841. **Advanced Endocrine Physiology and Pharmacology**
Fall. 4(4-0) Interdepartmental with Physiology, Pharmacology and Toxicology, and Psychology. Administered by Physiology.

R: BCH 461, PSL 452. Open only to graduate students in the Colleges of Human Medicine, Osteopathic Medicine, Veterinary Medicine, Natural Science, and Agriculture and Natural Resources.

Basic and advanced concepts of endocrine and reproductive physiology and pharmacology.

890. **Advanced Independent Study**
Fall, Spring, Summer. 1 to 6 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.

898. **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.

899. **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.

848. **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.

935. **Protein Nutrition and Metabolism**
Spring 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. Nutritional and endocrine regulation of protein synthesis and degradation; protein quality assessment; protein status; protein-energy malnutrition. Protein metabolism during exercise. Metabolism, digestion, and absorption of amino acids and proteins.

936. **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: SIT 484. 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. Brooding values.

976. **Multivariate Methods in Agriculture and Natural Resources**
Spring. 4(4-0) Interdepartmental with Forestry, and Fisheries and Wildlife. Administered by Forestry.

P: SIT 492, MTH 314. Open only to graduate students in the College of Agriculture and Natural Resources and in the Interdepartmental Graduate Specializations in Ecology and Evolutionary Biology. 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, Summer. 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

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 Perspectives**
Fall. 3(0-3)

Gender relations in different cultures. Economic and domestic division of labor between the sexes as a factor underlying power differentials.

254. **Great Discoveries in Archaeology**
Spring. 3(0-3)

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(0-3)


280. **The Anthropological Film**
Spring. 4(3-0)

Ethnographic films 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**
P: ANP 101 or ANP 201. R: Composition of Tier I writing requirement. Examination of the major theoretical traditions of cultural anthropology. Functionalism, symbolism, structuralism, and contemporary developments.

331. **Anthropology of Social Movements**
Fall. 3(3-0)

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(0-3)

P: ANP 101 or ANP 201. Cross-cultural perspective on patterns and variations in peasant systems worldwide. Social mechanisms with which they respond to change.

330. **Race, Ethnicity, and Nation: Anthropological Approaches to Collective Identity**
Spring. 3(0-3)

R: ANP 101 or ANP 201 or ANP 202. Not open to freshmen. Not open to students with credit in SOC 218. Understanding race and ethnicity. Models analyzing racial, ethnic, and national identities: boundaries and collective identities and differentiation. Case studies from cultures worldwide.

340. **Introduction to Physical Anthropology**
Spring. 4(3-0)

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.

350. **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 360. Stone Age archaeology from the dawn of tool making to the specialized hunters and cave artists of the late Ice Age.

362. **Rise of Civilization**
Spring. 3(0-3)

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: Composition of Tier I writing requirement. Cross-cultural perspectives on the definition and treatment of illness.
Descriptions — Anthropology

410. Revolution and Social Change in Latin America
Fall of even-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 I writing requirement.
Social and cultural history of Chicanos, Puerto Ricans, Cubans and Central Americans in the United States and their contributions to American society.

414. Anthropology of South Asia
Fall of even-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 odd-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. R: Completion of Tier I writing requirement.

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 161 or ANP 201. R: Completion of Tier I writing requirement.
The anthropology of religion and the symbolic analysis of ritual. Theoretical and ethnographic literature.

423. Psychological Anthropology
Spring of even-numbered years, 3(3-0)
P: ANP 101 or ANP 201.
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.
Relationships between culture and socioeconomic 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 transcend rules and conventions.

426. Urban Anthropology
Spring of even-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.
Culture as a system for interpreting experiences through shared meanings and understandings. The relationships of systems of thought to systems of action. Implications for conducting anthropological fieldwork and describing other cultures.

428. Environments of International Enterprise
Spring of odd-numbered years, 3(3-0)
P: ANP 101 or ANP 201. R: Not open to freshmen and sophomores.
Anthropological 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, inter-organizational business relationships.

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

430. Hominid Fossils
Spring of odd-numbered years, 3(3-0)
P: ANP 101 or ANP 202.
Aresof human evolution during the past five million years. Fossil evidence.

431. Osteology and Forensic Anthropology
Spring of even-numbered years, 3(3-2)
P: ANP 202 or ANP 272 or ANP 370 or HNF 150.

432. 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.

433. 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.

434. European Prehistory
Spring of even-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.

435. North American Prehistory
Spring 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.

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

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

438. 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.

439. 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.

440. Laboratory Methods in Archaeology
Spring of odd-numbered years, 3(2-2)
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.

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

442. 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.

443. History of Anthropological Theory
Fall of odd-numbered years, 3(3-0)
P: ANP 201 or ANP 292; one 300-level ANP course or ANP 360.
The 18th, 19th and early 20th century foundations of anthropological theory. Major contemporary theoretical approaches.
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. R: Approval of department.

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 201 or ANP 202 or one 300-level anthropology course. Selected topics in sociocultural anthropology, archaeology, physical anthropology, anthropological linguistics, or medical anthropology.

