and 15 in closely related fields approved by the student's advisor. The 30 hours must include the following:

SOC	101	Introductory Sociology SB 3 or SOC 301 Principles of
		Sociology SB (3)
SOC	391	Sociological Research SB 3
SOC	395	Social Statistics I N2 3

SOC	470	Racial and Ethnic	
		Minorities SB	. :
		or SOC 474 Afro-American	
		in Modern Society	
		L2/SB, $C(3)$	
SOC	483	History of Social	
		Thought L2/SB	. :
		or SOC 485 Sociology of	
		Knowledge L2/SB (3)	
		or SOC 486 Contemporary	

Also required is one course from at least three of the following six areas:

Theory SB(3)

- 1. family;
- 2. intergroup relations and social psychology;
- 3. political/comparative-historical;
- 4. social problems and processes;
- stratification/occupations/ organizations;
- 6. urban sociology/demography

At least 18 semester hours must be in upper-division courses, and at least 12 upper-division semester hour in the major must be taken in residence. A grade of "C" or higher is required in all upper-division courses in the major. A flyer detailing the courses in each of the six areas is readily available in the department office or from a sociology advisor. See "Degree Requirements" on page 107.

A more narrowly focused set of courses may by chosen for the fifteen non-core hours, in any of several areas (family, work and occupations, urban studies, and other sets as are available). A flyer is available in the Department of Sociology office describing the currently available foci.

MINOR IN SOCIOLOGY

The minor in Sociology consists of 18 hours in sociology, including the following:

SOC	101	Introductory Sociology SB 3
		or SOC 301 Principles of
		Sociology SB (3)
SOC	391	Sociological Research SB 3
SOC	395	Social Statistics I N2 3
SOC	483	History of Social
		Thought <i>L2/SB</i> 3
		or SOC 485 Sociology of
		Knowledge L2/SB (3)
		or SOC 486 Contemporary
		Theory SB (3)
		•

Four remaining courses must be chosen by the student in consultation with a sociology advisor. Twelve hours must be in upper-division courses, and at least six semester hours in upper-division courses in the minor are required for residency.

SECONDARY EDUCATION— B.A.E.

Social Studies. The major teaching field of social studies education consists of 63 semester hours, of which 30 hours may be in criminal justice, economics, geography, history, political science, psychology, and sociology and are exactly those courses required for the B.A. or B.S. degree in Sociology. Of the remaining hours, two groups of 12 hours each and one of six hours are generally taken in related social sciences plus SED 480 Special Methods of Teaching Social Studies.

The minor teaching field consists of 24 semester hours, at least six of which are in the upper division. SOC 101 or 301 is required. The remaining 21 hours must be approved by the sociology advisor in consultation with the student and must include at least one course from at least four of the following seven areas:

- 1. family;
- intergroup relations and social psychology;
- 3. political/comparative-historical;
- 4. racial/ethnic relations;
- 5. social problems and processes;
- stratification/occupations/organization; and
- 7. urban sociology/demography.

Details are available in the department office. One sociology course in racial/ethnic relations is required.

GRADUATE PROGRAMS

The Department of Sociology offers programs leading to the M.A. and Ph.D. degrees. Consult the *Graduate Catalog* for requirements.

SOCIOLOGY

SOC 101 Introductory Sociology. (3) F, S, SS

Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change. Not open to students who have credit for SOC 301. 2 hours lecture, 1 hour discussion. *General Studies*:

301 Principles of Sociology. (3) F, S, SS Intensive and critical analysis of the concepts of sociology. Not open to students who have credit for SOC 101. *General Studies: SB.*

312 Sociology of Adolescence. (3) F, S Cultural values and the social processes that help explain the development of the phenomenon of modern adolescence, including investigation of adolescent subcultures and crosscultural references. *General Studies: SB.*

315 Courtship and Marriage. (3) F, S, SS An overview of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective. General Studies: SB.

318 Overview of Aging. (3) F

Multidisciplinary introduction to gerontology. Explores the characteristics, experiences problems, and needs of older persons. General Studies: SB.

321 Sociology of Work. (3) S

Social and cultural analysis of industry. Occupational roles, status, and social participation of workers. General Studies: SB

331 Environmental Sociology. (3) F Analysis of human organizational responses to population growth, technological chang, and environmental stressors on both a national and global scale. Prerequisites: SOC 101 (or 301) or instructor approval. General Studies: SB.

332 Urban Sociology. (3) F, S Growth, characteristics, and problems of the modern city. Prerequisite: SOC 101 or 301. General Studies: SB.

333 Population. (3) F, S, SS

Theories of population change; births, deaths, and migration; population policies. Prerequisite: SOC 101 or 301. General Studies: SB, G.

340 Sociology of Deviant Behavior. (3) F, S,

A sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma. Prerequisite: SOC 101 or 301 or instructor approval. General Studies: SB.

341 Modern Social Problems. (3) F, S, SS Race relations, poverty, unemployment, and other current issues. General Studies: SB.

352 Social Change. (3) F, S

Patterns of social change, resistance to change, and change-producing agencies and processes. Prerequisite: SOC 101 or 301. General Studies: SB, G/H.

360 Sociological Psychology. (3) F, S Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior. Prerequisite: SOC 101 or 301. General Studies: SB.

361 Variant Sexuality. (3) F

Sociological research and theories dealing with homosexuality, transvestism, transsexualism, and other variations in sexual orientation and gender identity. Prerequisite: SOC 101 or 301. General Studies: SB.

365 The Sociology of Mass Communication. (3) F, S

A sociological exploration of the major mass media as a communicative process in American society. General Studies: SB.

368 Sociology of Everyday Life. (3) F, S Examination of routine everyday behavior as it relates to problems of social order, control, change, identity, and relationships

391 Sociological Research. (3) F, S, SS Methods of sociological research, including the fundamental assumptions underlying research and some practical experience in research design, data collection techniques, and data analysis. Prerequisite: SOC 101 or 301 or instructor approval. General Studies: SB.

395 Social Statistics I. (3) F, S, SS Application of descriptive and inferential statistical methods to research problems in sociology. Prerequisites: SOC 101 (or 301), 391; N1

course. General Studies: N2. 415 The Family. (3) F, S, SS

The family considered from the institutional viewpoint; its historical development and its adaptation to a changing culture; the family system in many cultures. Prerequisite: SOC 101 or 301 or instructor approval. General Studies: SB.

