

- 890 Independent Study**
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in English. Approval of department.
Special project, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.
- 891 Special Topics in American Literature**
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to graduate students in the College of Arts and Letters or approval of department.
Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students.
- 893 Interdisciplinary Seminar**
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with German; Spanish; French. Administered by Department of Linguistics and Germanic, Slavic, Asian and African Languages. R: Approval of department.
Examination of a theme, topic, or genre from several different national and disciplinary perspectives in the appropriate cultural and socio-historical context. Significant texts and important critical analysis selected from Great Britain, Spain, France, Germany, the Americas, and others.
- 896 Practicum in English Language and Literature**
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to graduate students in the Department of English. Approval of department.
Supervised graduate practicums, observations, or internships in the teaching of English language and literature.
- 898 Master's Research**
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in English. Approval of department.
Directed research in support of Plan B master's degree requirements.
- 899 Master's Thesis Research**
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in English. Approval of department.
Directed research leading to a master's thesis, used in partial fulfillment of Plan A master's degree requirements.
- 955 Studies in Shakespeare**
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to doctoral students in the College of Arts and Letters or approval of department.
Issues in Shakespeare studies of critical and current interest.

- 990 Independent Study**
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to doctoral students in English. Approval of department.
Special project, directed reading, and research arranged by an individual doctoral student and a faculty member in areas supplementing the regular course offerings.
- 991A Topics in English Language Studies**
Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to doctoral students in the College of Arts and Letters or College of Education or approval of department.
A major issue in the study of English such as language planning in the United States, power and status in English discourse, or literary applications of linguistic analysis.
- 991B Topics in Comparative Literature**
Fall. 3(3-0) A student may earn a maximum of 12 credits in all enrollments for this course. Interdepartmental with Linguistics and Languages; Romance Languages. R: Open only to Ph.D. students. Approval of department.
Critical approaches to genre, periodization, and influence in English and other literatures.
- 991C Topics in African American Literature**
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. RB: (ENG 850) R: Approval of department.
Analysis of contemporary controversies in African American literary studies.
- 991D Topics in the Literature of Africa and the African Diaspora**
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Linguistics and Languages; Romance Languages.
Authors, movements, and cultures of the literature of Africa and the African diaspora.
- 992 Seminar in American Studies**
Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to doctoral students in the College of Arts and Letters or approval of department.
American literature in a the context of popular and fine arts, the history of ideas, or the history of social movements.
- 992C Seminar in Earlier English Literature**
Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to doctoral students in the College of Arts and Letters or approval of department.
Special problems in English literature, beginnings to 1660.
- 992D Seminar in Later English Literature**
Fall. 3(3-0) A student may earn a maximum of 12 credits in all enrollments for this course. R: Open to doctoral students in the College of Arts and Letters or approval of department.
British literature 1660-1900. Culture and society, periodization and genres.

- 992E Seminar in 20th Century English Literature**
Spring. 3(3-0) A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to doctoral students in College of Arts and Letters or approval of department.
Literature of Great Britain, Ireland, and other Anglo-phone countries, exclusive of the United States.
- 992F Seminar in American Literature to 1900**
Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to doctoral students in the College of Arts and Letters or approval of department.
Issues in American literature of critical and current interest.
- 992G Seminar in 20th Century American Literature**
Fall, Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. R: Open only to doctoral students in the College of Arts and Letters or approval of department.
A particular problem, topic, theme, genre, issue, or period in twentieth century American literature.
- 992I Seminar in Literary Form and Theory**
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to doctoral students in the College of Arts and Letters or approval of department.
Theories of periodization, genre, form, signification, and cultural production which influence the study of literature and language.
- 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 the English major.
Doctoral dissertation research.

ENGLISH AS A SECOND LANGUAGE ESL

Department of Linguistics and Germanic, Slavic, Asian and African Languages College of Arts and Letters

- 090A Intensive English for Non-Native Speakers**
Fall, Spring. 0(20-0) R: Approval of English Language Center. SA: ENG 090A
Explanation and intensive practice of English skills. Focus on beginning grammar, speaking, listening, reading, and writing.
- 090B Intensive English for Non-Native Speakers**
Fall, Spring. 0(20-0) R: Approval of English Language Center. SA: ENG 090B
Explanation and intensive practice of English skills. Focus on intermediate grammar, speaking, listening, reading, and writing.

English as a Second Language—ESL

090C Intensive English for Non-Native Speakers
Fall, Spring. 0(20-0) R: Approval of English Language Center. SA: ENG 090C
Explanation and intensive practice of English skills. Focus on advanced grammar, speaking, listening, reading, and writing.

220 English Grammar and Composition for Non-Native Speakers of English
Fall, Spring, Summer. 6(6-0) A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of the English Language Center SA: ENG 093
Systematic review of English grammar. Intensive and extensive writing of English.

221 English Composition for Non-Native Speakers of English
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of English Language Center. SA: ENG 095
Intensive and extensive writing in English for academic purposes.

222 Listening and Speaking for Academic Purposes for Non-Native Speakers of English
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of English Language Center SA: ENG 092
Improvement of oral English skills for academic purposes.

223 Reading for Academic Purposes for Non-Native Speakers of English
Fall, Spring, Summer. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of English Language Center SA: ENG 094
Study of English for students needing a reading knowledge of English for academic purposes

205 Pests, Society and Environment
Fall, Spring. 3(3-0) Interdepartmental with Plant Pathology.
Nature of pests and their impact on society. Principles of integrated pest management in relation to environmental quality and sustainable development.

