482. Swine Production and Management  
Fall (4-3-2) ANS 152, ANS 313B, ANS 314. ANS 315 or approval of department.

483. Swine Nutrition  
Spring of odd-numbered years. 3(3-0) ANS 313B, ANS 482.

490. Senior Thesis in Animal Science  
Fall, Winter, Spring, Summer 6 to 12 credits. May enroll for a maximum of 12 credits. Students are limited to a combined total of 12 credits in ANS 400 and ANS 490. Senior Animal Science Majors, approval of department. Not open to graduate students.

511. Animal Science for Veterinarians  
Fall 4(4-0) Juniors, ANS 211 or approval of department.
Husbandry and management of food animals, horses, companion animals, zoo animals and laboratory animals.

512. Physical Examination and Animal Handling I  
Spring 2(0-6) First-year Veterinary Medicine students.

525. Animal Nutrition  
Spring 5(4-2) BCH 401.

530. Rumen and Gastrointestinal Microbiology  
Fall of odd-numbered years. 3(3-0) MPH 303, BCH 452 or approval of department.
Microbial activities in the ruminant and gastrointestinal ecosystems of major livestock species. Microbial types, classification, distribution, degradation, fermentation of substrates, interactions, manipulation and cultivation.

832. Research Methods in Nutrition  
(A H 827) Winter of odd-numbered years. 2(3-0) Approval of department.
Experimental techniques in nutrition: ration formulation, animal management, sampling procedures, balance trials, bioassays, tracer methodology, determination of nutrient requirements.

871. Design of Animal Experiments  
(SAS) Spring, 4(4-0) STT 423.
Choice, implementation and statistical analysis of experimental plans for research with animals. Design for reduction of experimental error. Analysis of experiments with complex structures and unequal subclass numbers.

872. Analysis of Unbalanced Multifactor Data  
(SAS) Spring, 4(4-0) STT 423.
Applied analysis techniques of field or survey data in biological sciences with unbalanced subclass numbers. Building models to fit data and research goals. Interpretation of analysis.

938. Comparative Nutrition—Vitamins  
(A H 928) Spring of odd-numbered years. 3(3-0) BCH 452 and a previous course on principles of nutrition. Interdepartmental with and administered by Human Nutrition and Foods.
Chemical and physical properties, standards of activity, occurrence, and antisubclinical deficiencies of vitamins, and factors affecting requirements.

941. Genetics of Breed Improvement  
(A H 963) Winter of odd-numbered years. 3(2-0) ANS 314, STT 421.

942. Breeding Systems and Plans  
(A H 964) Spring of odd-numbered years. 3(0-0) ANS 941.
Biometric relations between related animals. Role of selection in changing populations. The effects of different mating systems.

943. Biometrical Genetics  
(855) Spring of odd-numbered years. 4(4-0) ANS 872.
Analysis of experiments with complex structure and unequal subclass numbers. Building models to fit data and research goals. Correlation of relatives. Selection theory.

999. Doctoral Dissertation Research  
(A H 999) Fall, Winter, Spring, Summer. Variable credit. Approval of department.

ANTHROPOLOGY

College of Human Medicine  
College of Social Science

100. Human Evolution  
Fall, Winter, Spring, Summer. 4(0-4) Scientific fossil and archaeological evidence on human cultural and biological origins; anticipation of culture in other animals; place of humans among the primates; processes of organic evolution; modern human genetic variability; culture as an adaptive mechanism; cultural development to the dawn of civilization.

171. Introduction to Sociocultural Anthropology (S)  
Fall, Winter, Spring, Summer. 4(0-4) Comparison of ways of life among primitive, peasant and civilized peoples. Implications of these styles of life for understanding of human behavior in general and exotic cultures in particular.

210. The Anthropological Film  
Winter 3(2-2) Ethnographic film as a preserver of vanishing cultures worldwide, as a tool for ethnological analysis and as a creator of perspectives about other cultures and cultural variability.
230. Women and Health: Anthropological and International Perspectives
Spring. 3(3-0)
Cultural women's health issues. Health implications of differing life circumstances for women in developing countries. Women as health care providers and consumers. Health issues concerning the female life cycle.

