Descriptions - Electrical Engineering and Systems Science

Courses

841. Optimization of Urban Traffic Flow
Fall of odd-numbered years. 3(3-0)
Approval of department. Interdepartmental with Civil Engineering.
Traffic flow models used in design of computerized traffic control systems. Optimal freeway ramp metering algorithms. Offline and online optimization of traffic signal timing.

843. Ecosystem Analysis, Design and Management
Spring. 3(3-0) SYS 442 or ZOL 404, Interdepartmental with the Department of Zoology.
Groups of students from various biological and nonbiological disciplines will synthesize and analyze models of selected biological systems. Project should yield information relevant to solution of contemporary ecological problems.

847. Communication Engineering
Fall. 4(4-0) E E 456 or approval of instructor. Interdepartmental with and administered by Electrical Engineering.

848. Communication Theory
Spring. 3(3-0) E E 847, E E 880, E E 863. Interdepartmental with and administered by Electrical Engineering.

851. Modeling of Engineering Systems I
Fall. 3(3-0) M E 458 or E E 415, Interdepartmental with and administered by the Department of Mechanical Engineering.
Modeling of engineering components and dynamic systems, mechanical, electrical, fluid, thermal, and transistor effects. Linear state-space responses, impedance methods. Simulation of linear models. Design project.

852. Modeling of Engineering Systems II
Winter. 3(3-0) M E 851. Interdepartmental with and administered by the Department of Mechanical Engineering.

853. Analysis of Stochastic Systems
Winter. 3(3-0) E E 415, E E 455, Interdepartmental with Electrical Engineering.
Analysis and modeling of stochastic signals and systems. Topics include stochastic models, description of processes, stationarity, ergodicity, correlation and power spectrum, linear stochastic systems, harmonic analysis, Markov processes, Poisson processes.

880. Signal Analysis
Winter. 3(3-0) Approval of department. Interdepartmental with and administered by Electrical Engineering.
Continuous and discrete signals—generation, representation, and classification. Fourier transforms, spectral analysis and filtering for continuous and discrete signals. Computer implementation of signal processing.

899. Master's Thesis Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

947. Topics in Communications
Fall of odd-numbered years. 3(3-0)
May reenroll for a maximum of 6 credits. E E 845. Interdepartmental with and administered by Electrical Engineering.
Advanced treatment of a topic or group of topics of current research interest in the field of communications, information theory and signal processing.

961. Optimal Control Theory
Fall. 3(3-0) SYS 827, MTH 425.
Optimal control, performance measures, principle of optimality, dynamic programming, Hamilton-Jacobi-Bellman equation, variational approach, constrained extrema, Pontryagin principle, necessary conditions, solution techniques, singular cases.

962. Computational Techniques for Optimal Control
Winter of odd-numbered years. 3(3-0)
SYS 861.
Computational methods of optimal controls, steepest descent, variation of extremals, quasilinearization, gradient projection, dynamic programming, convexity techniques, support functions for reachable sets, current literature.

963. Dynamic System Identification and Control
Spring of odd-numbered years. 3(3-0)
SYS 863, SYS 829.
System identification: dynamic programming, stochastic and adaptive control. Topics under identification include review of statistics background, dynamic system models, identification methods, recursive algorithms, input design, and structure discrimination.

964. Large Scale Dynamic Systems
Winter of even-numbered years. 3(3-0)
SYS 861.
Model simplification; stability of large scale systems; decentralized control; optimization by decomposition and coordination; multilevel hierarchical control; applications.

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

270. Computer Graphics
Spring. 3(3-0) EGR 160 or EGR 161.
Use of computer controlled display systems for the solution of multidimensional problems.

344. Engineering Cooperative Education
Fall, Winter, Spring, Summer. Zero credits; 13 credits-see page A-1, item 2. May reenroll for a maximum of 6 credits if different topics are taken. Experimental course developments or special topics appropriate for freshmen and sophomores.

ENGLISH

College of Arts and Letters

091. English for Foreign Students-Structure
Fall, Winter, Spring. Summer. Zero credits. (3 credits-See page A-1, item 3.) English language proficiency examination.
Explanation and intensive practice of basic grammatical structures of English. Students are tested and then placed in small groups, from beginning to advanced, depending on their need.

092. English for Foreign Students-Speaking and Listening
Fall, Winter, Spring. Summer. Zero credits. (3 credits-See page A-1, item 3.) English language proficiency examination.
Intensive speaking and listening practice of spoken English in small groups (determined by proficiency). For beginners, practice is largely drill. Advanced groups use drill, films, discussion, and practical conversations.

