827. Integrated Risk Assessment of Environmental Hazards
Spring 3(0-0)
R: Open only to graduate students in the colleges of Agriculture and Natural Resources, Engineering, Human Medicine, Natural Science, Osteopathic Medicine, or Veterinary Medicine.
Alternative approaches to assessing environmental and health risk. Analyzing, interpreting, and using scientific data from ecology, agriculture, environmental chemodynamics, biology, geological sciences, and toxicology in the risk assessment process.

941. Advanced Endocrine Physiology and Pharmacology
Fall, 4(4-0) Interdepartmental with Physiology, and Pharmacology and Toxicology, and Psychology. Administered by Physiology.
P: BCH 461, PSL 432. R: Open only to graduate students in the Colleges of Human Medicine, Osteopathic Medicine, Veterinary Medicine, Natural Science, Agriculture and Natural Resources.
Basic and advanced concepts of endocrine and reproductive physiology and pharmacology.

989. Advanced Independent Study
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department, application required. Investigation of topics of special interest.

988. Master's Research
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 10 credits in all enrollments for this course.
R: Open only to master's students in Animal Science. Approval of department. Application required. Scholarly project for non-thesis (Plan B) master's degree.

989. Master's Thesis Research
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 99 credits in all enrollments for this course.
R: Open only to master's students in Animal Science. Approval of department.

935. Nutrition: Lipid and Carbohydrate Metabolism
Fall of even-numbered years. 3(3-0) Interdepartmental with Human Nutrition and Foods, administered by Human Nutrition and Foods.
R: Open only to graduate students in Food Science, Human Nutrition, Animal Science, and Nursing, and to graduate-professional students.
Regulatory aspects of lipid and carbohydrate metabolism as influenced by nutritional status.

936. Protein Nutrition and Metabolism
Spring of even-numbered years. 3(3-0) Interdepartmental with Human Nutrition and Foods.

937. Mineral Nutrition and Metabolism
Fall of even-numbered years. 3(3-0) Interdepartmental with Human Nutrition and Foods.
Forms and locations of mineral elements in the body, metabolic functions, deficiencies, and toxicities, interrelationships and quantitative requirements.

938. Nutrition: Metabolism and Function of Vitamins
Spring of odd-numbered years. 3(3-0) Interdepartmental with Human Nutrition and Foods, administered by Human Nutrition and Foods.
R: Open only to graduate students in Food Science, Human Nutrition, Animal Science, and Nursing, and to graduate-professional students.
Regulatory roles of vitamins at cellular and molecular levels.

943. Techniques of Analyzing Unbalanced Research Data
Spring. 4(4-0) Interdepartmental with Forestry, Crop and Soil Sciences, Horticulture, and Fisheries and Wildlife.
P: STT 464, R: Open only to graduate students in the College of Agriculture and Natural Resources.
Linear model techniques to analyze research data characterized by missing and unequal number of observations in classes. Simultaneous consideration of multiple factors. Estimable comparisons. Hypothesis testing. Computational strategies. Variance and covariance components. Breeding values.

976. Multivariate Methods in Agriculture and Natural Resources
Spring. 4(4-0) Interdepartmental with Forestry, and Fisheries and Wildlife. Administered by Forestry.
P: STT 422, MTH 314, R: Open only to graduate students in the College of Agriculture and Natural Resources.
Application of multivariate methods to research problems. Hotelling's T-test, profile analysis, discriminant analysis, canonical correlation, principal components, principal coordinates, correspondence analysis, and cluster analysis.

999. Doctoral Dissertation Research
Fall, Spring. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.
R: Open only to doctoral students in Animal Science. Approval of department.

ANTHROPOLOGY

ANP

Department of Anthropology College of Social Science

101. Introduction to Anthropology
Fall, Spring, Summer. 3(3-0)

201. Sociocultural Diversity
Fall, Spring, Summer. 3(3-0)
Origins and diversity of cultural systems. Theories of culture. Patterns of kinship. Religious, economic, and political institutions.

202. Biocultural Evolution
Fall, Spring, Summer. 3(3-0)

220. Gender Relations in Comparative Perspective
Fall, 3(3-0)
Gender relations in different cultures. Economic and domestic division of labor between the sexes as a factor underlying power differentials.

264. Great Discoveries in Archaeology
Spring. 3(0-0)
Great discoveries in archaeology that have captured the public's imagination and shaped Western thought, from Olduvai Gorge and Stonehenge to Machu Picchu.