250. Culture, Environment and Adaptation (S)
Fall. 4(4-0)
Culture as an adaptive process—as developed in the million years of human history and still influencing environmental quality, population control, and allocation of resources in primitive and modern societies.

255. Prehistory of the Bible Lands
Spring of odd-numbered years. 3(3-0)
Archaeological evidence for prehistoric cultures of Biblical Palestine up to the establishment of the ancient kingdoms of Judah and Israel around 1200 B.C.: rise of civilization into Old Testament times.

IDC. Introduction to Contemporary China
For course description, see Interdisciplinary Courses.

IDC. Contemporary Japan
For course description, see Interdisciplinary Courses.

262. Status of Women in Culture and Society: A Comparative View
Fall. 3(3-0)
Comparative analysis of the status of women in non-Western cultures and societies. Economic and domestic division of labor between the sexes as a factor underlying division of status, power and authority.

263. Introduction to Archaeology
Winter. 3(3-0)
Archaeologists, working in the field and laboratory, dating the past: analysis of finds and interpretation of sites from Stone Age caves to ceremonial sites.

264. Great Discoveries in Archaeology (S)
Winter. 4(4-0)
Great discoveries in archaeology that have captured the public's imagination and shaped Western thought, including Gobekli Tepe and Stonehenge to Machu Picchu.

265. Vanished Peoples and Lost Civilizations
Fall. 4(4-0)
Concepts of cultural evolution and origins of civilization as found in popular literature ranging from Atlantis to Chariots of the Gods.

266. War and Aggression
Fall. Spring. 3(3-0)
The question "What makes friends and what makes enemies?" is examined from the standpoint of cultural anthropology. Violence-producing cultures and peaceful ones are compared for factors influencing human aggression.

275. The Anthropology of Asia
Fall of odd-numbered years. 4(4-0)
Several cultural complexes and cultures—such as hunting and gathering through complex civilization in China, Southeast, and South Asia. The cultures and nature of their development will be examined. Past and present significance of cultural stability and change will be seen in a comparative framework.

281. Introduction to African Cultures
Spring. 4(4-0)
Patterns and diversity among contemporary African societies, emphasizing cultural continuity and change.

285. Anthropological Perspectives on Global Interdependence
Spring. 4(4-0)
Interweaving nature of cultural traditions in the modern world. Consideration of how people in developing nations respond to the dominant cultural forces of industrialized nations.

IDC. Contemporary South Asia
For course description, see Interdisciplinary Courses.

343. Introduction to Physical Anthropology
Fall. 4(4-0)
Problems, data and techniques in the main topical areas of physical anthropology: human genetics, hominid evolution, primate behavior, human osteology and human diversity. Field trips may be required.

350. Peasants and Social Change in the Developing World
Fall. 4(4-0) ANP 171
Cross-cultural examination of peasants and rural cultures and societies of Asia, Europe and Latin America. Traditional peasants and social change in developing nations.

355. Rise of Civilization
Spring of even-numbered years. 3(3-0)
ANP 100 or ANP 263, or approval of department.
Archaeological evidence for the appearance of the world's earliest prehistoric civilizations; ethnological and ethnohistoric perspectives and the nature of complex societies as models applied to archaeological evidence.

356. Culture, Health and Illness
Spring. 4(4-0) ANP 171
Anthropological study of health behavior. Comparative view of primitive, folk and scientific medical systems and their effect on the individual and the community in the illness situation.

360. Methods of Sociocultural Anthropology
Winter. 4(4-0) ANP 171, one upper division sociocultural anthropology course, approval of department.
Field research and analysis methods and techniques in ethnography: development of research problems and questions; alternate models of validation; ethics of research and presentation of findings.

381. Anthropology and Education
Winter. 4(4-0) ANP 171 or other social science. For Education and Anthropology majors.
Maturation and socialization in various societies of Africa, Asia, and Latin America. These will be compared with educational institutions in the U.S. and Europe. It is expected to be a contribution to the broader cross-cultural investigation of the teaching/learning process.