093. English for Foreign Students-Language Laboratory
Fall, Winter, Spring. Summer. Zero credits. (3 credits-See page A-1, item 3.) English language proficiency examination.
Language laboratory practice in small groups (determined by proficiency). Backgrounds review and supplement ENG 091, ENG 092. Advanced groups use carefully prepared lectures, speeches, and presentations to practice structures and vocabulary.
094. English for Foreign Students—Reading
Intensive and extensive reading in small groups (determined by proficiency). Beginners emphasize vocabulary, development and practice in basic structures. Advanced classes include reading skills, wider reading, and specialized vocabulary.

095. English for Foreign Students—Writing
Frequent controlled and free writing in small groups to reduce errors and practice using sentence structure and vocabulary to express ideas. Advanced classes include writing styles used in academic course work.

101. Responses Through Writing
Fall. 4(4-0) Arts and Letters Freshmen only. Students must enroll in and complete ENG 102 satisfactorily to make a substitution for the American Thought and Language requirement.
A writing workshop that concentrates on the student's personal writing voice and on his responses to the things, people, and institutions central to his experience.

102. Writing and Composing
Winter. 3(3-0) ENG 101; Arts and Letters Freshmen only.
A continuation of ENG 101 that develops the emphasis of ENG 101 and encourages students to write in more public and objective forms—narrative, critical analysis, and issue-oriented essays.

126. The Writer and Literature
Fall, Winter, Spring. 3(4-0) The first term of ATL 121 or above or ENG 101.
Modern literature from the writer's perspective. Students also write their own critical and creative work, using journal method.

2001. Honors Work
Fall, Winter, Spring. 1 to 16 credits. Approval of department.

201. Nature of Language
Fall, Winter, Spring. 3(3-0) Various aspects of language—phonology and orthography; morphology, semantics, and the lexicon; syntax; and dialects—with special reference to American English.

205. Introduction to Shakespeare
Fall, Winter, Spring. 3(3-0) Not applicable to major or minor requirements.
A study of selected plays illustrating the powers of England's greatest writer.

206. Forms of Literature: Fiction
Fall, Winter, Spring, Summer. 3(3-0) Open to Freshmen.
Major forms of prose fiction, designed to reveal artistic problems and solved by these forms. Prepares students for advanced literary study by acquainting them with the conventions of literary fiction, by providing a critical vocabulary and by furnishing experience in reading and writing critical evaluations of outstanding literary works from all historical periods.

207. Forms of Literature: Drama
Fall, Winter, Spring, Summer. 3(3-0) Open to Freshmen.
Major forms of drama, designed to reveal artistic problems and solved by these forms.

208. Forms of Literature: Poetry
Fall, Winter, Spring, Summer. 3(3-0) Open to Freshmen.
Major forms of poetry, designed to reveal artistic problems and solved by these forms.

210. Introduction to the Study of Literature I
Fall, Winter. 4(4-0) English majors or prospective English majors.
Exploration of the major forms of literature, the aims and processes of literary study, the cultural and personal functions of literature, and the role of literary study in the University.

211. Introduction to the Study of Literature II
Winter, Spring. 4(4-0) ENG 210.
A continuation of ENG 210.

213. Writing Workshop
Fall, Winter, Spring, Summer. 3(3-0) Completion of the American Thought and Language General Education requirement.
A writing workshop designed to help students improve their writing abilities. The course provides opportunities for students to write with different purposes in a variety of modes.

220. English from Greek and Latin Roots
Fall. 3(3-0) Interdepartmental and administered by Classical Languages.
Prefixes, roots, suffixes derived from Greek and Latin word elements used in formation of English words. Useful for improving vocabulary and spelling.

225. Introduction to Creative Writing
Fall, Winter, Spring. 4(4-0) The first term of ATL 121 or above or ENG 101.
Writing of fiction, drama, creative nonfiction, and poetry, with ample practice in several. Some reading of professional contemporary writing. Course organized as workshop, designed for beginning writers.

225A. Fiction Writing
Fall, Winter, Spring. 4(4-0) Written approval of instructor.
The writing of short fiction. Classes and individual conferences. Approval to enroll requires a conference with the instructor and will usually be on the basis of manuscripts submitted to him.

225B. Fiction Writing
Fall, Winter, Spring. 4(4-0) Written approval of instructor.
The writing of fiction. Classes and individual conferences. Approval to enroll requires a conference with the instructor and will usually be on the basis of manuscripts submitted to him.

229. Poetry Writing
Fall, Winter, Spring. 4(4-0) Written approval of instructor.
The writing of poetry. Classes and individual conferences. Approval to enroll requires a conference with the instructor and will usually be on the basis of manuscripts submitted to him.

230. Non-fictional Imaginative Prose Writing
Fall, Winter, Spring. 4(4-0) Written approval of instructor.
The writing of biography, autobiography, and personal essays. Classes and individual conferences.