270. Women and Health: Anthropological and International Perspectives
Fall, 3(3-0)

280. The Anthropological Film
Spring. 3(0-0)
Ethnographic film as a record of vanishing cultures, as a tool for ethno­logical analysis, and as a source of perspectives on different cultures and variability within cultures.

320. Social and Cultural Analysis
Fall, Spring. 4(4-0)
P: ANP 101 or ANP 201. R: Completion of Tier I writing requirement. Major theoretical traditions of cultural anthropology. Functionalism, symbolism, structuralism, and contemporary developments.

321. Anthropology of Social Movements
Fall, 3(3-0)
P: ANP 101 or ANP 201. How social movements within different cultures around the world organize, create or impede change on the basis of class, religion, race, ethnicity, language, and territory.

322. Peasants and Social Change in the Developing World
Spring. 3(0-0)
P: ANP 201 or ANP 204. Cross-cultural perspective on patterns and variations in peasant systems worldwide. Social mechanisms with which they respond to change.

340. Introduction to Physical Anthropology
Spring. 4(3-2)
P: ANP 101 or ANP 202. Problems, data, and methods of physical anthropology. Human genetics, hominid evolution, primate studies, human osteology, and human diversity. Field trips at the student's expense may be required.

360. Introduction to Archaeology
Fall. 3(3-0)
Theory, methodology, and techniques of archaeology. Applications to questions about past human behavior. History and concepts of archaeology as an anthropological subdiscipline.

361. Paleolithic Archaeology
Fall. 3(3-0)
P: ANP 101 or ANP 264 or ANP 366. Stone Age archaeology from the dawn of tool making to the specialized hunters and cave artists of the late Ice Age.

362. Evolution of Agrarian Society
Spring. 3(3-0)
P: ANP 201 or ANP 202 or ANP 264 or ANP 360. R: Not open to freshmen and sophomores. Food production as adaptive strategy. Archaeological evidence for the appearance and development of food production in prehistory. Theories, problems, and issues in the study of food production evolution.
363. Rise of Civilization
Spring. 3(3-0)
P: ANP 101 or ANP 360.
Archaeological evidence for the appearance and development of the world's earliest prehistoric civilizations. The nature of complex societies and the comparative evolution of states.

370. Culture, Health, and Illness
Spring. 3(3-0)
P: ANP 101 or ANP 201 or ANP 202 or ANP 270. R: Completion of Tier 1 writing requirement.
Cross-cultural perspectives on the definition and treatment of illness.

410. Revolution and Social Change in Latin America
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201. R: Not open to freshmen and sophomores.
Comparative examination of sociocultural changes leading to and created by major revolutions in Latin America.

411. North American Indian Ethnography
Spring of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Social and cultural patterns of North American Indian societies. History, economy, politics, social organization, religion, and social change.

412. Social and Cultural Status of Latinos in the U.S.
Spring of even-numbered years. 3(3-0)
P: ANP 101 or ANP 201 or SOC 101. R: Not open to freshmen and sophomores. Completion of Tier 1 writing requirement.
Social and cultural history of Chicanos, Puerto Ricans, Cubans and Central Americans in the United States and their contributions to American society.

413. Cultures of Southeast Asia
Spring of even-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Southeast Asian peoples, cultures, and nations. Tropical forest and sea trading adaptations. Recent social change.

414. Anthropology of South Asia
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Anthropology of India, Pakistan, Nepal, Bangladesh, and Sri Lanka. Religion, social organization, village life, urban structures, economic organization, history, and social change.

415. China: Culture and Society
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Socioeconomic and cultural continuity and change from traditional civilization to the contemporary state and the communist period. Village and urban society and their relationships.

416. Anthropology of Southern Africa
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Structure and organization of major cultures. Transformations caused by global, national, and local forces.

417. Anthropology of East Africa
Spring of even-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Social and cultural organization of the peoples of eastern Africa. Relationships between states and ethnic groups.

420. Language and Culture
Fall, Spring. 3(3-0) Interdepartmental with English.
P: ANP 101 or ANP 201 or ANP 320.

421. Social Anthropology
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Social structure and social organization. The anthropological understanding of human conduct.

422. Religion and Culture
Spring of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201. R: Completion of Tier 1 writing requirement.
The anthropology of religion and the symbolic analysis of ritual. Theoretical and ethnographic literature.

423. Psychological Anthropology
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Cross-cultural perspectives on culture and personality. Enculturation, life-cycle, person and self, emotion, and cognition, mental illness.

424. Culture and Economic Behavior
Fall of even-numbered years. 3(3-0)
P: ANP 101 or ANP 201 or SOC 101 or EC 202. R: Not open to freshmen and sophomores.
Relationship of economy to sociocultural phenomena in pre-capitalist and dependent capitalist societies.

