

**Descriptions — Animal Husbandry
of
Courses**

452. Sheep Production

Winter of even-numbered years. 4(3-3)
ANS 325 or approval of department.
History, modern breeds, breeding, selection,
nutrition and feeding, management, marketing,
housing, diseases and parasites, wool. Visits to
farm flocks. Practice in management skills.

453. Beef Production

Spring. 4(3-3) ANS 325 or approval
of department.
History, breeds, breeding, selection, nutrition
and feeding, commercial systems of production,
diseases and parasites. Visits to purebred herds
and to feed lots. Practice in management skills.

454. Horse Production

Fall of even-numbered years. 3(1-3)
ANS 325 or approval of department by inter-
view.
Horse selection, breeding, feeding, management
and merchandising. Arranged class hours to be
spent at the Horse Farm.

462. Meat Animal Breeding

Spring. 3(2-2) ANS 461.
Uses and effects of different breeding systems
with beef cattle, sheep, and swine. Formulating
breeding plans.

825. Techniques in Nutrition Research

Winter of odd-numbered years. 1 to
3 credits. CEM 333; approval of department.
Interdepartmental with Human Nutrition and
Foods.
Use of specialized instruments and techniques.
Laboratory safety. Management of laboratory
animals. Development of abilities in areas of
particular interest to individual students.

890. Advanced Special Problems

Fall, Winter, Spring, Summer. 1 to 4
credits. May re-enroll for a maximum of 8
credits. Approval of department.
Investigation of animal husbandry areas of spe-
cial interest to individual graduate students.

899. Research

Fall, Winter, Spring, Summer. Varia-
ble credit. Approval of department.

912. Seminar

Fall, Winter, Spring. 1 credit.

**926. Comparative Nutrition-Lipids and
Carbohydrates**

Winter of odd-numbered years. 4(4-0)
BCH 452 and a previous course on principles
of nutrition. Interdepartmental with and ad-
ministered by Human Nutrition and Foods.
Regulatory aspects of carbohydrate and lipid
metabolism as influenced by nutrition in mam-
mals. Emphasis on normal and abnormal
physiological states such as obesity, ketosis and
diabetes.

**927. Comparative Nutrition-Protein
Metabolism and Developmental
Biology**

Winter of even-numbered years. 4(4-0)
BCH 452, PSL 802 or concurrently. Interde-
partmental with and administered by Human
Nutrition and Foods.
Protein quality assessment, protein status, pro-
tein calorie malnutrition, amino acid metabolism,
protein turnover, digestion and absorption, hor-
monal control of protein metabolism, develop-
mental aspects of protein metabolism and
growth.

928. Comparative Nutrition-Minerals

Spring of even-numbered years. 3
credits. BCH 452, PSL 802. Interdepartmental
with Human Nutrition and Foods.
Forms and location in body, metabolic roles,
deficiency and toxicity signs, interrelationships,
requirements and biological availability of
sources.

929. Comparative Nutrition-Vitamins

Spring of odd-numbered years. 3(3-0)
BCH 452 and a previous course on principles
of nutrition. Interdepartmental with Human
Nutrition and Foods.

Chemical and physical properties, standards of
activity, occurrence, metabolic roles, antivita-
mins, deficiency and toxicity signs, requirements
and factors affecting requirements.

963. Genetics of Breed Improvement

Winter. 3(3-0) ANS 461, STT 421.
Breed improvement. Changing gene frequency.
Genetic and environmental subdivision of
phenotypic variance.

964. Breeding Systems and Plans

Spring. 3(3-0) 963.
Biometric relations between related animals.
Role of selection in changing populations. The
effects of different mating systems.

999. Research

Fall, Winter, Spring, Summer. Varia-
ble credit. Approval of department.

ANIMAL SCIENCE ANS

**College of Agriculture and
Natural Resources**

101. Animal Science

Fall. 5(4-2)
Survey of the animal industries including his-
tory, economic geography, anatomy and physi-
ology, nutrition and feed usage, and systems of
commercial livestock and poultry production.

213. Animal Science Seminar

Fall. 1(2-0)
Animal science industries. Industry representa-
tives will be utilized to discuss particular areas.

325. Principles of Animal Nutrition

Spring. 5(5-0) CEM 132; BCH 200
recommended.
Livestock feeds and their nutrients. Functions
of and requirements for nutrients. Evaluation
of feeds. Feeding practices. Formulation of
rations for beef and dairy cattle, horses, poultry,
sheep and swine.

