

Descriptions – English

of Courses

- 885. *Studies in the History of Literary Criticism***
Fall, Winter, Spring, Summer. 3(3-0)
The history of literary criticism.
- 886. *Studies in Modern Criticism***
Fall, Winter, Spring, Summer. 3(3-0)
ENG 885.
Continuation of ENG 885.
- 895A. *College Teaching of English Language and Literature: History and Issues***
Fall. 3(3-0) Approval of department.
Literature, literary criticism, writing, and reading in the English language as academic subjects.
- 895B. *College Teaching of English Language and Literature: Reading***
Winter. 3(3-0) Approval of department.
Integration of the teaching of writing and reading in English with stress on relevant research in reading in such areas as: linguistics, applied linguistics, psycholinguistics, language acquisition.
- 895C. *College Teaching of English Language and Literature: Writing***
Spring. 3(3-0) Approval of department.
Integration of the teaching of writing and reading in English with stress on relevant research in writing and composition such as linguistics, applied linguistics, psycholinguistics, and language acquisition.
- 896. *Practicum in English Language and Literature***
Fall, Winter, Spring, Summer. 2 to 6 credits. Approval of department.
Supervised graduate practicums, observations, internships in the teaching of English language and literature.
- 899. *Master's Thesis Research***
Fall, Winter, Spring, Summer. Variable credit. Approval of department.
- 902. *Comparative Literature: Studies in Form and Genre***
Winter, Spring. 3(3-0) Interdepartmental with German and Russian, and the Department of Romance and Classical Languages.
Development and interrelationships of individual and collective forms and genres of literatures of the Western world, including the drama, tragedy, the novel, the short story, the theory and forms of poetry, popular literature, and the tale.
- 903. *Comparative Literature: Studies in Periodization***
Fall, Winter, Spring. 3(3-0) Interdepartmental with German and Russian, and the Department of Romance and Classical Languages.
Analyses of the manner in which various genres, conventions and continuing traditions of literature interact with the creative and critical climates of particular periods and movements, such as classicism, the Middle Ages, the baroque, or romanticism, in qualifying or modifying characteristic literary works.
- 904. *Studies in Influence***
Fall, Winter, Spring. 3(3-0)
Mutual influences of the English, Romance and Germanic literatures in general and in terms of specific authors and literary kinds, together with studies of the intermediaries of transmission, translations and sources.
- 930. *Studies in English Drama***
Fall of even-numbered years. Spring of odd-numbered years. 3(3-0)
Liturgical beginnings to 1642.
- 940. *Studies in Shakespeare***
Winter of odd-numbered years. 3(3-0)
To receive credit, both ENG 940 and ENG 941 must be completed satisfactorily.
- 941. *Studies in Shakespeare***
Spring of odd-numbered years. 3(3-0)
To receive credit, both ENG 940 and ENG 941 must be completed satisfactorily.
- 970. *Graduate Reading Course***
Fall, Winter, Spring, Summer. 1 to 5 credits. Approval of department.
Supervised reading course in English and American literature for Ph.D. candidates.
- 973. *Seminar in English Education***
Spring, Summer. 3 to 5 credits. May reenroll for a maximum of 10 credits if different topics are taken. Approval of instructor.
Seminar in the teaching of English literature, language, and composition.
- 975. *The Reading Process and the Concept of Literacy***
Spring. 3(3-0) Approval of department.
The contributions of language and literary studies to our understanding of the reading process and our definitions of literacy.
- 980. *Studies in English Language***
Fall, Winter, Spring. 3(3-0)
The English language from the viewpoint of historical problems, literary analysis and pedagogical implications.
- 981. *Seminar: Earlier English Literature***
Fall, Winter, Spring. 3(3-0)
Special problems in English literature, beginnings to 1660.
- 982. *Seminar: Later English Literature***
Fall, Winter, Spring. 3(3-0)
Special problems in English literature, 1660-1900.
- 983. *Seminar: American Literature***
Fall, Winter, Spring. 3(3-0)
Special problems in American literature, beginnings to 1900.
- 984. *Seminar: Twentieth Century Literature***
Fall, Winter, Spring. 3(3-0)
Special problems in English and American literature, 1900 to the present.
- 985. *Seminar: Special Studies in Literary Form and Theory***
Fall, Winter, Spring. 3(3-0)
Forms, genres, and movements.
- 986. *Seminar: American Literature and Culture***
Fall, Winter, Spring. 3(3-0)
American literature in a cultural context, drawing upon popular and fine arts, the history of ideas, the history of social movements.
- 987. *Seminar: Special Topics in Comparative Literature***
Spring. 3(3-0) Advanced graduates. Interdepartmental with German and Russian, and the Department of Romance and Classical Languages. Administered by the Department of Romance and Classical Languages.
- 998. *Advanced Writing for Doctoral Candidates***
Fall, Winter, Spring, Summer. 3(3-0)
Admission to a doctoral program or approval of instructor.
Training for writing dissertations and publishing in the sciences, humanities, and other fields. Includes a detailed analysis of each student's style, methods of organizing, practice in editing, and individual conferences.
- 999. *Doctoral Dissertation Research***
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