241. Introduction to Popular Culture (A)
Fall, Winter, Spring, Summer. 3(3-0) Freshmen or Sophomores.
Generic and thematic study of the arts and artifacts of popular culture with particular emphasis on writing about the popular culture of contemporary American society.

242. Popular Literary Forms
Fall, Winter, Spring, Summer. 3(3-0) May enroll for a maximum of 6 credits. Freshmen or Sophomores.
Study of a particular genre of popular literature (e.g., science fiction, western, gothic) through readings, discussion, and writing, with attention to the genre's development in media other than print.

250. Major Themes in English and American Literature
Fall, Winter, Spring, Summer. 3(3-0)
A particular theme of significant works of English and American writers in a relevant social or cultural context. Reading, discussion, and writing are essential activities.

302. Introduction to English Language Studies
Fall, Winter, Spring, Summer. 4(4-0) ENG 212.
The English language, including such topics as social and regional dialects, sounds, grammar, usage, psycholinguistics, and semantics. Attention is given to practical applications.

303. Grammar and Usage
Winter, Spring. 4(4-0) Completion of the ATL requirement or approval of department.

310. Writing for Prose Students (J M 310)
Fall, Winter, Spring. 3(3-0)
Provides a step-by-step process for organizing and writing a legal argument. Emphasizes logical, clean, and persuasive style.

312. Advanced Workshop in Expository Writing
Winter, Spring. 3(3-0) ENG 213 or approval of department.
Directed practice in the writing of clear, concise, and forceful expository prose, with special emphasis on practical writing tasks like the composing of summaries, reports, and position papers.

313. Scientific Writing
Winter, Spring. 3(3-0) Science students or students with considerable background in the natural sciences.
Writing of papers, reports, and essays.

327. Playwriting
(300C) Winter, Spring. 4(4-0) May enroll for a maximum of 8 credits. Written approval of instructor.
Basic elements of playwriting: dramatic action, exposition, plotting, characterization, dialogue, mood, and visual effects. Class work will also include discussion of plays.
328. Advanced Fiction Writing (380.) Fall, Winter, Spring, Summer.
4(4-0) May reenroll in ENG 328 and/or ENG 329 for a maximum of 12 credits. ENG 229B and written approval of department.
Advanced work in the writing of fiction. Classes and individual conferences. Approval to enroll requires a conference with the instructor and will usually be based on manuscripts submitted to the instructor.

329. Advanced Poetry Writing (308.) Fall, Winter, Spring, Summer.
4(4-0) May reenroll in ENG 328 and/or ENG 329 for a maximum of 12 credits. ENG 229B and written approval of department.
Advanced work in the writing of poetry. Classes and individual conferences. Approval to enroll requires a conference with the instructor and will usually be based on manuscripts submitted to the instructor.

330. Composition for Secondary English Teachers (214.) Fall, Winter, Spring. 4(3-4)
Sophomore English Education majors or written approval of department.
Writing practice in various modes such as personal narrative and description, the familiar essay, drama, poetry, and fiction. Exercises in creative dramatics. Discussion of the process of composing and the teaching of oral and written composition in junior and senior high schools. Will participate in field experience.

331. Literature and the Adolescent (301.) Fall, Winter, Spring. 4(3-4) ENG 208, Junior English education majors or written approval of department.
Extensive reading of literature appropriate for secondary school students. Discussion of formal literature programs in relation to student's reading needs. Methods of analyzing literature and establishing common and individualized reading programs. Will participate in field experience.

332. English Field Experience Internship (300.) Fall, Winter, Spring. 3 to 5 credits. May reenroll for a maximum of 5 credits. ENG 330, ENG 351, or ENG 408A or concurrently.
Intensive field experience in English. Interns will be placed in schools for work in middle, junior, and senior high school classrooms and learning centers in the Lansing area.

340. Studies in Popular Culture Fall, Winter, Spring. 3(3-0) May reenroll for a maximum of 9 credits. Majors: ENG 205; others: 6 credits of literature.
Popular Cultures of the United States and England from the 18th Century to the present.

342. Women and Literature Fall, Winter, Spring. 3(3-0) Third term ATL course numbered ATL 123 or above or ENG 102.
The feminine sensibility as revealed in literary themes and characterizations, through a study of poetry and fiction written by women authors.

343. Regional American Literature (375.) Fall, Winter, Spring. 3(3-0) May reenroll for a maximum of 9 credits if different topics are taken.
Representative works of a particular geographical region as expressions of its distinctive cultural, historical, and literary characteristics, e.g., in a given term, the Middle West, South, New England, or Far West.