820. Language and Cultural Meaning
Spring of odd-numbered years. 3(3-0) P: ANP 420. R: Open only to graduate students.

822. Religion and Ritual
Fall of even-numbered years. 3(3-0) R: Open only to graduate students in Anthropology. Cross-cultural comparison of religious beliefs, values, and practices in traditional and developing cultures. Religious institutions in cultural systems. Anthropological theories of religion and culture.

826. International Development and Sustainability
Spring of odd-numbered years. 3(3-0) Interdepartmental with Resource Development and Political Science. Administered by Resource Development. Environmental, economic, political, legal, management, and cultural components of sustainable development.

832. Class and Ethnicity in Social Differentiation
Fall of odd-numbered years. 5(3-0) R: Open only to graduate students. Approval of department. Anthropological theories on nature and sources of differentiation and inequality within cultures and ethnic communities. Class and ethnic identity in cultural contexts.

833. 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.

834. Medical Anthropology I: Overview
Fall. 3(3-0) R: Approval of department.

835. Medical Anthropology II: Theoretical and Applied Issues
Spring. 3(3-0) P: ANP 434. R: Approval of department. Seminar in the description and analysis of themes in medical anthropology.

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

837. Seminar in Economic Anthropology
Fall 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.

838. 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.

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

840. 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.

841. 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.

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

College of Arts and Letters

192. Arts and Humanities Freshman Seminar
Fall, Spring. (4-4)
P: Designated score on English placement test or SAT/ACT, 1994. R: Not open to students with credit in MC 112 or MC 114 or MC 115 or MC 116 or MC 120 or MC 130 or MC 135 or MC 140 or MC 145 or MC 150 or MC 198H or MC 192H. Critical reading, writing and understanding of modes of discourse. Interdisciplinary topics vary by instructor. fulfills Tier I writing requirement.

192H. Arts and Humanities Freshmen Seminar
Fall, Spring. (4-4)
R: Open only to freshmen Honors College students or approval of college. Designated score on English placement test. Not open to students with credit in AL 192 or MC 112 or MC 114 or MC 115 or MC 116 or MC 120 or MC 130 or MC 135 or MC 140 or MC 145 or MC 150 or MC 198H or MC 192H. Critical reading, writing and understanding of modes of discourse. Interdisciplinary topics vary by instructor. fulfills Tier I writing requirement.

191. Writing Tutorial
Fall, Spring. (2-1)
F: Grade of 3.0 or 3.5 in Tier I writing course. CAH 201 concurrently. Development of writing skills involved in learning and in thinking about and critically reading complex texts.

292. Introduction to Ancient Studies

390H. Interdisciplinary Perspectives in the Arts and Humanities
Fall, Spring. (3-0) A student may earn a maximum of 6 credits in all enrollments for the course. R: Open only to Honors College students and to other students with approval of College of Arts and Letters. In-depth selected topics in the arts and humanities drawing on materials and methods of several disciplines.

400. Overseas Study in Arts and Letters
Fall, Spring, Summer. 2 to 8 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to freshmen and sophomores. Approval of College. Supervised study of selected topics in the arts, languages, history, philosophy, and religious studies, in relation to particular cultural sites, museums and institutions.

450. Arts Management
Fall of odd-numbered years, 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Not open to freshmen and sophomores. Arts administration, funding and financial structure, audience development and marketing.

456. Museum Studies
Fall of even-numbered years, 3(3-0) Interdepartmental with History of Art. R: Not open to freshmen and sophomores. Activities, functions and organization of museums; the changing role of museums as cultural institutions.

486. Museum Exhibitions: Theory and Development
Spring, 3(2-2) R: Open only to seniors and graduate students. Theoretical and practical approaches to the planning, design, development, installation, and evaluation of museum exhibitions. Field trip required.

487. Approaches to Museum Education
Summer, 3(3-0) R: Open only to seniors and graduate students. Theoretical and practical approaches to the design and development of interpretive materials and programs within museums. Design and development of research and projects.

491. Special Topics
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. Special topics supplementing regular course offerings proposed by faculty on a group study basis.

ARABIC

Department of Linguistics and Germanic, Slavic, Asian and African Languages

College of Arts and Letters

101. Elementary Arabic I
Fall, Spring. (4-1)
P: ARB 101 or approval of department. Further work on speaking, listening comprehension, reading and writing of standard Arabic, with continued emphasis on developing oral proficiency skills.

102. Elementary Arabic II
Spring, (4-1)
P: ARB 102 or approval of department. Intermediate-level work on speaking, listening comprehension, reading and writing of standard Arabic, with increased emphasis on developing oral proficiency skills.

105. Special Topics in Arabic Studies
Fall, Spring. (4-4) A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. Special topics supplementing regular course offerings proposed by faculty on a group study basis.

125. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

130. Writing Tutorial
Fall, Spring, Summer, (2-1) Fulfills Tier I writing requirement.

145. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

160. Writing Tutorial
Fall, Spring, Summer. (2-1) Fulfills Tier I writing requirement.

180. Writing Tutorial
Fall, Spring, Summer. (2-1) Fulfills Tier I writing requirement.

192. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

201. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

210. Writing Tutorial
Fall, Spring, Summer. (2-1) Fulfills Tier I writing requirement.

230. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

240. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

250. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

260. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

270. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.

280. Writing Tutorial
Fall, Spring. (2-1) Fulfills Tier I writing requirement.