ENTOMOLOGY

ENT

College of Agriculture and Natural Resources College of Natural Science

- 250. *Pesticides, Their Alternatives and Environmental Quality (N)***
Winter. 3(4-0)
Impact of agricultural pesticides on man and his environment. Emphasizes the effect of chemicals on food production and combating diseases and ecological imbalance. Presents pesticide alternatives for the future.
- 301. *General Entomology***
Fall, Spring. 3(3-0) BS 211 and BS 212 recommended.
Biological relationships of insects. Insect behavior, ecology, and classification. Metamorphosis and development of insects.
- 302. *General Entomology Laboratory***
Fall, Spring. 2(0-6) ENT 301 or concurrently.
Insect diversity with emphasis on morphology, development, classification, identification, bionomics, and evolution. Stresses reproductive strategies and general adaptability as relates to the overall ecological success of insects.
- 303. *Entomological Techniques***
Spring. 2(0-6) ENT 301 or approval of department; ENT 302 recommended but not required.
Field entomology, including collecting and rearing techniques and methods of specimen preparation and preservation. Practical experience in insect identification and bionomics. Collection required.

337. Forest and Shade Tree Entomology
Fall. 4(3-2) Three terms of natural science.

Ecological relationships of insect/tree interactions. Taxonomy of insects and recognition of insect injury. Biological, chemical, silvicultural and integrated control methods. Insect collection required (see instructor during prior spring term).

401. Problems

Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Approval of department.

Advanced individual work on a field or laboratory research problem or a study of published literature on a selected topic.

410. Apiculture and Pollination

Spring. 3(2-2)

Biology of the honey bee and some of the wild bees. Relationships between bees and flowering plants. Value of bees in crop pollination. Introduction to management with visits to the University apiary.

415. Insect Behavior

Winter of even-numbered years. 3(3-0) ENT 301, ENT 302; ZOL 413 recommended.

Mechanisms and adaptive significance of communication, orientation, food and habitat selection and behavioral rhythmicity in insects.

418. Systematic Entomology

Winter. 4(1-9) ENT 301, ENT 302.

General taxonomic course to acquaint the student with the various groups of insects.

420. Aquatic Insects

Spring. 4(3-3) ENT 301, ENT 302.

Biology, ecology and systematics of aquatic insects. Insect collection required.

425. Agricultural Entomology

Fall. 4(3-2) One year of biological or agricultural sciences.

Natural processes of insect populations and associated techniques that are important to agriculture.

438. Taxonomy of Immature Insects

Spring of even-numbered years. 4(1-9) ENT 418.

Identification of immature insects with particular emphasis on the Holometabola.

440. External Morphology of Insects

Fall. 4(2-6) ENT 301, ENT 302, or approval of department.

Morphological concepts of external skeletal parts of insects. Emphasis on evolutionary development of structures from the Apterygota through the Pterygota.

444. Insect Ecology

Fall of odd-numbered years. 3(3-0) One course in introductory entomology.

Unique characteristics and principles of insect ecology. Trophic relationships, populations, climate, co-existence, competition, behavior, communities and distributions.

450. Insect Physiology

Fall of even-numbered years. 5(3-4) ENT 301, ENT 302; 1 biochemistry or physiology course; 1 year of chemistry including 1 term of organic.

General and comparative physiology of insects, treating molecular, tissue and organ function. Laboratory exercises emphasizing mastery of sound experimental procedures.