344. Jewish-American Literature (A) (577.) Winter. 3(3-0)
The Jewish-American experience as reflected in fiction, drama, poetry, essay, autobiography, film.

347. Literature and Film Fall, Winter, Spring. 3(3-0) ENG 208 or ENG 311.
Introduction to the relationship between film and literature through study of theme, style, and structure in selected film masterpieces from different periods and cultures.

349. Afro-American Literature I (449.) Fall, Winter, Summer. 4(4-0)
Majors: ENG 206; others: 6 credits of literature.
Creative thought of the black American illustrated by the participation of the black man in American culture—pre-World War II.

351. English Literature I Fall. 4(4-0)

352. English Literature II Winter. 4(4-0)
Survey of English literature, Milton to Blake. Major representative writers and literary forms of the specified period.

353. English Literature III Spring. 4(4-0)
Survey of English literature, Blake to Hardy. Major representative writers and literary forms of the specified period.

360. World Literature in English (315.) Fall. 3(3-0) Interdepartmental with Linguistics and Oriental and African Languages.
Representative works, not from England or the United States, which were written originally in English, especially the English literature of present or former British Commonwealth nations, and nations from the Middle East and Africa.

361. World Literature in English Translation (316.) Winter. 3(3-0) Interdepartmental with administered by Linguistics and Oriental and African Languages.
Significant and characteristic works of the Orient, the Middle East, and Africa in English translation.

362. Genres and Themes in World Literature (517.) Spring. 3(3-0) Interdepartmental with Linguistics and Oriental and African Languages.
Work will center each term around a single literary genre, type or theme. Typical examples: The Novel, Literature of Revolt, Satire. Literary examples will be selected from several national literatures.

363. African Literature in English (318.) Winter, Spring. 3(3-0) HST 204 or HUM 205 or IDC 290 recommended.
Contemporary African literature written in English, including novels by Soyinka, Achebe, Ngugi, Attaah, La Guma, and Ekwensi; plays and poetry by Clark, Hutchinson, Nkosi, Hen­shaw, Okara, Awoonor, Okigbo, and others.

364. Canadian Literature and Culture (376.) Spring. 4(4-0) May reenroll for a maximum of 8 credits.
Canadian literature and culture in bicultural, historical and contemporary contexts.

365. Classic Myths and Literature (363.) Fall, Winter, Spring. Summer of even-numbered years. 3(3-0)
Greek myths that have been brought into later poetry, fiction, drama, painting, sculpture, and music.

366. Literary Interpretation of the Bible (346.) Fall, Winter, Spring. 3(3-0)
Literary study of the Old and New Testaments, with emphasis upon the ideas and events which figure prominently in English and American literature.

380. Masterpieces of American Literature Fall, Winter, Spring. 3(3-0) Not applicable to major or minor requirements. Selected masterpieces of American literature.

381. Masterpieces of English Literature Fall, Winter, Spring. 3 credits. Not applicable to major or minor requirements. Selected masterpieces of English literature.

382. Masterpieces of Contemporary Literature Fall, Winter, Spring. 3(3-0) Not applicable to major or minor requirements. Selected masterpieces of contemporary literature.

389. Perspectives on Literature and English Language Fall, Winter, Spring. 4(4-0)
May reenroll for a maximum of 12 credits if different topics are taken.
A rich variety of perspectives on literature and English language for majors and non-majors. Approach and content differs with each section.

400. Tutorial Fall, Winter, Spring. Variable credit.
Open to particularly able students. Consists of individually supervised study of a phase of literary history.

402. Modern English Grammar Winter. 4(4-0) ENG 302 or approval of department.
English morphology and syntax, incorporating insights from current linguistic theory and practice.
403. The Development of Modern English
Winter, Summer. Offered each year. (4-4)

Historical development of the language; native and foreign elements; changes in inflections, pronunciation, vocabulary, meaning.

404. American English
Fall, (4-4)

Characteristics of American dialects, standard and non-standard, with analysis of usage and explanations of origin and differences.

405. Comparative Linguistics
Spring. (3-4) ENG 402, ENG 403; 2 college years of a foreign language or approval of department.

Techniques for the scientific comparison of related languages. The comparative method and the results of its application to the Indo-European languages.

406. Methods of Teaching English as a Second Language
Fall, (4-4) ENG 302 or ENG 402 or approval of department.

Survey and demonstration of theories, methods and techniques for teaching English, both here and abroad, to school age children and adults who are not native speakers of English.

407. Problems in the Teaching of Reading
Fall, Winter, Spring. (3-5) ENG 330 or ENG 331, ENG 302.

Instruction and field experience in the teaching of reading for prospective English teachers.