385. The Anthropology of Social Movements
Winter. 4(4-0) ANP 171 or approval of department.
Analysis of how different cultures around the world organize and create (or impede) change on the basis of class, religion, race, ethnicity, language, and territory.

400. Honors Work
Fall. Winter. Spring. Summer. 1 to 16 credits. May reenroll for a maximum of 20 credits. Approval of department.

406. Environmental History
Winter. 4(4-0) Juniors. Interdepartmental with and administered by the Department of History.
History of the impact of human societies on the natural environment. Effect of human induced environmental change on the history of various peoples. Global, thematic approach with emphasis on Europe and America since the 18th century.

407. Interactions of Culture and Nutrition
Spring. 3(3-0) Juniors: HNF 102 or ANP 171 approved by the Department of Anthropology, psychology, and social sciences.
World and U.S. food behavior focusing on conflicts between behavior and nutritional needs at various stages of life cycle. Anthropological, psychological and social influences affecting food behavior are analyzed.

411. Studies in the Anthropology of Asia (MTC)
Fall. Winter. Spring. 4(4-0) May reenroll for a maximum of 16 credits if different subtopics are taken. ANP 171; ANP 275 or approval of department.
Traditional cultures of Asia, emphasizing social, political, economic and ideological factors; traditional cultures and culture change in colonial and modern periods; subtopics focus on different regions of Asia.

412. China: Its Civilization, Culture and Society
Winter. 4(4-0) ANP 171; ANP 275 or approval of department; Juniors.
Chinese culture and society from traditional civilization to contemporary state. Emphasis on cultural continuity and change, village and urban society and their relationships.

415. Studies in the Anthropology of Africa (MTC)
Winter. Spring. 4(5-0) May reenroll for a maximum of 16 credits if different subtopics are taken. ANP 171; ANP 281 or approval of department.
Separate courses on African cultures with emphasis on traditional patterns of social organization, political systems, subsistence and ideology; culture change through colonialism and modernization; traditional cultures and modern states.

418. Critical Issues in Contemporary Africa (MTC)
Fall. Spring. 3(3-0) May reenroll for a maximum of 8 credits if different topics are taken. One course on African subject and approval of instructor. Interdepartmental with African Languages and the departments of Geography, History, Political Science, and Sociology. Administered by the Department of History.
Four separate interdisciplinary topics will be offered at different times: The Horn of Africa, Southern Africa, Africa and the Americas, Social Impact Studies.
419. Studies in the Anthropology of the New World (MTC)  
Fall, Winter, Spring. 4(4-0) May renewal for a maximum of 12 credits if different subtitles are taken. ANP 171 or approval of department.

Separate courses on cultures within the Americas, with emphasis on traditional patterns of society, political systems, subsistence and ideology; culture change through colonialism and modernization; traditional cultures and modern states.

421. North American Indian Ethnography  
Fall of odd-numbered years. 4(4-0) ANP 171; ANP 250 or approval of department. Native cultures of North America on eve of European contact and during past three centuries of interaction with Europeans. Federal policy toward Native Americans. Traditional adaptations and contemporary problems.

425. Cultural Anthropology of Mexican Americans  
Spring. 4(4-0) ANP 221 or ANP 350. Origins, development, and contemporary variation in Chicano culture as studied anthropologically. Comparative theoretical perspectives in Chicanx anthropology.

426. Humanistic Perspectives on Global Diversity and Interdependence  
Fall. 4(4-0) Juniors or approval of department. Interdepartmental with and administered by the Department of History. Anthropological and historical analysis of global diversity and interdependence since the sixteenth century.

427. Contemporary Issues in Global Interdependence and Change  
Fall. 4(4-0) Juniors or approval of department. Interdepartmental with and administered by the Department of History. Interdependence of the modern world since 1945. Focus on such issues as the impact of the West on the non-Western world: industrialization, modernization, population and natural resources.