416 Marriage Problems in Contemporary Society. (3) S

Marital and family problems in today's society from the viewpoint of personal and cultural adjustment. Prerequisites: SOC 101 (or 301) and an additional 3 hours in sociology or instructor approval. General Studies: L2/SB.

417 Family Violence. (3) F, S

Study of current research and theory on several aspects of domestic violence, including child maltreatment, spousal aggression, and courtship violence. Prerequisite: instructor approval. General Studies: SB.

418 Aging and the Life Course. (3) F, S Social aspects of aging. Theoretical and methodological perspectives and problems of aging such as life satisfaction, retirement, and adjustment to role loss. Prerequisite: SOC 101 or 301 or instructor approval. General Studies:

420 Sociology of Religion. (3) S Interrelationship of culture, society, and religion; religion and social stratification; reli-

gious, economic, and political institutions; social change and religion. Emphasis on American society and institutions. Prerequisites: ASB 102 or SOC 101 or 301 and an additional 3 hours in sociology or instructor approval. General Studies: L2/SB.

421 Sociology of Education. (3) S

Contemporary sociological perspectives are used to examine effects of schools and schooling on individuals and society. Prerequisite: SOC 101 or 301 or instructor approval

422 Sociology of Complex Organizations. (3) F

Sociological studies of government agencies, industrial firms, labor unions, military establishments, and other large-scale organizations. Prerequisite: 6 hours in sociology, including SOC 101 or 301 or instructor approval. General Studies: L2/SB.

423 Social Class and Stratification. (3) S Social classes and the function of these groupings in a society. Prerequisite: SOC 101 (or 301) and an additional 3 hours in sociology or instructor approval. General Studies: L2/

424 Politics of Women's Health. (3) S '97 Women as health care workers and issues of health, illness, and health care for women Prerequisite: SOC 101 or 301 or instructor approval.

427 Sociology of Health and Illness. (3) F Social aspects of physical and mental illness and sociological analysis of the health care system and its practitioners. Prerequisite: SOC 101 or 301 or instructor approval. General Studies: L2/SB.

428 AIDS and Society. (3) F

This course provides a sociohistorical perspective on stigma and illness in general and on AIDS in specific. Prerequisite: SOC 101 or 301 or instructor approval. General Studies: L2.

429 Sociology of Law. (3) S

Examination of law as an institution; its origins, operations, and consequences. Emphasis on contemporary legal issues and problems. Prerequisite: SOC 101 or 301. General Studies: SB.

433 Demographic Methods. (3) S

Science of population analysis; problems in measurements of size, composition, and changes in population. Prerequisite: SOC 101 or 301. General Studies: SB.

446 Sociology of Crime. (3) F

The process of criminalization, exploring the behavior of the definers of crime, and the behavior of those defined as criminals. Prerequisites: SOC 101 (or 301) and 340 or instructor approval. General Studies: SB.

451 Comparative Sociology. (3) F Cross-cultural study of basic social institutions; the methodology of cross-cultural research. Prerequisite: ASB 102 or SOC 101 or 301 or instructor approval. General Studies: SB, G

455 Collective Behavior. (3) S

Social causes and consequences of such noninstitutionalized forms of behavior as crowds, cults, publics, social movements, and revolutions. Prerequisite: SOC 101 (or 301) and an additional 3 hours in sociology or instructor approval. General Studies: SB.

456 Political Sociology. (3) S

Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure. Prerequisite: SOC 101 or 301 or instructor approval. General Studies: SB, G.

462 Social Control. (3) F

Significance of social control in society and the various methods used by individuals and groups to control others. Prerequisite: SOC 360 or instructor approval. General Studies:

464 Women's Roles. (3) S

Sociological analysis of the development, nature, and consequences of traditional and alternative roles of women in contemporary society. Prerequisite: SOC 101 or 301 or instructor approval. General Studies: L2/SB, C.

470 Racial and Ethnic Minorities. (3) F, S,

Problems of minorities in the United States and in other racially and ethnically heterogeneous societies. Evaluation of theories of prejudice and of research dealing with discrimination, desegregation, and assimilation. Prerequisite: SOC 101 or 301. General Studies: SB.

474 Afro-American in Modern Society. (3) F. S. SS

Social and cultural heritage of black Americans; achievements and current trends. Lecture, discussion. Prerequisite: SOC 101 or 301 or instructor approval. *General Studies: L2/SB, C.*

483 History of Social Thought. (3) S, SS Social thought in human culture. Background of modern sociology. Prerequisite: SOC 101 or 301. *General Studies: L2/SB.*

485 Sociology of Knowledge. (3) F

Relationship between social conditions and the development of knowledge in modern society. Prerequisite: SOC 101 or 301 or instructor approval. *General Studies: L2/SB*.

486 Contemporary Theory. (3) S

Contemporary issues and crises in social theory with major focus on particular theorists Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology. Prerequisite: SOC 101 or 301 or instructor approval. *General Studies*: SB

501 Practicum in Survey Research. (3) F, S A research practicum in survey field work, analysis, and reporting in the Phoenix Area Study. Prerequisite: SOC 391 or equivalent.

502 Practicum in Survey Research. (3) F, S Continuation of SOC 501. Prerequisite: SOC 501

503 Sociology as a Profession I. (1) F Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data. Prerequisite: graduate Sociology major.

504 Sociology as a Profession II. (1) S Becoming and working as a sociologist, including how to write a vita, choose a thesis topic, or find dissertation data. Prerequisite: graduate Sociology major.

505 Social Statistics II: Multivariate Analysis. (3) F, SS

Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving. Prerequisites: SOC 395 or equivalent; a proficiency examination.

507 Social Statistics IIIA: Categorical Data Analysis. (3) F

Logistic and log-linear models through computer applications. Social mobility, dynamic analysis, and discriminate analysis may also be included. Prerequisite: SOC 505 or instructor approval.

508 Social Statistics IIIB: Structural Equation Analysis. (3) S

Structural equation models are taught using LISREL and other computer packages. Topics include multiple group analyses and ordinal endogenous variable models. Prerequisite: SOC 505 or instructor approval.

509 Social Statistics IIIC: Event History Analysis. (3) F, S

Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables. Prerequisite: SOC 505 or equivalent.