408A. Problems in the Teaching of Reading
Fall, Winter, Spring. (3-4) ENG 408A.

Instruction and independent work on the teaching and learning of reading with strong emphasis on field experience.

408B. Problems in the Teaching of Reading
Fall, Winter, Spring. (3-4) ENG 408B.

Instruction and independent work in developing junior and senior high school reading programs. Will participate in field experience.

409. Teaching Competencies in English
Fall, Winter, Spring, Summer. (4-4) ENG 330, ENG 331, or ENG 408A or ENG 327D.

Practicalization of the development of teaching competencies in the fundamentals of teaching reading and writing within a humanities English curriculum. Analysis of accountability models and assessment instruments in English.

410. Chaucer
Fall, Winter, Spring, Summer. (4-4) ENG 308; others: 6 credits of literature.

Chaucer's poetry, especially The Canterbury Tales. Read in Middle English.

411. Spenser
Winter. (4-4) Majors: ENG 208; others: 6 credits of literature.

A representative selection of Spenser's poetry with special emphasis on The Faerie Queene.

412. Milton
Fall, Winter, Spring, Summer. (4-4) Majors: ENG 208; others: 6 credits of literature.

Milton's prose and poetry, especially Paradise Lost.

418. Scandinavian Contributions to Literary Tradition
Winter. (3-0) Approval of department.

Interdepartmental with German and Russian and the Department of Romance and Classical Languages. Administered by German and Russian.

Development and influence of the ideas, forms and motifs of the Scandinavian literatures in the literatures of the world.

421. Shakespeare
Fall, Winter, Spring, Summer. (4-4) Majors: ENG 208; others: 6 credits of literature.


422. Shakespeare
Fall, Winter, Spring, Summer. (4-4) ENG 421.

Advanced study of several representative plays exclusive of those taught in ENG 211.

423. Writing: Style and Technique
(1 M 410) Fall, Winter, Spring. 3 to 8 credits. May enroll for a maximum of 8 credits. ATL 413.

Intensive individual and seminar instruction in advanced composition.

424. Conference Course in Advanced Writing
Fall, Winter, Spring, Summer. 4 credits. Written approval of department.

Intended for the student ready to pursue an advanced project in writing. Individual conferences. Approval to enroll required. A conference with the instructor and usually on the basis of manuscripts submitted to him. Prior course work in writing will normally be expected.

425. Writing as a Profession
Winter, Spring. 2(2-0) At least one creative writing course or approval of department. Discussion of many questions and problems experienced by students interested in professional writing. A variety of panels and lectures by people who know the field.

426A. Comparative Drama
Fall, Winter, Spring. (3-4) Majors: ENG 208; others: 6 credits of literature.

Studies in the development of drama: classical and medieval.

426B. Comparative Drama
Winter. (3-0) Majors: ENG 208; others: 6 credits of literature.

Studies in the development of drama: Renaissance and seventeenth century.

426C. Comparative Drama
Spring. (3-3) Majors: ENG 208; others: 6 credits of literature.

Studies in the development of drama: neoclassical and romantic.

426D. Comparative Drama
Fall, Winter, Spring. (3-4) Majors: ENG 208; others: 6 credits of literature.

The development of drama: from prehistory to World War I.

426E. Comparative Drama
Spring, Summer. (3-0) Majors: ENG 208; others: 6 credits of literature.

The development of drama: World War I to the present.

430. Advanced Writing: The Prose Essay
(AVL 329) Spring. 4(4-0) Completion of AVL English Education requirement, ENG 213 or approval of department.

Provides instruction in the acquiring of knowledge from the prose essay, making sophisticated inferences from the ideas collected, and formulating and supporting logical inferences in the writing of such essays.

431. Writing the Research Report
(AVL 439) Winter, Spring. (4-4)

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.

432. Technical Report Writing
(AVL 449) Winter, Spring. (4-4)

Completion of AVL English Education requirement, juniors or approval of instructor.

Use and understanding of language through writing and editing clear, concise, purposeful technical reports, letters, instructions, proposals.

436. Comparative Fiction
Fall, Winter, Spring. (3-3) May enroll for a maximum of 9 credits. Majors: ENG 208; others: 6 credits of literature.

Types of narrative and fiction in various literatures and periods. Specific course content varies each term.

439. British Poetry and Poetic Theory
Since 1890
Winter, Summer. (4-4) Majors: ENG 208; others: 5 credits of literature.

Special emphasis on Hopkins, Hardy, Yeats, Auden and Thomas.

441. American Literature: Colonial and Revolutionary Period
Fall, (4-4) Majors: ENG 208; others: 8 credits of literature.

Works of Taylor, Edwards, Franklin, French and others.