222 New Horizons in Biotechnology
Fall. 2(2-0) Interdepartmental with Crop and Soil Sciences. Administered by Department of Crop and Soil Sciences.
Perspectives on biotechnology for safer food production, environmental quality, and improved human health. Impacts of biotechnology on the national economy. Political and ethical ramifications of applied biotechnology.

319 Introduction to Earth System Science
Fall. 3(3-0) Interdepartmental with Plant Biology; Geological Sciences; Zoology; Sociology. RB: Completion of one course in biological or physical science.
Systems approach to Earth as an integration of geochemical, geophysical, biological and social components. Global dynamics at a variety of spatio-temporal scales. Sustainability of the Earth system.

362 Management of Turfgrass Pests
Fall. 4(3-2) Interdepartmental with Crop and Soil Sciences; Plant Pathology. Administered by Department of Crop and Soil Sciences. P: (CSS 232)
Chemical, biological, and cultural methods of managing weeds, diseases, and insect pests of turfgrass. Environmental considerations in pest management.

401 Directed Studies
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department.
Individual field or laboratory research, or review of published literature, on a topic of interest.

404 Insects: Success in Biodiversity
Fall. 4(3-4) P: (BS 110) or (BOT 105 and BOT 106)
Biological adaptations of insects to the environment. Evolution, behavior, ecology, metamorphosis, classification, importance to humans, and pest management.

407 Diseases and Insects of Forest and Shade Trees
Spring. 4(3-3) Interdepartmental with Plant Pathology; Plant Biology. Administered by Department of Plant Pathology. P: (PLB 105 or BS 110 or LBS 144 or LBS 148H) and (PLB 218 or FOR 204 or HRT 211) and completion of Tier I writing requirement. SA: BOT 407
Diseases, insects, and environmental problems affecting trees in forests, parks, suburbs, and nurseries. Methods of control.

410 Apiculture and Pollination
Fall. 2(1-2)
Biology of bees and their relationship to flowers, pollination and crop production.

419 Advanced Earth System Science
Spring. 3(2-2) Interdepartmental with Plant Biology; Geological Sciences; Zoology; Sociology. P: (ENT 319)
Systems science theory applied to analysis of the biological, geological, physical, and social causes and consequences of global changes. Issues of sustaining the Earth system.

422 Aquatic Entomology
Fall of odd years. 3(2-3) Interdepartmental with Fisheries and Wildlife; Zoology. P: (BS 110) SA: ENT 420
Biology, ecology and systematics of aquatic insects in streams, rivers and lakes. Field trips and aquatic insect collection required.

442 Concepts of Biological Information Systems
Spring. 3(3-0) Interdepartmental with Resource Development. R: Open only to seniors or graduate students.
Systems approach to managing biological information using computer technology.

469 Biomonitoring of Streams and Rivers
Summer of even years. 3(2-3) Summer: Given only at W.K. Kellogg Biological Station. Interdepartmental with Fisheries and Wildlife. P: (BS 110)
Practical field and lab rapid bioassessment methodologies used to sample and assess the biota of streams and rivers. Sampling and identification of fish, macroinvertebrates and other biota will be emphasized.

470 General Nematology (W)
Spring of odd years. 3(2-3) P: (BS 110) or (BS 111 and BS 111L) and completion of Tier I writing requirement.
Biology of nematodes with special reference to the influence of phyt parasitic, entomopathogenic, animal parasitic, microbiontrophic and marine species on human ecology.

477 Pest Management I: Pesticides in Management Systems
Fall. 3(3-0) Interdepartmental with Crop and Soil Sciences; Fisheries and Wildlife; Horticulture. RB: (CEM 143 or CEM 251) and (BOT 405 and CSS 402) and (ENT 404 or ENT 470 or FW 328)
Chemistry, efficient use, and environmental fate of pesticides. Legal and social aspects of pesticide use.

478 Pest Management II: Biological Components of Management Systems (W)
Spring of even years. 3(2-3) Interdepartmental with Crop and Soil Sciences; Forestry; Fisheries and Wildlife; Horticulture. P: (ENT 404 or ENT 470 or PLP 405 or CSS 402 or FW 328) and completion of Tier I writing requirement.
Principles of host plant resistance and biological control and their relationship to the design of agroecosystems. Classification of insect biological control agents.

485 Tropical Biology
Spring. 3(3-0) Interdepartmental with Zoology; Plant Biology. Administered by Department of Zoology. P: (ZOL 355) R: Open only to juniors or seniors.
Tropical biota emphasizing evolutionary and ecological principles compared across tropical ecosystems.

812 Graduate Seminar
Fall, Spring. 1(1-0) A student may earn a maximum of 10 credits in all enrollments for this course.
Current research topics. Student presentation required.

ENTOMOLOGY

ENT

Department of Entomology College of Agriculture and Natural Resources

110 Applied Entomology for Ornamentals and Turf
Fall of odd years. 3(2-2) RB: Interest or experience in ornamentals and turf production systems. R: Open only to students in the Institute of Agricultural Technology. Not open to students with credit in ENT 111.
Arthropod pests of woody ornamentals and turf grasses. Groups and species of importance to northern Michigan.

111 Basics of Applied Entomology
Spring. 2(2-1) R: Open only to students in the Institute of Agricultural Technology. SA: AT 057 Not open to students with credit in ENT 110 or AT 057.
Basic insect biology, principles of integrated pest management, and the major pests of field crops, woody ornamentals, other perennials, turf, and commercial greenhouses. Offered first ten weeks of semester.