515 Studies of the Family. (3) S

Current developments in the study of marriage and the family. Prerequisite: instructor approval.

585 Development of Sociology. (3) F Major sociological theorists, including Durkheim, Weber, Marx, Parsons, Merton,

Durkheim, Weber, Marx, Parsons, Merton, Dahrendorf, Homans, and Mead. Prerequisite: instructor approval.

586 Contemporary Sociological Theory. (3)

Analysis of major theories, including structuralfunctional, conflict, social exchange, symbolic interaction, and role theory. Prerequisite: instructor approval.

587 Metasociology. (3) ${\sf S}$

Nature of sociological assumptions. Nature and form of sociological theories. Context of discovery-grounded theory. Context of justification. Prerequisite: instructor approval.

588 Methodological Issues in Sociology. (3)

Basic methodological issues in the application of scientific methods to the study of human so-cial life. Emphasis on limited number of major works, with contrasting approaches to issues. Prerequisite: SOC 391 or instructor approval.

Department of Speech and Hearing Science

M. Jeanne Wilcox *Chair* (LL A145) 602/965–2374

PROFESSORS

BACON, CASE, DORMAN, LaPOINTE, MOWRER, WILCOX

ASSOCIATE PROFESSOR SINEX

ASSISTANT PROFESSORS HADLEY, LISS, SHARMA

HADLEY, LISS, SHARMA

FACULTY ASSOCIATES
BROWN, BUDRZYSKY, HUEFFNER,
MINTZ, WEXLER, WILSON

CLINIC DIRECTOR CASE

CLINICAL ASSISTANT PROFESSOR COOK

PROFESSORS EMERITI CHUBRICH, CLUFF, PRATHER

SPEECH AND HEARING SCIENCE—B.S.

The B.S. in Speech and Hearing Science consists of 45 semester hours of speech and hearing science courses emphasizing the developmental and scientific aspects of language, speech, and hearing. The following courses, or their approved equivalents, are required:

SHS	250	Introduction to Phonetics3
SHS	310	Anatomical and Physiological
		Bases of Speech3

SHS	311	Physical and Physiological	
		Bases of Hearing	3
SHS	367	Language Science	3
SHS	375	Speech Science	3
SHS	376	Psychoacoustics	3
SHS	384	Hearing Disorders	3
SHS	401	Introduction to Audiologic	
		Evaluation	4
SHS	402	Modifying Communicative	
		Behavior	3
SHS	450	Observation	1
SHS	465	Language Acquisition	3

Also required are one three-hour course in disorders of speech and one three-hour course in disorders of language. The remaining speech and hearing science courses to complete the major are determined by the students in consultation with an advisor. A list of approved electives is available through the department. Supporting courses from related fields must include the following or their equivalents:

MAT	170	Precalculus N1	3
PGS	101	Introduction to	
		Psychology SB	3
PHY	111	General Physics S1/S2*	3
PHY	113	General Physics	
		Laboratory <i>S1/S2</i> *	1
PSY	230	Introduction to Statistics N2	3
ZOL	201	Human Anatomy and	
		Physiology I S2	4

*Both PHY 111 and 113 must be taken to secure S1 or S2 credit.

GRADUATE PROGRAMS

The Department of Speech and Hearing Science offers programs leading to the Master of Science degree in Communication Disorders and Doctor of Philosophy degree in Speech and Hearing Science. Consult the *Graduate Catalog* for requirements.

SPEECH AND HEARING SCIENCE

SHS 174 American Sign Language I. (4) F,

Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture. Lecture, drill, practice, dialogue, and discussion.

175 American Sign Language II. (4) F, S Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture. Lecture, discussion, drill, practice. Prerequisite: SHS 174

250 Introduction to Phonetics. (3) F An introduction to English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.

274 American Sign Language III. (4) F, S

Develop greater fluency and speed. Emphasis on deaf culture and folklore including storytelling and idioms. Beginning technical and interpreting signs. Lecture, discussion, drill, practice. Prerequisite: SHS 175.

275 American Sign Language IV. (4) F, S

ASL grammar and syntax, conceptually accurate use of vocabulary, deaf culture, text analysis, and translation. Presentations, finger spelling, drills, and stories. Prerequisite: SHS 274

305 Survey of Communication Disorders. (3) F, S

An overview of normative and disordered processes of human communication. Designed for majors as well as nonmajors.

310 Anatomical and Physiological Bases of Speech. (3) F

A noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.

311 Physical and Physiological Bases of Hearing. (3) F

Study of the physical characteristics of sound and of the structure and function of the human auditory system. Prerequisites: MAT 117; PHY 111, 113.

367 Language Science. (3) F

Normative aspects and integration of language structure, comprehension, and production in children and adults.

375 Speech Science. (3) F

Normative aspects of speech, hearing, and language. Prerequisites: SHS 310, 311.

376 Psychoacoustics. (3) S

Introduction to acoustics, cochlear anatomy and physiology, and the perception of sound. Prerequisite: SHS 311 or instructor approval.

384 Hearing Disorders. (3) S

Pathologies of the ear and associated peripheral and central hearing disorders: characteristics, management, and effects on communication. Prerequisites: SHS 311, 376.

401 Introduction to Audiologic Evaluation. (4) F

Measurement of the basic audiologic test battery, including audiograms, masking, speech recognition, and immittance. 3 hours lecture, 3 hours lab. Prerequisites: SHS 311, 376, 384 or equivalents.

402 Modifying Communicative Behavior. (3) S

Principles and techniques of modifying speech and language behavior. Prerequisite: SHS 250 or equivalent.

431 Developmental Speech Disorders. (3) S Introduction to the nature of articulation, fluency, resonance, and voice disorders in childhood. Prerequisites: SHS 250 and 310 or equivalents.

435 Hearing Conservation. (3) S

The causes and prevention of noise-induced hearing loss, and approaches to industrial audiology programs. Prerequisite: SHS 401.

450 Observation. (1) F, S

Opportunity to obtain observation experience at the ASU Speech and Hearing Center or at external sites. Prerequisite: instructor approval.

465 Speech and Language Acquisition. (3) S, SS

Speech and language development in the normal child. Cross-listed as SHS 565. Prerequisite: SHS 367 or equivalent.