461. Principles of Animal Breeding

Winter. 3(3-0) CSC 250.
Quantitative inheritance. Gene frequency. Sta-
tistical tools used in animal breeding. Effect of
selection and mating systems on animal popu-
lation.

525. Animal Nutrition

Winter. 5(4-2) BCH 401.
Principles of nutrition. Nutrients and their me-
tabolism. Nutritive requirements for mainten-
ance, growth, reproduction, lactation and work.
Nutrient sources and their use in preparing diets
for domestic animals.

826. Animal Nutrition

Spring. 4(4-0) One course each:
*biochemistry, physiology; and approval of de-
partment.*
Nutrition basic to animal feeding. Application of
chemistry and physiology to nutrition. Nutrient
requirements for normal body functions. Tech-
niques involved in nutrition research; readings in
current literature.

854. Design of Animal Experiments

Spring. 4(4-0) STT 423.
Choice, implementation and statistical analysis
of experimental plans for research with animals.
Designs for reduction of experimental error.
Analysis of experiments with complex structure
or unequal subclass numbers.

965. Biometrical Genetics

Fall. 4(4-0) One course in quanti-
tative or population genetics.
Genetic expectations in random mating and in-
bred populations. Estimation of genetic param-
eters. Relation of gene frequency to population
mean and variance. Components of genetic
variance. Correlation of relatives. Selection
theory.

ANTHROPOLOGY ANP

**College of Human Medicine
College of Osteopathic Medicine
College of Social Science**

100. The Origin of Man and Culture

Fall, Winter, Spring, Summer. 4(3-1)
Introduction to physical anthropology: the po-
sition of man in the animal kingdom, the
genetic mechanisms of evolution, human begin-
nings and the fossil record, racial evolution and
racial types among modern man, the anticipation
of culture among other animals and the devel-
opment of human culture, and culture as an
adaptive mechanism.

171. Introduction to Anthropology

Fall, Winter, Spring, Summer. 4(3-1)
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.

IDC. Resource Ecology and Man

For course description, see Interdisci-
plinary Courses.

**221. Introduction to Social and
Cultural Analysis**

Fall, Spring. 4(3-1) 171.
Basic theoretical framework of socio-cultural
analysis: structural functionalism, evolutionism,
and cultural ecology.

**250. Culture, Environment and
Adaptation**

Fall. 4(3-1) 100.
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.

**IDC. Continuing Revolution in China:
Problems and Approaches**

For course description, see Interdisci-
plinary Courses.

**263. Origin of Civilization:
Archaeology**

Spring. 4(3-0) 100.
The rise, development and spread of culture in
the period before written history. Archaeological
evidence is used to trace the evolution of culture
as it has been reconstructed from the excavation
of pre-historic sites in the Old and New World.

275. The Anthropology of Asia

Fall. 4(3-0) Sophomores or approval
of department.
Several cultural complexes and cultures types—
from hunting and gathering through complex
civilization—of East, 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. The Africans and Their Cultures
Fall, Spring. 4(3-0) Sophomores or approval of department.

Racial and cultural problems confronting the African peoples.

285. Anthropology and the Modern World
Spring. 4(2-2) 171.

Interwoven nature of cultural traditions in the modern world. Consideration of how people of developing nations respond to the dominant cultural forces of industrialized nations.

350. Peasant Society
Fall. 4(3-1) 171.

Anthropological study of peasantry. Comparative examination of the rural societies and cultures of Asia, Europe, and Latin America.

356. Culture, Health and Illness
Spring. 4(3-1) 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.

381. Anthropology and Education
Winter. 4(3-1) 171 or other social science. For Education and Anthropology majors.

Maturation and socialization in various societies of Asia, Africa, 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.

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

387. Ethnicity and Nation Building
Spring. 4(2-2) 171.

Ethnic minorities and the roles they play in fostering and/or hindering nation building processes in Third World countries. A theoretical framework is utilized to compare systematically these roles in various areas of the world.

IDC. Survey of Sub-Saharan Africa
For course description, see Interdisciplinary Courses.

IDC. Survey of Sub-Saharan Africa
For course description, see Interdisciplinary Courses.

400H. Honors Work

Fall, Winter, Spring, Summer. 1 to 16 credits. May re-enroll for a maximum of 20 credits. Approval of department.

411. Studies in the Anthropology of Asia

Fall, Winter, Spring. 4(3-0) May re-enroll for credit for Part II in an area and/or for another area. 171; 275 or approval of department.

Separate courses in Asian cultures: China; Japan; Southeast Asia; South Asia; Central Asia. A two-part course sequence is usually given. Part I: Ethnographic survey. Part II: Sub-areas, special problems and approaches.