428. Project in Global Studies  
Spring. 4(4-0) HST 426 or HST 427 or approval of instructor. Interdepartmental with and administered by the Department of History. Supervised project to test students' competence in applying the cultural and historical diversity/interdependence frameworks introduced in the prerequisite courses.

430. Environments of International Enterprise  
Fall, Spring. 4(4-0) ANP 171 or approval of department. Natural, socioeconomic, governmental, and global competitive environments that limit and are affected by multinational firm's operations are presented in an anthropological framework.

439. Anthropology of Birth  
Fall of odd-numbered years. 4(4-0) ANP 171 or ANP 221 or ANP 350 or ANP 263 or approval of department. Ethno-obstetrics. Pregnancy, childbirth and infant care in developed and developing nations. Interaction of culture and biology in obstetric phenomena.

444. Human Diversity  
Winter of even-numbered years. 3(3-0) ANP 106. Origins and evolutionary meaning of human physical variability. Racial variation as an adaptive phenomenon. Roles of genetic and environmental influences in creating the phenotype.

445. Fossil Hominids  
Winter of odd-numbered years. 3(3-0) ANP 100. Fossil evidence and theory pertaining to human evolution during the last four million years.

446. Primatology  
Spring. 3(3-0) ANP 100. The order primates: evolution, taxonomy, biology, and behavior. Primate learning, cultural sex, maternal, and aggressive behavior, and social organization.

448. Forensic Anthropology  
Spring of odd-numbered years. 3(3-0) ANP 243 or approval of instructor. Physical anthropological analysis of human skeletal remains, reconstruction of individuals from skeletal evidence, and place of physical anthropology in legal proceedings.

450. Area Courses in Prehistory (MTC)  
Fall, Winter. 4(4-0) May renewal for a maximum of 16 credits if different subtitles are taken; ANP 100 or ANP 263. Archaeology of different areas with emphasis on prehistoric adaptations to natural and social environments. Settlement patterns, subsistence, technology, social organization, economy, style analysis. Areas vary with staff and student interest.

451. African Prehistory  
Fall. 4(4-0) ANP 100 or ANP 263 or approval of instructor. Prehistory of Africa, with emphasis south of the Sahara, from first human cultures two million years ago to Iron Age. Major research problems, issues, strategies and researchers.

453. Origins of Food Production  
Spring of even-numbered years. 4(4-0) ANP 263 or ANP 357. Archaeological evidence for origins and development of prehistoric animal and plant domestication. Models and theories of adaptive change involving food production origins.

454. Paleolithic Archaeology  
Fall of odd-numbered years. 3(3-0) ANP 100; ANP 263 or ANP 583. Current archaeological knowledge of the origins and development of human culture in Paleolithic Period (2,000,000-12,000 years ago); development, issues and problems in field of Paleolithic archaeology.

455. Theory in Historical Archaeology  
Winter of even-numbered years. 4(4-0) ANP 263 or approval of department. Traces the history of the development of theory and method in historical archaeology. Historic site interpretation is also considered.

456. The Practice of Historical Archaeology  
Spring of even-numbered years. 4(4-0) ANP 263 or approval of department. Course covers various methods of artifact typology. Artifact classes, including ceramics, trade goods, firearms, and architecture, are examined for purposes of identifying attributes useful in the areal and temporal placement of historic sites.

457. Public Archaeology  
Fall of even-numbered years. 3(3-0) ANP 100; at least one 400-level archaeology course. History of public archaeology; legislation and review procedures at State and Federal level; contract requirements for reports and field work; roles of amateurs, professional certification and private contractors.

458. Archaeological Investigation of Frontiers and Colonization  
Fall. 4(4-0) ANP 100 or ANP 263 or approval of department. Use of archaeology to study cultural dynamics of frontier and colonization movements, with emphasis on North America. Results of recent historical archaeological research in frontier and colonizing situations.

463. Social Anthropology  
Fall. 4(4-0) ANP 171 or approval of department. Organization and structure of non-Western societies, ranging from simpler tribal and peasant societies to complex civilizations. Social institutions, such as those based upon kinship, power, and gender status, analyzed for specific groups.