470 Developmental Language Disorders.

Introduction to the nature and treatment of language disorders in children. Prerequisite: SHS 465 or instructor approval.

483 Professional Issues in Communication Disorders. (3) F

Topics related to professional certification, accreditation, code of ethics, graduate education and other issues in speech-language pathology and audiology.

485 Acquired Speech and Language Disorders. (3) $\ensuremath{\mathbb{S}}$

Introduction to acquired speech and language disorders across the lifespan. Prerequisites: SHS 250, 310.

494 Special Topics. (3) F, S

Topics may be selected from the following:

- (a) Hearing Disorders
- (b) Research
- (c) Speech and Language Disorders May be repeated for credit. Prerequisite: instructor approval.

496 Aural Rehabilitation. (3) S

Approaches to aural rehabilitation of children and adults. Introduction to educational audiology and assistive listening devices. Prerequisites: SHS 375. 401.

501 Introduction to Audiologic Evaluation. (4) F

Measurement of the basic audiologic test battery, including audiograms, masking, speech recognition, and immittance. 3 hours lecture, 3 hours lab. Prerequisite: SHS 311 and 376 and 384 or equivalents.

502 Advanced Audiologic Evaluation I. (4)

Differential diagnosis of cochlear and retrocochlear disorders, including measurement of auditory evoked responses. 3 hours lecture, 2 hours lab. Prerequisite: SHS 401 or 501 or equivalent.

504 Hearing Aids. (4) S

Operation, application and fitting of amplification devices for the hearing impaired. 3 hours lecture, 2 hours lab. Prerequisite: SHS 401 or 501 or equivalent.

505 Computers and Current Technology in Audiology and Speech-Language Pathology. (3) F

Computer applications and current technology as applied to service administration and delivery in the fields of audiology and speech-lanquage pathology. Lecture, lab.

508 Pediatric Audiology. (3) F

Audiologic assessment, screening, and development considerations for infants and young children. Prerequisite: SHS 401 or 501 or equivalent.

510 Advanced Hearing Science. (3) N

Anatomical, physiological, and psychophysical aspects of audition. Prerequisite: SHS 376 or instructor approval.

511 Auditory Perception by the Hearing Impaired. (3) F '96

A study of how and why sensorineural hearing loss alters the perception of sound. Prerequisite: SHS 376 or instructor approval.

512 Medical Aspects of Speech and Hearing. (3) F

Correlation of history and physical findings with pathologic physiology and test results in speech and hearing abnormalities.

515 Audiologic Instrumentation and Calibration. (3) ${\mathbb S}$

Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment. Lecture, lab. Prerequisite: SHS 401 or 501 or equivalent.

516 Advanced Audiologic Evaluation II. (3)

Continuation of SHS 502, including behavioral and physiological measures of the central auditory nervous system, and vestibular assessment. Lecture, lab. Prerequisite: SHS 502.

535 Hearing Conservation. (3) S

The causes and prevention of noise-induced hearing loss and approaches to industrial audiology programs. Prerequisite: SHS 401 or 501 or equivalent.

545 Speech Perception and Production. (3)

Current knowledge regarding the production and perception of speech. Introduces speech perceptual problems of the hearing impaired, and cochlear implants. Prerequisite: SHS 375 or instructor approval.

552 Otoacoustic Emissions as a Diagnostic Tool. (3) F '96

Study of the types of otoacoustic emissions, their theoretical implications and application to clinical diagnostics. Lecture, discussion, lab. Prerequisite: SHS 376 or instructor approval.

555 Cochlear Implants. (3) S

Current status of cochlear implant research and development. Prerequisites: SHS 504 and 545 or instructor approval.

565 Speech and Language Acquisition. (3)

Speech and language development in the normal child. Cross-listed as SHS 465. Prerequisite: SHS 367 or equivalent.

566 Psychology of Language. (3) S

The psycholinguistic study of the production and comprehension of language across the lifespan.

567 Neural Bases of Communication Disorders (3) F

Neuroscience and its application to matters of normal and disordered communication. Preor corequisite: SHS 310 or equivalent.

571 Augmentative Communication and Language Programming. (3) S

Focus on individuals across the age span who are or who are at risk for being unable to communicate with spoken language. Lecture, lab.

572 Language Assessment and Intervention in Early Childhood. (3) F

Focus on the birth to 5-year-old population who are at risk for or have communication and language disabilities. Prerequisite: SHS 470 or equivalent.

573 Language Assessment and Intervention with School-Age Populations. (3) $\ensuremath{\mathsf{S}}$

Focus on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents. Prerequisite: SHS 565 or equivalent.

574 Fluency Disorders and Treatment. (3) F Phenomena, etiology, assessment, and theories of stuttering are presented, followed by various treatment procedures for children and adults who stutter. Prerequisite: SHS 431 or equivalent.

575 Aphasia and Related Neurogenic Language Disorders. (3) S

Assessment and treatment of acquired neurolinguistic impairment. Prerequisite: SHS 567.

576 Neuromotor Speech Disorders. (3) S Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasis on acquired adult disorders.

577 Craniofacial Disorders of Communication. (3) S. SS

Communication disorders related to anomalies of the craniofacial structures, including orofacial clefting of the lip and palate. Prerequisite: SHS 310 or equivalent.

578 Disorders of Voice. (3) S

Communication disorders related to dysfunction of the phonatory and resonance systems of voice production, assessment, and treatment. Prerequisite: SHS 310 or instructor approval.

580 Clinical Practicum. (1–6) F, S, SS Supervised practicum in audiology or speech-language pathology. 1 hour staffing and 3 hours of client contact per week per hour of credit. May be repeated for credit. Prerequisites: instructor approval; student must not have provisional admission status.

582 Differential Diagnosis of Communication Disorders. (3) ${\sf S}$

Procedures for assessing speech/language disorders in children and adults. 3 hours lecture, 2 hours lab. Prerequisite: instructor approval.

584 Internship. (1-6) F, S, SS

Off-campus directed experiences in audiology or speech-language pathology. May be repeated for credit. Prerequisites: SHS 580; student must consult with coordinator before registration.

585 Articulation and Phonology: Assessment and Intervention. (3) $\ensuremath{\mathsf{S}}$

Assessment and treatment of developmental articulation and phonological disorders. Prerequisites: SHS 250 and 310 *or* equivalents.