415. Studies in the Anthropology of Africa

Winter, Spring. 4(3-0) May re-enroll for credit for Part II in an area and/or for another area. 171; 281 or approval of department.

Separate courses on African cultures: West Africa; Central Africa; East Africa. A two-part course sequence is usually given. Part I: Ethnographic survey. Part II: Sub-areas, special problems and approaches.

419. Studies in the Anthropology in the New World

Fall, Winter, Summer. 4(3-0) May re-enroll for credit for Part II in an area and/or for another area. 171 or approval of department.

Separate courses on New World cultures: Arctic; North America; Middle America; South America. A two-part course sequence is usually given. Part I: Ethnographic survey. Part II: Sub-areas, special problems and approaches.

423. Studies in the Anthropology of the Near East

Winter, Spring. 4(3-0) May re-enroll for credit for Part II in an area and/or for another area. 171 or approval of department.

Separate courses on Near East cultures: North Africa and Southwest Asia. A two-part course sequence is usually given. Part I: Ethnographic survey. Part II: Sub-areas, special problems and approaches.

444. Races of Man

Fall of odd-numbered years. 3(3-0) 100.

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 Man

Winter of odd-numbered years. 3(3-0) 100.

Fossil evidence and theory pertaining to human evolution during the last four million years.

446. Primatology

Spring. 3(3-0) 100.

The order primates: evolution, taxonomy, biology, and behavior. Primate learning, cultural, sexual, maternal, and aggressive behavior; and social organization.

450. Area Courses in Prehistory

Fall, Winter. 4(4-0) 100 or 171, and 263; 6 additional credits in anthropology.

Archaeology of different areas with emphasis on prehistoric adaptations to natural and social environments. Settlement patterns, subsistence, technology, and style will be considered. Areas covered will vary with staff and student interest.

463. Social Anthropology

Fall. 4(3-0) 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, sex, age and status, analyzed for specific groups.

464. Religion and Culture

Winter. 4(3-0) 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) 171 and 463 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(3-0) Approval of department. Interdepartmental with the English Department.

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, Trade Jargon, Lingua Franca; "Hybridization" and "Substratum"; Language and Cultural Change; a brief examination of Theories of Origins and of the Sapir-Whorf Hypothesis.

468. Systems of Rank

Spring of odd-numbered years. 4(4-0) 171 and 463 or approval of department.

A comparative study of systems of rank such as age grading, sexual, spatial, caste, ethnicity, and class systems. The course emphasizes both symbolic and transactional analyses of rank.

469. Cultural Areas of the World

Winter, Summer. 4(3-0) May re-enroll for credit when new area is given. 100 or 171 or SOC 241 or approval of department.

Social character of people, social organization, culture of area in relationship to social heritage, local conditions and world affairs. Areas emphasized will vary with staff and student's interest: Africa, American Indian, Latin America, Near East, Northeast Asia, Pacific, and South-east Asia.

472. Anthropology of Legal Systems

Winter. 4(4-0) 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 Sociology Department.

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. 4(4-0) 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.

475. Political Anthropology

Spring. 4(4-0) 171.

Political systems of changing cultures in Asia, Africa and Latin America. Relation between political and other social institutions and analysis of the organization of conflict in non-Western societies. The relation of tribal and peasant politics to national politics in developing countries seen in a comparative framework.

IDC. Canadian-American Studies

For course description, see Interdisciplinary Courses.

481. Cross-Cultural Relations in the Modern World

(466.) Winter of even-numbered years. 4(4-0) 473. Interdepartmental with the Department of Sociology.

Relationship of native peoples to world-wide forces and reactions of native peoples to world struggle for power. Problems involved in administration of programs for non-Western societies.

**Descriptions — Anthropology
of
Courses**

801. Core Seminar in Ethnographic Analysis I
Fall. 4(4-0) Approval of department.

Develops professional competence in the analytical assessment of monographic studies in social anthropology and examines a selected range of analytical issues in relation to their ethnographic contexts.

802. Core Seminar in Ethnographic Analysis II
Winter. 4(4-0) 801.

Continuation of 801.

803. Introduction to Paleoanthropology I
Winter. 4(4-0) Approval of department.

Exploration of evolutionary theory followed by an examination of data and modes of analysis pertinent to the study of hominid evolution and the development of culture through the Middle Pleistocene.

804. Introduction to Paleoanthropology II
Spring. 4(4-0) 803.

Exploration of hominid evolution and cultural development from the Middle Pleistocene through the Early Holocene. Emphasis on selected issues illustrating the ways in which paleoanthropologists solve problems.