442. American Literature: Early Romanticism
Fall, (4-4) Majors: ENG 208; others: 6 credits of literature.

Works of Cooper, Irving, Poe, Emerson, Thoreau and others.

443. American Literature: Later Romanticism
Winter, Spring, Summer. (4-4) Majors: ENG 208; others: 6 credits of literature.

Works of Hawthorne, Melville, Whitman, Dickinson and others.

446. American Literature: Realism and Naturalism
Fall, Winter, Spring, Summer. (4-4) Majors: ENG 208; others: 6 credits of literature.

Rise and development of realism and naturalism as exemplified in the works of such authors as Twain, James, Dreiser, Hobinson, and others.

447. Twentieth Century American Fiction
Fall, Winter, Spring, Summer. (4-4) Majors: ENG 208; others: 6 credits of literature.

Works of Fitzgerald, Hemingway, Faulkner and others.
448. Twentieth Century American Poetry
Fall, Spring, Summer. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Works of Eliot, Pound, Frost and others.

449. Contemporary British Literature
Fall. 4{4-0} Majors: ENG 206, ENG 207, ENG 208 or ENG 210, ENG 211; others: 9 credits of literature.
Contemporary British fiction, drama, poetry; such writers as Sillitoe, Powell, Murdoch, Osborne, Fowles, Larkin, and others.

450. Contemporary American Fiction
Fall. 4{4-0} Majors: ENG 206, ENG 207, ENG 208 or ENG 210, ENG 211; others: 9 credits of literature.
American fiction from WWII to present; such writers as Rothke, Lowell, Plath and others.

451. Tudor Literature
Fall. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Poetry, prose and non-Shakespearian drama of the sixteenth century.

452. Early Seventeenth Century Literature
Winter. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Some of the major literary works of 1660-1660.

453. The Age of Dryden and Pope
Fall. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Literature of the Restoration and early eighteenth century, 1660-1744; Dryden, Pope, Swift, and others.

454. The Age of Johnson
Spring. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Literature of the eighteenth century to 1785; Johnson and his circle, the novelists and others.

455. The English Romantic Period
Fall, Spring. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
The beginnings of romanticism; Blake, Wordsworth and Coleridge.

456. Language and Culture
Fall, Spring. 4{4-0} Approval of department. Interdepartmental with and administered by the Department of Anthropology. 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, Jargon, Trade Jargon, Lingua Franca; 'Hybridization' and 'Substratum'; Language and Cultural Change; a brief examination of Theories of Origins and of the Sapir-Whorf Hypothesis.

457. Nature of Myth
Winter. 3(3-0)
Myth in some of its theoretical aspects, with special reference to the mythical character of literature.

458. Nature of Story
Winter. 3(3-0)
The nature of story, its social functions, and its use in literature and drama.

459. Comparative Epic
Fall, Winter, Spring. 3(3-0) May reenroll for a maximum of 9 credits. Majors: ENG 208; others: 6 credits of literature.
Each term will consider: two epics. Fall: 'Odyssey' and the 'Book of Job'; Winter: Dante's 'Inferno' and Milton's 'Paradise Lost'; Spring: 'Becof' and the 'Song of Roland'.

460. Classical Christian Contributions to Literary Tradition
Spring of odd numbered years. 3(3-0)
Two of the following: ENG 206, ENG 207, ENG 208.
Development and influence of the ideas, forms, and motifs of the ancient world and Christianity in literature of the world.

461. Literary Criticism: Theory and Practice
Fall, Spring, Summer. 4{4-0} Senior majors.
A survey of literary theory; critical and historical approaches to literature.

462. Modern Critical Theory
Winter. 4{4-0} Senior majors.
An examination of the principal modern theories of literary criticism.

463. Literature and Psychology
Spring. 4{4-0} Juniors or approval of department. Interdepartmental with the Department of Psychology. An application of psychological theory to the study of literature and an exploration of the ways in which literature enriches the theory which helps to illuminate it.

464. The English Novel Through the Eighteenth Century
Fall, Summer. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Study of such writers as Richardson, Fielding, Smollett, Sterne, Austen, and others.

465. The English Novel in the Nineteenth Century
Winter, Summer. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Study of such writers as Scott, Dickens, Thackeray, Eliot, Hardy and others.

466. The Modern English Novel
Spring, Summer. 4{4-0} Majors: ENG 208; others: 6 credits of literature.
Study of such writers as Conrad, Ford, Joyce, Lawrence and others.

467. Studies in Genre
Spring. 4{4-0} May reenroll for a maximum of 8 credits. To receive credit, both ENG 491H and ENG 492H must be completed satisfactorily. Six credits in English honors courses and approval of the departmental honors adviser.
A twoterm study of specific writers in relation to their age is provided by ENG 491H and ENG 492H.