591 Seminar. (3) F, S, SS

Selected topics regularly offered:

- (a) Autism and Pervasive Language Disorders
- (b) Multiply Handicapped Child

596 Aural Rehabilitation. (3) S

Approaches to aural rehabilitation in children and adults. Introduction to educational audiology and assistive listening devices. Prerequisite: SHS 375 or 401 or 501 or equivalent.

Women's Studies Program

Mary Logan Rothschild Director (SS 103) 602/965-2358

ANTHROPOLOGY

Professor: Koss-Chiono; Associate Professor: Brandt

ART

Professors: Codell, Magenta; Associate Professors: Fahlman, Schleif

ART HISTORY

Assistant Professor: Wolfthal

COMMUNICATION

Professor: K. Valentine; Associate Professors: Carlson, C. Valentine; Assistant Professor: Nakayama

CURRICULUM AND INSTRUCTION

Professor: Edelsky; Associate Professor: Wilson

EDUCATION

Associate Professor: Guzzeti

EDUCATIONAL MEDIA AND COMPUTERS

Associate Professor: McIsaac

ENGLISH

Professors: Lightfoot, Nilsen, Shinn; Associate Professors: Adams, Gutierrez, Miner, Morgan, Sensibar; Assistant Professors: Horan, McCabe, Morgan, Pritchard, Tohe

EXERCISE SCIENCE AND PHYSICAL EDUCATION

Professor: Wells; Assistant Professor: Swan

FAMILY RESOURCES AND HUMAN DEVELOPMENT

Associate Professor: Martin

GEOGRAPHY

Professor: Burns

HEALTH ADMINISTRATION AND POLICY

Professor: Kronenfeld

HISTORY

Professors: Fuchs, Giffin, Lavrin, Rothschild, Warnicke; Associate Professor: Stoner; Assistant Professors: Gray, Gullet, Hendricks

JUSTICE STUDIES

Professors: Johnson, Kelly; Associate Professors: Jurik, Zatz

LANGUAGES AND LITERATURES

Professors: Ahern, Foster, Losse; Assistant Professors: Galindo, Gruzinska

MANAGEMENT

Associate Professor: Cook

MUSIC

Associate Professor: Williamson

NURSING

Associate Professor: Kenney

PHILOSOPHY

Associate Professor: McGregor

PLANNING

Assistant Professor: Wasserman

POLITICAL SCIENCE

Associate Professor: Dantico; Assistant Professor: Bower

PSYCHOLOGY

Professors: Berstein, Chassin, Eisenburg, Russo; Assistant Professor: Saenz

PSYCHOLOGY IN EDUCATION

Professors: Hackett, Kerr; Associate Professors: Metha, Moore

RECREATION MANAGEMENT AND TOURISM

Professor: Allison

RELIGIOUS STUDIES

Assistant Professor: Fessenden

SOCIAL WORK

Professor: Coudroglou

SOCIOLOGY

Professors: Gordon, Laner, Miller-Loessi, Weitz; Associate Professor: Benin

WOMEN'S STUDIES

Professors: Rothschild, Ruiz; Associate Professor: Ferraro; Assistant Professors: Gutierrez de Soldatenko, Hopkins, Scheiner

The Women's Studies Program is an interdisciplinary university program housed in the College of Liberal Arts and Sciences. Information on faculty affiliation is provided for reference.

WOMEN'S STUDIES— B.A. OR B.S.

The B.A. or B.S. in Women's Studies consists of 45 semester hours, of which 36 must be in Women's Studies and nine must be in a closely related field. At least 36 of the 45 semester hours required for the major must be completed in upper-division courses. In addition, for the B.S. degree, students must complete six hours in statistics, computer science, or quantitative research methods. This sequence must be approved by a women's studies advisor.

Required Courses. Five courses are required. Students must complete the following courses:

WST 100 Women and Society SB, C 3 or WST 300 Women in Contemporary Society SB, C (3)

WST	376	Introduction to Feminist
		Theory <i>L1</i> , <i>C</i> 3
WST	484	Internship1–3
WST	498	PS: Theoretical Issues in
		Women's Studies L2 3

Students must also complete three other courses:

- 1. an upper-division course that provides a historical perspective on the lives and contributions of women;
- an upper-division course that provides a humanities or fine arts perspective on the lives and contributions of women; and
- 3. an upper-division course on women in non-Western societies or a course on minority or ethnic women in American society.

A list of approved courses is available each term in the program office.

The historical perspective requirement may be fulfilled by completing one of these courses:

HIS	333	Women and Society in
		Europe <i>L2/HU/SB</i> , <i>H</i>
HIS	370	Women in U.S. History,
		1600–1880 <i>SB</i> , <i>C/H</i>
HIS	371	Women in U.S. History,
		1880–1980 <i>SB</i> , <i>C/H</i>
HIS	422	Rebellious Women L2/SB,
		<i>C/H</i> 3

The humanities perspective requirement may be fulfilled by completing one of these courses:

ARS	485	Women in the Visual
		Arts <i>L</i> 2 3
ENG	461	Women and Literature HU 3
		or ENG 462 20th-Century
		Women Authors HU (3)
REL	390	Women and
		Religion <i>HU</i> , <i>G</i> 3
		or an approved special
		topics course

No course may be used to satisfy more than one requirement.

Electives in a Closely Related Field.

Majors must complete nine hours of courses in a field closely related to women's studies, thereby completing the minimum core requirements in a single field. These courses may be used to satisfy the general education requirements in the College of Liberal Arts and Sciences.

MINOR IN WOMEN'S STUDIES

The Women's Studies minor consists of 18 semester hours. The following courses are required:

WST	100	Women and Society SB, C.	3
		or WST 300 Women in	
		Contemporary Society	
		SB, C(3)	
WST	376	Introduction to Feminist	
		Theory <i>L1</i> , <i>C</i>	3
WST	498	PS: Theoretical Issues in	
		Women's Studies L2	3

Nine additional hours of approved women's studies courses must be taken after consultation with a women's studies advisor.

Students pursuing a minor must register at least one semester before gradu-

CERTIFICATE PROGRAM IN WOMEN'S STUDIES

The certificate program is equivalent to an interdisciplinary minor, consisting of 21 semester hours. Students pursuing a certificate must consult with a women's studies advisor. See page 112 for a description of the certificate program.