464. Religion and Culture  
Fall. 4(4-0) ANP 171 or SOC 241 or approval of department. Religious beliefs and magical practices of primitive peoples and functions of magic and folklore in contemporary society. Religion as an institution in society.

465. Symbolic Anthropology  
Winter. 4(4-0) ANP 221 or ANP 463 or ANP 464, or approval of department. Course explains how human perception and communication are guided by systems and meanings and relates systems of thought to systems of action. Examples from western and non-western cultures.

467. Language and Culture  
Fall, Spring. 4(4-0) Approval of department. Interdepartmental with the Department of English. A survey exploring the interconnectedness of language and culture. Special areas to be emphasized include: Child Language Learning; Linguistic and Cultural Contact Phenomena; "Specialized" Languages, such as Cant, Argot, Substratum; "Substratum" - Language and Cultural Change; a brief examination of Theories of Origins and of the Sapir-Whorf Hypothesis.

472. Anthropology of Legal Systems  
Spring of even-numbered years. 4(4-0) ANP 221 or ANP 463 or approval of department. A comparative examination of legal ideas in selected non-Western preindustrial and peasant societies, parallels and contrasts are drawn with key legal ideas of modern Western systems.

473. Culture and Personality  
Fall, Spring. 4(4-0) One 300 level anthropology or sociology course. Interdepartmental with the Department of Psychology. Human nature in evolutionary and cross-cultural perspective. Special attention to relating theories of anthropology and psychology to methods of studying personality in non-Western societies.
474. **Culture and Economic Behavior**
Winter of even-numbered years. 4(4-0)
ANP 221 or ANP 463 or approval of department.
Economic systems of changing cultures in Asia, Africa and Latin America. The cultural matrix of economic transactions and relations of economic and other social and cultural institutions seen in a comparative framework. Emphasis is placed on traditional agricultural or tribal communities.

477. **Urban Anthropology**
Winter of even-numbered years. 3(3-0)
Juniors.
Applies anthropological concepts to urban issues. The cross-cultural perspective includes the study of American culture and cities. Topics include ideology, social organization, power, protest, urbanization processes and urban reform.

479. **Anthropology Capstone Course**
Spring 4(4-0) Senior Anthropology majors.
Seminar on the integration of the subdivisions of anthropology and its distinctions from other approaches in the social sciences; perspectives on future directions of anthropological inquiry and options for careers.

482. **American Folk Medicine**
Winter. 3(3-0) Juniors or approval of department.
Traditional practices of health maintenance and healing in American subcultures. Health-related folklore and practices include taboos, religious healing, witchcraft and herbal medicine.

484. **Methods of Field Archaeology**
Summer. 4(4-0) ANP 223 or approval of department.
Methods of field research in archaeology. Site survey, excavation, sampling, data recording, field photography, field laboratory procedures, mapping. Problem formation, hypothesis testing, preliminary analysis.

486. **Practicum in Field Archaeology**
Summer. 2 to 12 credits. May reenroll for a maximum of 20 credits. Approval of department. Application of methods and techniques of field archaeological research using actual sites and in the context of participation in a research program. Small groups work closely with staff in the execution of research designs.

490. **Topics in Anthropology (MTC)**
Fall, Winter, Spring, Summer. 2 to 6 credits. May reenroll for a maximum of 20 credits when a different topic is given. Approval of department. Experimental courses and courses taught by visiting scholars.

495. **Topics in Medical Anthropology (MTC)**
Fall, Winter, Spring. 2 to 6 credits. May reenroll for a maximum of 16 credits if different subtitles are taken. Approval of department. Western and non-Western health care and medical systems, relationships between cultural systems and treatment of illness, cross-cultural analysis of health maintenance and medical delivery.

499. **Independent Study**
Fall, Winter, Spring, Summer. 2 to 16 credits. May reenroll for a maximum of 16 credits. Written approval of instructor and department.
Study of a selected topic under the guidance of a faculty advisor in the area of specialty, including field work.