425. Culture and Power
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201. R: Open only to seniors and graduate students.
Culture and systems of power. Societal rules and conventions. How and why people abide or transgress rules and conventions.

426. Urban Anthropology
Spring of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
The anthropological approach to urban issues. Cross-cultural perspectives on the informal economy, power, ideology, and community.

427. Interpretive Anthropology
Fall of even-numbered years. 3(3-0)
P: ANP 101 or ANP 201.
Archaeological commentary on (1) issues stemming from disparate cultures and objectives of transnational organizations and host countries; and (2) cultural and power issues that affect activity in international, interorganizational business relationships.

428. Ethnographic Field Methods
Summer. 3(3-0)
P: ANP 101 or ANP 201. R: Not open to freshmen or sophomores. Completion of Tier 1 writing requirement.
Field research in cultural anthropology. Research design, participant observation, relationship of techniques to methods, and ethics.

440. Hominid Fossils
Spring of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 202.
Theories of human evolution during the past five million years fossil evidence.

441. Osteology and Forensic Anthropology
Spring of even-numbered years. 3(3-2)
P: ANP 202 or CJ 210.

442. Genes and Diversity
Fall of odd-numbered years. 3(3-0)
Controversies over the contributions of nature and nurture to biological diversity. Issues of gender differences and the race concept.

450. African Archaeology
Fall of even-numbered years. 3(3-0)
P: ANP 101 or ANP 360.
The archaeological sequence in Africa from the dawn of the Paleolithic to the late Iron Age. Key sites and the interpretation of archaeological evidence.

451. European Prehistory
Spring of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 360.
Patterns of change in technology, subsistence, economy, settlement, social organization, and political complexity from the earliest human occupation through the Iron Age. Major issues in European archaeology.

452. North American Prehistory
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 360.
Characteristics and processes of North American prehistory on a regional level. Economic, social, political and technological change through time.

453. Mesoamerican Prehistory
Fall of odd-numbered years. 3(3-0)
P: ANP 101 or ANP 360.
Emergence and development of civilizations from first contact with Spanish Conquest. Use of archaeology, ethnohistory, and history. Major theories of plant domestication and state evolution.

460. Public Archaeology
Fall of even-numbered years. 3(3-0)
P: ANP 360.
Federal and state legislation and regulations governing archaeology and historic preservation. Major agencies responsible for compliance.

461. Method and Theory in Historical Archaeology
Fall of odd-numbered years. 3(3-0)
P: ANP 360.
Theory and methodology in historical archaeology and its relation to history and anthropology.

462. Frontiers and Colonization in Historical Archaeology
Spring of even-numbered years. 3(3-0)
P: ANP 360. R: Not open to freshmen.
Cultural dynamics and historical archaeological research in frontier and colonizing situations. European expansion in North America.

465. Laboratory Methods in Archaeology
Spring of odd-numbered years. 3(3-2)
P: ANP 360.
Preparation and preservation of archaeological data. Conservation, cleaning, cataloguing, and classification. Analysis of lithics, ceramics, faunal and floral remains, metals, and glass.

A-16
464. Field Methods in Archaeology
Summer, 2 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: ANP 101 or ANP 360. Field research. Survey, excavation, mapping, data recording, and field laboratory procedures.

470. Food, Hunger and Society
Fall of even-numbered years, 3(3-0). P: ANP 201 or ANP 202 or ANP 270 or ANP 370 or HNF 150. R: Not open to freshmen and sophomores. Cultural, economic, social, and ecological factors affecting the production and use of food. Relationship of culture to hunger.

480. History of Anthropological Theory
Fall of even-numbered years, 3(3-0). P: ANP 201 or ANP 202, one 300-level ANP course or ANP 360. The 18th, 19th and early 20th century foundations of anthropological theory. Major contemporary theoretical approaches.

489. Anthropology Capstone Course (W)
Spring, 3(3-0). P: ANP 201, ANP 202, ANP 360. R: Open only to seniors in Anthropology. Completion of Tier 1 writing requirement. Integration of the subdivisions of anthropology. Differences between anthropology and other approaches in the social sciences. Future directions of anthropological inquiry.

490. Independent Study
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: ANP 101 or ANP 201 or ANP 202; one 300-level ANP course or ANP 360. Individual research and writing supervised by a faculty member.

491. Topics in Anthropology
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: ANP 101 or ANP 201 or ANP 202; one 300-level anthropology course or ANP 360. Selected topics in sociocultural anthropology, archaeology, physical anthropology, anthropological linguistics, or medical anthropology.