GRADUATE STUDIES

Although the Women's Studies Program does not offer a graduate degree, it is possible to pursue a graduate degree in some existing programs with a thesis or dissertation topic related to women's studies. Information on such programs can be obtained from the Women's Studies Program office.

COURSES IN WOMEN'S STUDIES

Additional courses appear as Special Topics and vary semester to semester. A list of approved interdisciplinary courses that count toward the 36 hours of requirements for Women's Studies is available each term in the program office.

WOMEN'S STUDIES

WST 100 Women and Society. (3) F, S Interdisciplinary introduction examining critical issues in women's studies. Not open to students who have credit for WST 300. General Studies: SB, C.

300 Women in Contemporary Society. (3) F. S. SS

Intensive interdisciplinary examination of such topics as gender roles, work, education, sexuality, politics, health, and law. Not open to students who have credit for WST 100. General Studies: SB. C.

372 Women in Judaism. (3) S

The impact of feminism on the legal, social, and cultural status of Jewish women in various historical and contemporary societies. Cross-listed as REL 373.

373 Latina/Chicana Issues. (3) F, S Course examines the roles Mexican-American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States. Prerequisite: WST 100 or 300 or instructor approval. General Studies: SB, C.

375 Women and Social Change. (3) S Combines research and theory on a contemporary social problem with a community action experience focusing on women's social change initiatives. Lecture, field placement. General Studies: C.

376 Introduction to Feminist Theory. (3) F.

Introduction to feminist theories and exploration of the intersection of gender, race, ethnicity, and class through critical analyses. Prerequisite: WST 100 or 300. General Studies: L1, C.

380 Gender, Race, and Class. (3) SS Cultural diversity, class, and gender issues in American social life are explored. Lecture, seminar, analysis papers, and writing. General Studies: SB, C.

413 Lesbian Culture: Images and Realities. (3) S

Explores aspects of lesbian experience from sociological, psychological, historical, political, and literary critical perspectives. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval.

457 Women in Developing Countries. (3) F Economic, sociopolitical, and demographic contexts for understanding women's roles related to health, family, work, education, and community in developing countries. Crosslisted as NUR 457/SPF 457. Prerequisite: 6 hours of social science credit or instructor approval. General Studies: SB, G.

460 Women and the Body. (3) F

An interdisciplinary look at how representations of woman as body permeate culture and affect a woman's sense of self. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval. General Studies: SB, C.

464 Voices and Visions. (3) F, S

Explores the contributions of visionary women in the humanities, varying from semester to semester. Repeat credit for different topics. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval. General Studies: HU, C.

470 Women and Popular Culture, (3) S An interdisciplinary examination of how gender is constructed in popular cultural forms. Lecture, discussion. Prerequisite: WST 100 or 300 or instructor approval. General Studies: HU, C.

477 Women and Violence. (3) F

Global examination of forms of violence against women at the individual, institutional, and cultural levels and efforts to control it. Prerequisite: WST 100 or 300 or instructor approval. *General Studies: C.*

484 Internship. (1-3) A

Practical experience to enhance the academic perspectives that emerge from women's studies instruction. Prerequisite: preapproval by internship coordinator required.

498 Pro-Seminar: Theoretical Issues in Women's Studies. (3) A

Reading and research on important theoretical issues in women's studies. *General Studies:* 1.2.

Department of Zoology

James Collins Chair (LS C226) 602/965–3571

REGENTS' PROFESSOR ALCOCK, MARKOW

PROFESSORS

ALVARADO, CAPCO, CHANDLER, CHURCH, COLLINS, DOANE, FAETH, FISHER, HAZEL, HEDRICK, LAWSON, MAIENSCHEIN, McGAUGHEY, MINCKLEY, MOORE, OHMART, RISSING, RUTOWSKI, SATTERLIE, A. SMITH, WALSBERG

ASSOCIATE PROFESSORS

DOWLING, FOUQUETTE, GOLDSTEIN, G. SMITH

ASSISTANT PROFESSORS

COOPER, ELSER, FEWELL, HARRISON, ORCHINIK

ACADEMIC PROFESSIONALS DOUGLAS, GRIMM, KAZILEK

DOUGLAS, GRIMM , KAZILEI

RESEARCH PROFESSOR PEARSON

ASSOCIATE RESEARCH
PROFESSOR
DAVIDSON

PROFESSORS EMERITI

BENDER, CLOTHIER, COLE, GERKING, HADLEY, HANSON, JUSTUS, PATTERSON, RASMUSSEN, WOOLF

BIOLOGY-B.S.

The B.S. in Biology is offered jointly by the Department of Zoology and the Department of Botany. See pages 117–118 for a description.

WILDLIFE CONSERVATION BIOLOGY—B.S.

Under the B.S. in Wildlife Conservation Biology, the terrestrial and the aquatic options are available. Both options consist of 62 hours in the major and supplementary courses, plus mathematics proficiency. Courses required for both options are as follows:

BIO	181	General Biology S1/S2 4
BIO	182	General Biology S2 4
BIO	217	Conservation Biology3
BIO	320	Fundamentals of Ecology3
BIO	340	General Genetics4
BIO	415	Biometry N2 4
CHM	113	General Chemistry S1/S2 4
CHM	115	General Chemistry with
		Qualitative Analysis S1/S2 5
Choos	e betw	veen the two combinations
		of organic chemistry
		courses below4 or 8
CH	M 23	1 Elementary Organic
		Chemistry S1/S2* (3)
CH	M 23	5 Elementary Organic
		Chemistry Laboratory
		S1/S2* (1)
		or
CH	M 33	1, 332 General Organic
		Chemistry (6)
CH	M 33	5, 336 General Organic
		Chemistry
		Laboratory (2)
ENG	301	Writing for the
		Professions <i>L1</i> 3
MAT	210	Brief Calculus N1 3
		or any calculus
ZOL	360	Basic Physiology4
ZOL	410	Techniques in Wildlife
		Conservation Biology L2 3
ZOL	411	Biology and Management
		of Terrestrial Wildlife3
ZOL	413	Biology and Management
		of Aquatic Resources3
*D .1	a	224 1225

*Both CHM 231 and 235 must be taken to secure S1 or S2 credit.

