173. America on Film

(113F.) Spring. 3(4-0) Three credits in the second term of any ATL sequence numbered 121 or above; or satisfactory performance in Comprehensive English.

Aims to acquaint the student with cinematic and fictional representation of experience, and to improve his ability at reading and writing. Selected readings and theme topics.

181. Women in America

(111J.) Fall. 3(3-0) Satisfactory grade on English proficiency examination or in Comprehensive English.

Aims to acquaint the student with women's experience in America, and to improve the student's ability at reading and writing. Selected readings and theme topics.

182. Women in America

(112J.) Winter. 3(3-0) Three credits in the first term of any ATL sequence numbered 121 or above; or satisfactory performance in Comprehensive English.

Aims to acquaint the student with women's experience in America, and to improve the student's ability at reading and writing. Selected readings and theme topics.

183. Women in America

(113J.) Spring. 3(3-0) Three credits in the second term of any ATL sequence numbered from 121 or above; or satisfactory performance in Comprehensive English.

Aims to acquaint the student with women's experience in America, and to improve the student's ability at reading and writing. Selected readings and theme topics.

191H. Honors Work in American Experience

(111H.) Fall. 3(3-0) Satisfactory grade in entrance examination.

Students read and write on selected topics to improve their knowledge of the American heritage and their ability at reading and writing.

192H. Honors Work in American Experience

(112H.) Winter. 3(3-0) Satisfactory grade in the first term of any ATL sequence numbered 121 or above.

Students read and write on selected topics to improve their knowledge of the American heritage and their ability at reading and writing.

193H. Honors Work in American Experience

(113H.) Spring. 3(3-0) Satisfactory grade in the second term of any ATL sequence numbered 121 or above.

Students read and write on selected topics to improve their knowledge of the American heritage and their ability at reading and writing.

205. Reading for University-Level Understanding

Fall, Winter, Spring. 2(0-4) May re-enroll for a maximum of 4 credits.

Individualized instruction in techniques for improving vocabulary, comprehension, rate, study skills and test taking skills in order to achieve a better understanding of university-level materials.

232. American Humor

Winter. 4(4-0) Sophomores.

An interdisciplinary study of the relationship between American humor and the developing American experience, especially of the nineteenth and twentieth centuries.

300. Supervised Individual Study

Fall, Winter, Spring, Summer. 2 to 4 credits. May re-enroll for a maximum of 12 credits. 9 credits in a composition course; approval of department.

Selected students requesting individual study of interdisciplinary problems will work under supervision of University College professors. Variable elective credit will be determined when the student secures instructor, adviser, and department approval.

350. Contemporary American Film and Society

Winter. 4(4-0) Sophomores.

Contemporary American films as reflections of and influences on American society. Term topics: Violence and Crime or Women.

380. The Role of Women in America: Arts and Self

Winter. Summer of even-numbered years. 4(4-0) Juniors.

Various art forms by women and the exploration of a feminine sensibility; sex, race, and class interactions, sexual stereotypes; male views of women and themselves; the impact of the media.

381. The Role of Women in America: Movements and Ideology

Spring. Summer of odd-numbered years. 4(4-0) Juniors.

Key personalities and philosophical currents in the women's movement; biological and cultural myths and realities; the historical role of the family, "The Culture of Romance".

439. Writing the Research Report

Winter, Spring. 4(4-0) Juniors.

Advanced methods and organization of written research reports will be taught by providing examples, exercises, and writing practice based on research submitted by the students.

ANATOMY ANT

College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine

316. General Anatomy

Fall, Spring. 5(5-0)

Designed to impart the basic concepts of the broad field of anatomy. Special requirements of the various disciplines will be met in their respective laboratories.

420. Microscopic Anatomy

Winter. 5(2-8) Medical Technology students or approval of department.

Microscopic study of the structure of cells, tissues and organs.

505A. Anatomy in Physical Diagnosis

(505.) Fall. 1 to 3 credits. H M 505 concurrently.

Exercises in which students study systemic anatomy in a physical diagnosis context. Preparatory self-instruction precedes exercises.

505B. Anatomy in Physical Diagnosis

Winter. 1 to 3 credits. 505A or approval of department.

Exercises in which students study regional anatomy in a physical diagnosis context. Preparatory self-instruction precedes exercises.

505C. Anatomy in Physical Diagnosis

Spring. 1 to 3 credits. 505B or approval of department.

Exercises in which students study regional anatomy in a physical diagnosis context. Preparatory self-instruction precedes exercises.

510. Veterinary Gross Anatomy

(521.) Summer. 6(3-9) Admission to professional veterinary program.

Gross anatomy of a representative animal, the dog, is studied. Lecture, dissection of embalmed specimen, study of prosections, slides, models and living animals.

511. Veterinary Histology

(520.) Summer. 4(2-6) First-term Veterinary Medicine students.

A general histology course for veterinary students which includes a survey of the tissue of the animal body.

512. Veterinary Neuro Anatomy

Summer. 2(2-0) First-term Veterinary Medicine students.

Gross anatomy of the central nervous system in animals emphasizing functional and dysfunctional aspects of pathways and nuclei in dogs as a foundation for clinical neurology.

513. Veterinary Microscopic Anatomy

(522.) Fall. 5(3-6) Second-term Veterinary Medicine students.