492. Culture and Language Meaning

520. Research Methods in Cultural Anthropology
Spring of even-numbered years, 3(3-0). R: Open only to graduate students in Anthropology. One course in Statistics. Methodological underpinnings. Project design, field strategies, research techniques, and methods of data analysis.

530. Kinship Studies
Spring of even-numbered years, 3(3-0). P: ANP 421. R: Open only to graduate students. Cultural notions of kinship and conflict in kinship in familial, political, and other domains.

531. Seminar in Cultural Ecology
Fall of even-numbered years, 3(3-0). R: Open only to graduate students. Approval of department. Anthropological theories for understanding culture as system of mediation between humans and environment. Ecological approaches applied to sociocultural change and stability.

532. Class and Ethnicity in Social Differentiation
Fall of odd-numbered years, 3(3-0). R: Open only to graduate students. Approval of department. Anthropological theories on nature and sources of social differentiation and inequality within cultures and ethnic communities. Class and ethnic identity in cultural contexts.

533. Ethnographic Analysis
Fall of even-numbered years, 3(3-0). R: Approval of instructor. Methodological and theoretical issues in the analysis of the ethnographic monograph.

534. Medical Anthropology I: Overview
Fall, 3(3-0). R: Approval of department. Anthropological approaches to the study of sickness, disease, and healing. Medical anthropology as a sub-discipline.

535. Medical Anthropology II: Theoretical and Applied Issues
Spring, 3(3-0). P: ANP 834. R: Approval of department. Seminar in the description and analysis of themes in medical anthropology.

536. Theories of Sociocultural Change
Fall of even-numbered years, 3(3-0). R: Open only to graduate students. Theoretical and methodological issues. Major theories and models.

537. Seminar in Economic Anthropology
Spring of even-numbered years, 3(3-0). P: ANP 424 or approval of department. R: Open only to graduate students in Anthropology. Central research topics in the economic anthropology of peasant societies. Dependent capitalist formation and marginal sectors.

538. Agrarian Systems and Social Transformation
Fall of odd-numbered years, 3(3-0). Structure and organization of agrarian societies. Transformations caused by global, national and local forces.

539. Age and Gender
Fall of odd-numbered years, 3(3-0). R: Open only to graduate students. Cultural construction of age and gender. Effects on the individual and society.

560. Biocultural Evolution
Fall, 3(3-0). R: Open only to graduate students in Anthropology. One course in human evolution. Major contemporary issues in evolutionary theory, taxonomy, and the evolution of biology and culture.

561. Physical Anthropology
Spring of odd-numbered years, 3(3-0). R: Open only to graduate students. Approval of department. Controversies in biological anthropology. History of physical anthropology and current theoretical perspectives. Critical approaches to research design.

562. Human Osteology
Spring of even-numbered years, 5(4-2). R: Approval of department. Human bone biology, skeletal anatomy, and osteological analysis.

563. Nutritional Anthropology
Spring of odd-numbered years, 3(3-0). P: ANP 470 or approval of department. Food, foodways, and nutrition in different cultural systems. Production, storage, processing, and consumption. The social significance of eating, foods, and body image. Research methods.

565. Principles of Archaeological Analysis
Spring of odd-numbered years, 3(3-0). P: GEO 465 or approval of instructor. R: Open only to graduate students. Formal, spatial, and temporal dimensions of archaeological research design. Appropriate analytic techniques.

566. Evolution of Civilization
Fall of odd-numbered years, 3(3-0). R: One 300- or 400-level archaeology course and approval of department. Major anthropological theories of the emergence and development of civilizations. Role of archaeological data in formulating, testing, and refining these theories.

567. Archaeological Theory
Fall of even-numbered years, 3(3-0). R: One 300- or 400-level archaeology course and approval of department. Archaeological theory and the nature of the archaeological record. Use of archaeological data to test social theories of past human behavior.

568. The Roots of Contemporary Anthropological Theory
Spring, 3(3-0). Development of contemporary anthropological theory from 18th and 19th centuries. Major paradigms in current anthropology.

569. Social Impact Analysis
Fall of odd-numbered years, 3(3-0). Interdepartmental with Sociology. Sociocultural consequences of development programs on populations, communities, and regions in developing and industrial societies. Theory, purposes, methods, outcomes, and uses of social impact analysis.

570. Issues in Contemporary Archaeology
Fall of odd-numbered years, 3(3-0). R: Open only to graduate students in Anthropology. One 300- or 400-level archaeology course. Approval of department. Theories, issues, problems, and methodological innovations affecting the conduct of research in archaeology.