Terrestrial Option. Additional required courses for the terrestrial option are as follows:

BOT	370	The Flora of Arizona4
ERA	370	Forest Ecosystem
		Management3
		or ERS 360 Range Eco-
		system Management (4)
ZOL	471	Ornithology3
		or ZOL 472 Mammalogy (4)

Aquatic Option. Additional required courses for the aquatic option are as follows:

BIO	426	Limnology <i>L2</i> 4
ZOL	350	Comparative Invertebrate
		Zoology4
		or ZOL 370 Vertebrate
		Zoology (4)

ZOL 473 Ichthyology L2 3

These requirements meet the minimum for eligibility for the Federal Register. Students planning to enter graduate school from either option should take CHM 331, 332, 335, and 336 instead of CHM 231 and 235 and should take PHY 111, 112, 113, and 114.

ZOOLOGY-B.S.

The B.S. in Zoology consists of 40 hours in major courses and 17 hours in required supplementary courses, plus math proficiency. Required courses are as follows:

	BIO 181 General Biology <i>S1/S2</i> 4						
BIO	182	General Biology S2 4					
BIO	320	Fundamentals of Ecology3					
BIO	340	General Genetics4					
BIO	445	Organic Evolution3					
CHM	113	General Chemistry S1/S2 4					
CHM	115	General Chemistry with					
		Qualitative Analysis S1/S2 5					
Choose between the two combinations							
		of organic chemistry					
		courses below4 or 8					
CHM 231 Elementary Organic							
		Chemistry <i>S1/S2</i> ¹ (3)					
CHM 235 Elementary Organic							
011	Chemistry Laboratory						
		$SI/S2^{1}$ (1)					
CHM 331, 332 General Organic							
CII	111 5.	Chemistry (6)					
CH	М 33	35, 336 General Organic					
CH	IVI 3.	Chemistry					
MAT	210	Laboratory (2) Brief Calculus <i>N1</i> 3					
MAI	210	or any calculus					
PHY	101	Introduction to					
РПІ	101						
		Physics <i>S1/S2</i>					
		or PHY 111, 112 General Physics <i>S1/S2</i> ² (6)					
		Physics 51/52 ⁻ (b)					
		and PHY 113, 114					
		General Physics					
	• • • •	Laboratory S1/S2 ² (2)					
ZOL	280	Animal Behavior3					
ZOL	330	Developmental Anatomy3					
ZOL	331	Laboratory in Vertebrate					
		Developmental Anatomy2					
ZOL	350	Comparative Invertebrate					
		Zoology4					
		or ZOL 354 General					
		Entomology (4)					
		or ZOL 370 Vertebrate					
		Zoology (4)					
ZOL	360	Basic Physiology4					
1 Both	. CHN	// 231 and 235 must be taken to					

Both CHM 231 and 235 must be taken to secure S1 or S2 credit.

² Both PHY 111 and 113 or PHY 112 and 114 must be taken to secure S1 or S2 credit.

The remaining six hours may be selected from upper-division BIO or ZOL courses.

Undergraduate Thesis Option. To fulfill the six semester hours of zoology electives, a student may arrange to conduct a laboratory or field research project under the supervision of a member of the Zoology faculty. At least three semester hours are taken as BIO 310 Special Problems and Techniques or ZOL 499 and three semester hours as ZOL 495 Undergraduate Thesis. This option culminates in the production of a thesis by the student that describes the research project and a thesis defense. See the Department of Zoology office for a complete description of this option.

MINOR IN ZOOLOGY

The Zoology minor consists of 24 semester hours in BIO and ZOL courses, including BIO 181 General Biology and BIO 182 General Biology, and 16 hours selected with approval of an advisor in the Department of Zoology; at least 12 hours must be in the upper division. Courses not available for credit in the Zoology major cannot be used for the minor (e.g., BIO 100 The Living World and ZOL 201 Human Anatomy and Physiology I). This minor is not available to students majoring in the life sciences.

SECONDARY EDUCATION—B.A.E.

See page 118 for information on the academic specialization in biological sciences.

GRADUATE PROGRAM

The Department of Zoology offers programs leading to the degrees of Master of Natural Science, Master of Science, and Doctor of Philosophy (with a concentration in ecology for the Master of Science and the Doctor of Philosophy). Consult the *Graduate Catalog* for requirements.

The department participates in the interdisciplinary program for the Master of Science and Doctor of Philosophy degrees in Molecular and Cellular Biology. See page 172 for more information.

BIOLOGY

For courses in biology, see "Biological Sciences," pages 117–119.

ZOOLOGY

ZOL 113 Contemporary Zoology. (4) F, S Topics emphasizing socially relevant problems. Cannot be used for major credit in the biological sciences. 3 hours lecture, 3 hours

120 Human Physiology. (4) F, S Basic concepts of general science are discussed using current issues and basic concepts of human physiology as a focus. Cannot be used for major credit in biological sciences. 3 hours lecture, 3 hours lab. *General Studies*:

201 Human Anatomy and Physiology I. (4) F, S, SS

Structure and dynamics of the human mechanism. Cannot be used for major credit in the Department of Zoology. 3 hours lecture, 3 hours lab. *General Studies: S2*.

202 Human Anatomy and Physiology II. (4) F. S. SS

Continuation of ZOL 201. Cannot be used for major credit in the Department of Zoology. 3 hours lecture, 3 hours lab. Prerequisite: ZOL 201 or instructor approval.

241 Human Genetics. (3) F, S

Introduction to human heredity and variation. Cannot be used for major credit in the Department of Zoology. Prerequisite: a course in the life sciences

280 Animal Behavior. (3) F

Evolutionary, genetic, physiological, and ecological bases of animal behavior. Prerequisite: 4 hours of BIO or ZOL or instructor approval.

316 History of Biology: Conflicts and Controversies. (3) N

Focuses on 19th and 20th centuries, considering biology as a discipline, evolution, and problems of heredity, development, and cell theory. Cross-listed as HPS 330. General Studies: H.

318 History of Medicine. (3) N

Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice. Cross-listed as HPS 331. General Studies: H.

330 Developmental Anatomy. (3) F

General developmental biology (embryology) and comparative structure of organ systems, illustrated mainly by vertebrate examples. Prerequisite: BIO 182.

331 Laboratory in Vertebrate Developmental Anatomy. (2) F, S

Morphology of representative embryonic and adult vertebrates. 2 3-hour labs. ZOL 330 recommended. Prerequisite: BIO 182.