Microscopic anatomy of the digestive, urinary, respiratory, male and female reproductive systems, integumentary system, central nervous system and special sense organs of domesticated animals.

514. Veterinary Comparative Anatomy

(523.) Fall. 4(2-6) Second-term Veterinary Medicine students.

Lecture, dissection of embalmed specimens and the study of prosections, models and live animals related to the anatomy of the domestic animals.

540. Gross Biomedical Structure

Fall, Winter, Spring. Variable credit. May re-enroll for a maximum of 15 credits. Human Medicine students; approval of department for graduate students.

Human structure, systemic and regional, is studied in self-instructional and dissection sequences. Application of this knowledge to recognition of normal and abnormal structure in appropriate medical contexts is accomplished through self-instructional and clinical sessions.

543. Microscopic Anatomy

Winter. 3(1-3) Human Medicine students; approval of department for graduate students.

The principles of microscopic anatomy, utilizing self-instructional units and laboratory experience with organ sections viewed through the light microscope.

545. Neuroanatomy

Spring. 3(4-0) Admission to medical school or approval of Neuroscience Committee.

Introduction to gross and microscopic anatomy of the human nervous system, to related basic neurophysiologic concepts and to a problem-solving approach to the diagnosis of nervous system disease.

560. Functional Medical Cytology and Histology

Fall. 2(1-3) Approval of department

Self-study and laboratory instruction are combined in presenting the mutual relationship between the structure and function (physiological and biochemical) of cells and tissues. The emphasis is on the medical relevance of cytophysiology.

565. Introduction to Human Gross Anatomy

Fall. 5(3-6) Approval of department.

Core concepts in regional, systemic and topographical human gross anatomy: Prosection, discussion and lecture methods using audio-visual aids and frequent review.

801. Seminar

Fall, Winter, Spring. 1(1-0) Approval of department.

813. Problems in Anatomy

Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 15 credits. Basic disciplines in various areas and approval of department.

Various anatomical fields such as gross anatomy, histology, hematology, tissue culture, cytology, neurology and embryology will be studied.

815. Anatomy of the Nervous System

Fall. 5(3-5) Approval of department.

Developmental, gross and microscopic anatomy of the nervous system. Organizational and functional aspects of the peripheral and central nervous system are stressed. Gross demonstrations include brain and dog dissections.

899. Research

Fall, Winter, Spring, Summer. Variable credit. Majors.

999. Research

Fall, Winter, Spring, Summer. Variable credit. Majors.

ANIMAL HUSBANDRY A H

College of Agriculture and Natural Resources

111. Livestock and Meat Industry

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

Adaptation, distribution and numbers of livestock throughout the world; significance and economic importance. Trends in livestock production. Evaluating, grading, classifying and marketing of livestock and meat. Relationship of live animal conformation to carcass merit.

214. Horses and Man

Fall. 3(3-1)

The horse in today's world. Types, breeds and uses for recreation and therapy. Selection, development and maintenance of a healthy, well-trained horse.

241. Meat Production

Winter. 5(3-6) 111.

Principles of meat evaluation and selection. Carcass certification programs. Influence of production factors on carcass desirability. Practice in slaughtering, cutting and meat processing.

242. Meats, Poultry and Fishery Products I

Fall. 3(2-2) Interdepartmental with and administered by Food Science.

Principles of evaluation and nutritive value. Identification of grades and cuts of beef, pork, lamb and poultry products.

245. Meat Evaluation and Grading

Fall, Spring. 1 to 3 credits. May re-enroll for a maximum of 4 credits subject to a maximum of 10 credits in 245 and 335 combined. 241.

Evaluation of carcasses and wholesale cuts of beef, pork, veal and lamb in accordance with federal and commercial grading standards. Inspection trips through large meat packing plants.

335. Livestock Selection

Fall, Winter, Spring. 1 to 3 credits. May re-enroll for a maximum of 9 credits subject to a maximum of 10 credits in 245 and 335 combined. 111.

Evaluation of productive merit of individual animals. Comparison of type with a standard. Relationship of form to function. Field trips to prominent livestock breeding establishments and to major livestock events.

415. Special Problems

Fall, Winter, Spring. 1 to 3 credits. May re-enroll for a maximum of 5 credits. Seniors and approval of department.

Special studies in fields not covered by other animal husbandry courses.

451. Swine Production

Fall. 4(3-3) ANS 325 or approval of department.

Historical aspects with emphasis on current trends. Breeds, breeding, selection, nutrition requirements, management practices, marketing, housing and environmental needs, disease and parasite problems. Visits to representative farms.

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.

Feeding, breeding management, marketing. Emphasis on growth and development; costs and returns; feed requirements; reproduction, cross-breeding; performance testing; housing; diseases. Practice in management skills. One field trip.

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.

IDC. The Impact of Animal Resource Management Upon the World's Developing Nations

For course description, see Interdisciplinary Courses.

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 special interest to individual graduate students.

899. Research

Fall, Winter, Spring, Summer. Variable 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 administered by Human Nutrition and Foods.

Regulatory aspects of carbohydrate and lipid metabolism as influenced by nutrition in mammals. 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. Interdepartmental with and administered by Human Nutrition and Foods.

Protein quality assessment, protein status, protein calorie malnutrition, amino acid metabolism, protein turnover, digestion and absorption, hormonal control of protein metabolism, developmental 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, antivitamins, 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. Variable credit. Approval of department.