455. Toxicology of Insecticides

Winter of odd-numbered years. 4(4-0) 1 term organic chemistry.

Properties of insecticides. Mode of action, metabolism and movement in animals. Safety and potential hazards to man and wildlife. Fates of insecticides in the environment.

460. Medical Entomology

Spring. 4(3-3) ENT 301, ENT 302, or approval of department.

Distribution and biology of important arthropod vectors of diseases to man, disease symptoms, life cycle of the infectious agent, reservoirs, urticating arthropods, anaphylactic reactions, myiasis, and prophylactic measures.

470. Nematode Diseases of Economic Plants

Winter. 4(3-3) B S 212 or BOT 205. Interdepartmental with the Department of Botany and Plant Pathology.

Major nematode diseases of economically important plants, with emphasis on diagnostic symptoms, nematode biology and principles of control.

478. Stream Ecology

Spring. 3(3-0) ENT 420, ZOL 389 or BOT 450 or F W 302 or approval of department. Students may not receive credit in both F W 478 and ENT 421. Interdepartmental with the departments of Fisheries and Wildlife and Zoology. Administered by the Department of Fisheries and Wildlife.

Biological, chemical, physical, and geological processes which determine the structure and function of stream ecosystems.

490. Topics in Entomology

Fall, Winter, Spring, Summer. Variable credit. Majors or approval of department.

Advanced work in medical entomology, acarology, advanced forest entomology, soil arthropods, behavior and biological control.

812. Graduate Seminar Topics

Fall, Winter. 1(1-0) May reenroll if different topic is taken. Graduate students and approval of department.

Graduate level seminars on current research and philosophy. Student participation required.

815. Biological Control

Spring of even-numbered years. 3(2-3) Approval of department.

Properties of entomophagous species; relationships to population ecology and systematics; foreign exploration, colonization, manipulation, and evaluation; interactions with pesticides, analysis of successful programs, and future trends. Collection for taxonomic lab to be made the summer before.

820. Applied Insect Ecology

Winter of odd-numbered years. 3(2-3) Approval of department.

Ecological factors in an insect's ecosystem that can be manipulated for the purpose of pest management. Critical evaluation of current and classical literature presented by students in both oral and written reports.

838. Principles of Taxonomy

Spring of odd-numbered years. 3(3-0) Twenty credits in zoology and/or entomology, or approval of department.

Methods and principles of systematic zoology and entomology, including a historical survey of the pre-Linnaean and post-Linnaean systems of classification. International rules of zoological nomenclature and their emendations.

871. Biology of Nematodes

Spring. 4(2-6) ENT 470 or approval of department. Interdepartmental with the Department of Botany and Plant Pathology.

Ontogeny, taxonomy, morphology, pathology and ecology of nematodes, with special reference to plant-parasitic and phytopathogenic species.

881. Biology of the Arthropoda

Winter. 5(3-6) ZOL 481 or approval of department. Interdepartmental with and administered by the Department of Zoology.

Ecology, life cycles, morphology, taxonomy, and distribution of arthropods other than insects.

890. Problems

Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Majors or approval of department.

Advanced individual work in: apiculture, aquatic insects, insect biochemistry, biosystematics, economic insects, insect ecology, forest insects, morphology, nematology, insect physiology, plant disease transmission, insect toxicology, araneida, acarina, medical entomology, chemistry of insecticides, insect biology, extension entomology, systems.

899. Master's Thesis Research

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

940. Analytical Techniques for Biological Compounds I

Winter of odd-numbered years. 4(2-6) Organic chemistry, approval of department.

Application, extraction, cleanup and purification techniques employed in analysis of biologically active compounds. Stresses use of radioisotopes, and column, paper, thin-layer, and molecular sieve chromatography.

941. Analytical Techniques for Biological Compounds II

Winter of even-numbered years. 4(2-6) ENT 940.

Analytical techniques used for identification and quantification of biologically active compounds. Emphasis on spectroscopy and gas-liquid chromatography.

999. Doctoral Dissertation Research

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

**FAMILY AND CHILD
ECOLOGY**

FCE

(Name changed effective July 1, 1980. Formerly the departments of Family and Child Sciences, and Family Ecology.)

College of Human Ecology

118. Family Resources

(F E 118.) Fall. 3(2-2)

Skill development in identification, description and classification of human and non-human family resources on a historical and cross-cultural basis.