468. Interdepartmental with and administered by the Department of Anthropology. 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, Jargon, Trade Jargon, Lingua Franca; 'Hybridization' and 'Substratum'; Language and Cultural Change; a brief examination of Theories of Origins and of the Sapir-Whorf Hypothesis.

469. Special Topics
Fall, Winter, Spring. 4{4-0} May reenroll for a maximum of 12 credits. Approval of the departmental honors adviser.
Intensive study of some particular author, theme, problem or other critical topic.

470. Senior Honors Essay
Fall, Winter, Spring. 4 to 10 credits. May reenroll for a maximum of 10 credits. Seniors and approval of departmental honors adviser.
A substantial piece of writing under the direction of selected faculty.

471. Topics in Comparative Literature
Fall, Winter, Spring. 3{3-0} or 4{4-0} May reenroll for a maximum of 12 credits if different topics are offered. Interdepartmental with German and Russian, and the Department of Romance and Classical Languages. Administered by the Department of Romance and Classical Languages.
Varying topics on relationships among writers, themes, genres, movements and periods in different national literatures, and between literature and other arts.

472. Senior Seminar
Fall, Winter, Spring. 4{4-0} Senior English majors.
Intensive work in an area, problem or author. Students will work closely with the instructor in the preparation and evaluation of substantial research or creative papers.
The content of courses on both the 800-level and the 900-level may change from term to term, making possible a wide variety of course offerings. Students may enroll in a course for more than one term or in more than one section of a course during the same term, provided that duplication of content does not result. Brochures giving detailed information concerning all graduate courses to be offered during a given year are available in the English office throughout that academic year.