350 Comparative Invertebrate Zoology. (4)

Characteristics, life cycles, adaptations, and evolution of invertebrate animals. 3 hours lecture, 3 hours lab. Prerequisite: BIO 182 or instructor approval.

354 General Entomology. (4) S '98

Form, activities, and classification of insects. 3 hours lecture, 3 hours lab. Prerequisite: BIO 182

360 Basic Physiology. (4) F, S

Physiological mechanisms of the higher vertebrates. 3 hours lecture, 3 hours lab. Prerequisites: BIO 182; CHM 115; MAT 117.

370 Vertebrate Zoology. (4) S

Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals. 3 hours lecture, 3 hours lab. Prerequisite: BIO 182.

380 Sociobiology. (3) S

Survey of animal and human social behavior examined from an evolutionary perspective. Suitable for nonmajors. ZOL 280 is recommended.

394 Special Topics (Nonmajors). (2–3) N Topics of current or special interest in one or more aspects of animal biology. Topics vary. Cannot be used for major credit in life sciences. Prerequisite: junior standing.

410 Techniques in Wildlife Conservation Biology. (3) F

Field and analytical techniques used in evaluating population structure, viability and environmental impacts. Lecture, lab. Prerequisites: BIO 217 and 320 or instructor approval. General Studies: 12.

411 Biology and Management of Terrestrial Wildlife. (3) S

Principles, theories, and practices of managing terrestrial wildlife from habitat and population perspectives. Prerequisites: BIO 217 and 320 and ZOL 471 and 472 or instructor approval.

413 Biology and Management of Aquatic Resources. (3) F

Principles, theories, and practices of managing aquatic resources. Prerequisites: BIO 217 and 320 and ZOL 473 *or* instructor approval.

420 Field Zoology. (3) N

Experience in zoological field techniques. Requires weekend or longer field trips. Prerequisite: instructor approval.

423 Population and Community Ecology. (3) N

Organization and dynamics of population and communities, emphasizing animals. Theoretical and empirical approaches. Prerequisite: BIO 320 or instructor approval.

425 Animal Ecology. (3) N

Physiological and behavioral adaptations of individual animals to both abiotic and biotic environments. Prerequisite: BIO 320.

433 Animal Histology. (4) S

Microscopic study of animal tissues. 3 hours lecture, 3 hours lab. Prerequisite: BIO 182 or instructor approval.

441 Principles of Human Genetics. (3) N Genetics in human populations, including medical aspects. Prerequisite: BIO 340. *General Studies: L2*.

454 Aquatic Insects. (3) N

Systematics and ecology of aquatic insects. Prerequisite: ZOL 354.

465 Neurophysiology. (3) S '98

Detailed treatment of cellular and organismal neurophysiology and nervous system function. Prerequisite: ZOL 360.

466 Neurophysiology Laboratory. (2) S '98 Intracellular and extracellular electrophysiological recording techniques, histological preparations, and dye-filling techniques. 6 hours lab. Pre- or corequisite: ZOL 465.

470 Systematic Zoology. (3) S '97

Philosophy, theory, and practice in interpreting patterns of animal diversity, including species concepts and speciation, nomenclature and taxonomy, and evolutionary and phylogenetic classification. Prerequisites: junior standing; 18 hours in life science. *General Studies: L2*.

471 Ornithology. (3) S

The biology of birds. 2 hours lecture, 3 hours lab, weekend field trips. Prerequisite: ZOL 370 or instructor approval.

472 Mammalogy. (4) F '96

Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms. 3 hours lecture, 3 hours lab or field trip, weekend field trips. Prerequisite: ZOL 370 or instructor approval.

473 Ichthyology. (3) S '97

Systematics and biology of recent and extinct fishes. 2 hours lecture, 3 hours lab or field trip, weekend field trips required. Prerequisites: ZOL 370 and 425 or instructor approval. General Studies: L2.

474 Herpetology. (3) S '98

Systematics and biology of recent and extinct reptiles and amphibians. 2 hours lecture, 3 hours lab or field trip. Prerequisite: ZOL 370.

481 Research Techniques in Animal Behavior. (3) S $^{\circ}$ 98

Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework. 1 hour lecture, 6 hours lab. Prerequisite: ZOL 280. General Studies: L2.

495 Undergraduate Thesis. (3) F, S, SS Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters. Prerequisites: At least 3 hours of BIO 310 or 499 or ZOL 499; formal conference with instructor; instructor and department chair approval.

508 Scientific Data Presentation. (2) F

Techniques necessary for presentation of scientific data used in journal publications, grant proposals, and visual presentations. Lecture, lab. Prerequisite: instructor approval.

515 Populations: Evolutionary Genetics. (3)

Mathematical models in the description and analysis of the genetics of populations. Prerequisites: BIO 320 and 415 and 445 *or* instructor approval.

516 Populations: Evolutionary Ecology. (3)

S

Principles of population biology and community ecology within an evolutionary framework. 2 hours lecture, 2 hours recitation. Prerequisites: BIO 320, 415 (or MAT 210); ZOL 515.

517 Techniques in Evolutionary Genetics.

(4) S

Practical experience in modern techniques for the study of evolution. Lecture, lab. Prerequisites: BIO 340, 445; instructor approval. **532** Developmental Genetics. (3) S '98 Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype. Prerequisite: BIO 543

560 Comparative Physiology. (3) S '97 The analysis of function in invertebrates and vertebrates, emphasizing evolutionary trends in physiological systems. Prerequisite: ZOL 360 or equivalent.

566 Environmental Physiology. (3) S '98 Physiological responses and adaptations of animals to various aspects of the physical environment. Prerequisites: BIO 320; ZOL 360.

568 Mammalian Physiology. (3) F '97 Detailed treatment of mammalian organ system functions emphasizing integrative mechanisms. Prerequisite: ZOL 360 or equivalent.

569 Cellular Physiology. (3) F '96 Emphasizing the molecular basis for cell structure and function. Prerequisites: ZOL 360; organic chemistry.

591 Seminar. (1-3) F, S

Topics such as the following are offered:

- (a) Adaptations
- (b) Behavior
- (c) Cell Biology
- (d) Ecology
- (e) Evolution
- (f) Genetic Engineering
- (g) Genetics
- (h) Physiology
- May be repeated for credit.