800A. **Concepts in Anthropology: Sociocultural Anthropology**
Fall. 4(4-0) Approval of department.
Theories, methods, data and issues characterizing anthropology among the social sciences and distinguishing sociocultural anthropology from other subdisciplines.

800B. **Concepts in Anthropology: Biocultural Evolution**
Winter. 4(4-0) Approval of department.
Theories, methods, data and issues characterizing the study of human biological and cultural development from the perspective of anthropology.

800C. **Concepts in Anthropology: The Archeological Study of Culture**
Spring. 4(4-0) Approval of department.
Archaeological methods and techniques of cultural study and reconstruction. Application of archaeological data to studies of world prehistory. Archaeological approaches to culture theory and process.

820. **Overview I, Medical Anthropology**
Fall. 3(3-0) Approval of instructor.
Theoretical framework central to studies of health and illness. Culturally defined approaches to diagnosis and healing. The evolution of disease.

821. **Overview II, Medical Anthropology**
Winter. 3(3-0) Approval of instructor.
A modular seminar in theoretical and applied issues in medical anthropology. A different theme is explored each year (e.g., healers, biology and culture, political economics of health).

822. **Overview III, Medical Anthropology**
Spring. 3(2-2) Approval of department.
Clinical applications of medical anthropological method and theory. Observation and analysis of health care delivery in varied cultural and clinical settings.

823. **Seminar on Ethno-obstetrics and Midwifery**
Fall of even-numbered years. 3(3-0) ANP 439 or approval of department.
Anthropological perspectives on obstetric systems in different cultures. Functions, philosophies and efficacy of birth practitioners in modern and traditional societies. Crosscultural obstetric technologies. Crosscultural maternal and child health care delivery systems.

825. **Nutritional Anthropology**
Fall of odd-numbered years. 3(3-0) Approval of instructor.
Cross-cultural perspectives on dietary issues with intensive examinations of foodways of different societies such as hunter-gatherers compared with farmers; cultural considerations in nutrition and growth studies; genetic adaptation to environment.

826. **Anthropological Analysis of Population**
Spring of odd-numbered years. 4(4-0) SOC 420 or approval of instructor.
Anthropological approaches to human population dynamics from prehistoric times to the present. Critical approaches to the theory of the demographic transition. Relationships among social structure, household economic situations and population.

830. **Kinship Studies**
Winter of odd-numbered years. 4(4-0) Approval of department.
The course will raise the question of what kinship is and why it has been such a central topic in anthropology. Various controversies and theoretical trends will be presented and analyzed.

831. **Linguistic Anthropology**
Winter. 4(3-2) Approval of department.
The nature of language; techniques for the description and comparison of languages; linguistics as an anthropological tool; language and culture.

832. **Language and Cultural Meaning**
Spring of even-numbered years. 4(4-0) ANP 467 or approval of department.
Anthropological understandings of nature of language and its relationship to meaning in communication. Structuralist and non-structuralist approaches in French and American anthropological linguistics.

835. **Human Osteology and Osteometry**
Spring of even-numbered years. 5(3-4) Approval of department.
Identification of human bones and fragments; aging, sexing and determining the race of skeletal remains; measuring techniques for cranial and postcranial remains; the more common forms of paleopathology.

837. **Problems in Contemporary Physical Anthropology**
Winter of even-numbered years. 3(3-0) Approval of department.
Research problems, issues and controversies in physical anthropology as reflected in contemporary literature.

839. **African Research**
Fall, Winter, Spring. 2 to 4 credits. May reenroll for a maximum of 8 credits. Graduate standing or approval of instructor. Inter-departmental with African Languages and the departments of Educational Administration, Geography, History, Political Science, and Sociology. African-related archival and field research topics and methodologies viewed from perspective of relevant social sciences and humanistic disciplines associated with the African Studies Center.

840. **Biocultural Evolutionary Theory**
Fall. 3(3-0) Approval of department.
Anthropological theories about processes, causes and nature of evolutionary development in human biology and culture, and about the interaction between biology and culture in human.