Courses numbered 900 or above (with the exception of 930, 970, and 999) are doctoral seminars. Students desiring to enroll in these courses must obtain departmental approval at least before registration, but if possible before the pre-enrollment period.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Term(s)</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>History of the English Language</td>
<td>Spring, Summer</td>
<td>3</td>
<td>3 credits. Linguistic study of English writings, 1100-1400.</td>
</tr>
<tr>
<td>801</td>
<td>Old English</td>
<td>Fall, Summer</td>
<td>3</td>
<td>3 credits. Phonology and morphology of English before 1100.</td>
</tr>
<tr>
<td>802</td>
<td>Beowulf</td>
<td>Winter</td>
<td>3</td>
<td>3 credits. From the poetry of the Exeter Book to other works exclusive of Beowulf.</td>
</tr>
<tr>
<td>803</td>
<td>Old English Poetry</td>
<td>Spring</td>
<td>3-0</td>
<td>3 credits. Studies in Old English poetry. Selections from the poetry of the Exeter Book or other works exclusive of Beowulf.</td>
</tr>
<tr>
<td>804</td>
<td>Middle English</td>
<td>Winter</td>
<td>3-0</td>
<td>3 credits. Linguistic study of English writings, 1100-1400.</td>
</tr>
<tr>
<td>805</td>
<td>Studies in Comparative Theatre and Drama</td>
<td>Fall, Winter, Summer</td>
<td>3-0</td>
<td>3-0 credits. Comparative study of selected playwrights, movements, trends and developments in world drama from the beginnings to the present day.</td>
</tr>
<tr>
<td>807</td>
<td>Advanced Methods of Teaching English as a Second Language</td>
<td>Fall, 3(3-0) ENG 407</td>
<td></td>
<td>Advanced study of linguistic theory and applications to classroom practice of methods of teaching English as a second language, specifically with regard to oral drill, reading, writing, testing, language and cultural heritage.</td>
</tr>
<tr>
<td>810</td>
<td>Medieval Literature</td>
<td>Fall, Winter, Summer</td>
<td>3-0</td>
<td>3 credits. Chaucer and the literature of the fourteenth century.</td>
</tr>
<tr>
<td>811</td>
<td>Renaissance Literature</td>
<td>Fall, Winter, Summer</td>
<td>3-0</td>
<td>3 credits. English nondramatic literature, 1500-1600.</td>
</tr>
<tr>
<td>815</td>
<td>Restoration and Eighteenth Century Literature</td>
<td>Fall, Winter, Summer</td>
<td>3-0</td>
<td>3-0 credits. English literature, 1660-1798.</td>
</tr>
<tr>
<td>816</td>
<td>Nineteenth Century Literature</td>
<td>Fall, Winter, Spring, Summer</td>
<td>3-0</td>
<td>3-0 credits. Nineteenth century literature: American literature, 1875-1900.</td>
</tr>
<tr>
<td>821</td>
<td>Nineteenth Century American Literature</td>
<td>Fall, Winter, Summer</td>
<td>3-0</td>
<td>3 credits. Nineteenth century American literature: American literature, 1829-1900.</td>
</tr>
<tr>
<td>824</td>
<td>Seventeenth Century Literature</td>
<td>Winter</td>
<td>3-0</td>
<td>3 credits. Seventeenth century literature: American literature, 1600-1669, including Milton.</td>
</tr>
<tr>
<td>825</td>
<td>Comparative Literature: Studies in Theme and Idea</td>
<td>Fall</td>
<td>3-0</td>
<td>3 credits. Comparative literature: Studies in Theme and Idea: American literature, from the beginnings to 1829.</td>
</tr>
<tr>
<td>829</td>
<td>Twentieth Century Literature</td>
<td>Fall, Winter, Summer</td>
<td>3-0</td>
<td>3 credits. Twentieth century literature: American literature, 1900 to the present, with attention to foreign backgrounds.</td>
</tr>
<tr>
<td>833</td>
<td>Writing Workshop: Poetry</td>
<td>Fall, Winter, Spring</td>
<td>3-3-0</td>
<td>3 credits. Workshop for the writing of individual student's work, through workshop discussion and conferences with instructor. Some attention to professional contemporary poetry.</td>
</tr>
<tr>
<td>835</td>
<td>Writing Workshop: Fiction</td>
<td>Fall, Winter, Spring</td>
<td>3-3-0</td>
<td>3 credits. Workshop for the writing of individual student's work, through workshop discussion and conferences with instructor. Some attention to professional contemporary fiction.</td>
</tr>
<tr>
<td>837</td>
<td>Writing Workshop: Drama</td>
<td>Fall</td>
<td>3-3-0</td>
<td>3 credits. Workshop for the writing of individual student's work, through workshop discussion and conferences with instructor. Some attention to professional contemporary drama.</td>
</tr>
<tr>
<td>840</td>
<td>Writing Workshop for Teachers</td>
<td>Fall, Summer</td>
<td>3-3-0</td>
<td>3 credits. Workshop for the writing of individual student's work, through workshop discussion and conferences with instructor. Some attention to professional contemporary drama.</td>
</tr>
<tr>
<td>841</td>
<td>Topics in the Teaching of English</td>
<td>Winter, Spring</td>
<td>3-3-0</td>
<td>3 credits. Topics in the teaching of English. Selected topics and issues in the teaching of English and the language arts. Investigation of problems of special concern to the students, especially those directly related to teaching.</td>
</tr>
<tr>
<td>845</td>
<td>Approaches to Language</td>
<td>Fall, Winter, Summer</td>
<td>3-3-0</td>
<td>3 credits. Approaches to Language: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
<tr>
<td>846</td>
<td>Approaches to Language</td>
<td>Winter</td>
<td>3-3-0</td>
<td>3 credits. Approaches to Language: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
<tr>
<td>847</td>
<td>Reading and the English Teacher</td>
<td>Spring, 3-3-0 or 5-5-0</td>
<td>3-0</td>
<td>3 credits. Reading and the English Teacher: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
<tr>
<td>855</td>
<td>Shakespeare</td>
<td>Fall, Spring</td>
<td>3-3-0</td>
<td>3 credits. Shakespeare: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
<tr>
<td>871</td>
<td>Methods of Literary Research</td>
<td>Fall, Spring, Summer</td>
<td>3-3-0</td>
<td>3 credits. Methods of Literary Research: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
<tr>
<td>872</td>
<td>Methods of Research into Literacy</td>
<td>Fall, Winter, Spring</td>
<td>3-3-0</td>
<td>3 credits. Methods of Research into Literacy: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
<tr>
<td>878</td>
<td>Comparative Literature: Methods in the Study of Comparative Literature</td>
<td>Fall, 3-3-0</td>
<td></td>
<td>3 credits. Comparative Literature: Methods in the Study of Comparative Literature: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
<tr>
<td>879</td>
<td>Myth, Ritual and Folklore in Literature</td>
<td>Fall, 3-3-0</td>
<td></td>
<td>3 credits. Myth, Ritual and Folklore in Literature: American literature. Exploration of the writing process through composition activities and examination of techniques for teaching writing.</td>
</tr>
</tbody>
</table>
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, Winter, Spring, Summer. 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 literature 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.

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, 1860-1900.

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 Literature: 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

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) B S 211 and B S 212 recommended.

302. General Entomology Laboratory
Fall, Spring. 2(0-6) ENT 301 or concurrently.
Insect diversity with emphasis on morphology, development, classification, identification, biocontrol, and evolution. Stresses reproductive strategies and general adaptability as relates to the overall ecological success of insects.

303. Entomological Techniques
Spring. 2(3-0) 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 biometrics. Collection required.