805. History of Anthropological Theory
(829.) Fall. 5(5-0) 802, 804 or approval of department.

A review of the various schools of thought, important personalities, and principal concepts that have contributed to the development of anthropological theory.

821. Evolution of Man
Fall. 5(3-3) Approval of department.

Intensive review of biological and cultural evolution of man, with emphasis placed on anatomy, ethnology, polymorphism, genetics, cultural ecology, prehistory, and the development of civilization.

825. Seminar in Cross-Cultural Relations
Winter of odd-numbered years. 4(3-0) Approval of department. Interdepartmental with the Sociology Department.

Analysis of the relations between superordinate and subordinate societies and between coordinate societies and cross-cultural exchange programs.

826. Ethnology of Selected Areas
Fall, Spring. 4(3-0) May re-enroll for a maximum of 16 credits. Approval of department.

Intensive review of ethnology of selected culture areas with emphasis on current anthropological problems of that area.

827. Anthropological Theorists
Winter. 4(4-0) May re-enroll for credit with approval of department. Approval of department.

Review of current theoretical problems in social and cultural anthropology.

830. Kinship Studies
Winter. 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. 5(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.

833. Anthropological Problems of Prehistory
Spring. 5(3-2) Approval of department.

Relation of archaeology to the other fields of anthropology on both a theoretical and practical level. Archaeological data are used to introduce problems of long-range cultural change and development.

835. Human Osteology and Osteometry
Fall of even-numbered years. 5(3-4) 821 or ANT 540.

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.

IBC. Interdisciplinary Seminar on Africa
For course description, see Interdisciplinary Courses.

850. Archaeological Methods and Techniques
Winter. 4(4-0) 833 or approval of department.

Seminar outlining archaeological method and the role of technique in the strategy of archaeology. Techniques and problems of information retrieval will be emphasized.

856. Methodology of Anthropological Research
Winter. 1 to 12 credits. Approval of department.

Seminar in problems of anthropological investigation considered in the framework of history and philosophy of science. Relevance of various field techniques, methods of data gathering and data handling, and strategies of analysis for various problems are treated.

865. Environment, Technology, and Culture
Spring. 4(3-0) Approval of department.

Cultural ecology, study of the relation of man and his physical environment, the role of technology in mediating between the two. Comparative analysis of the interdependence of social organization, technology and environment. Case histories of cultural and social change arising from technological innovations.

870. Applied Anthropology
Spring of odd-numbered years. 4(3-0) Approval of department.

Theoretical and methodological problems involved in planned social change. Course will focus on field experience in the local community. Designed mainly for graduate students having professional interest in the application of social change.

872. Seminar in Special Subject Fields
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

Special fields of study will include any area of anthropology selected.

875. Individual Research Projects
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

880. Individual Readings
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

899. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

922. Dimensions of Culture
Winter. 5(5-0) Approval of department.

Intensive review of principles of cultural anthropology, ethnology, and cultural change with particular attention to systems theory and interconnections of cultural, social, personality, and ecological systems.

923. Cultural Dynamics
Spring. 5(3-2) Approval of department.

Intensive review of culture change theories, processes of the development of the self, contemporary cultural movements, and the application of anthropological knowledge.

999. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

ART

College of Arts and Letters

History of Art

HA

205. Introduction to Art
Fall, Winter, Spring. 3(3-0) Not open to majors.

Painting, sculpture and architecture from the time of the Greeks to the present. Individual works of art examined intensively, as regards both their formal qualities and the manner in which they exemplify the shifting patterns of Western culture.

206. History of Western Art
Fall. 4(4-0)

Painting, sculpture, architecture and decorative art from prehistoric to modern times. Provides acquaintance with the forms of art typical of each period and indicates the aesthetic qualities which give them artistic significance. Work in first term covers Prehistoric, Egyptian, Mesopotamian, Greek, Roman, Early Christian and Byzantine periods.

207. History of Western Art
Winter. 4(4-0)

Continuation of 266. Early Medieval, Romanesque, Gothic, Renaissance and Mannerist periods.

208. History of Western Art
Spring. 4(4-0)

Continuation of 267. Baroque, Rococo, Neoclassic and subsequent periods to contemporary art.

400H. Honors Work
Fall, Winter, Spring, Summer. 1 to 6 credits. Approval of department.

404. Greek Art
Winter. 4(3-0) 206 or approval of department.

The history of painting, sculpture and architecture of ancient Greece from the Bronze Age through the end of the Hellenistic period.