College of Engineering

160. Engineering Communications
Fall, Winter, Spring. 4(1-6) MTH
108 or 111 or concurrently.
Engineering graphics, a means used by engineers to communicate their ideas to others. Freehand sketching, descriptive geometry, and graphical, numerical and computer problem solutions.

161. Mechanical Drawing
Fall, Winter, Spring. 2(0-4)
Lettering and use and care of instruments. Orthographic projection, working drawings, machine sketching and isometric drawing.

162. Mechanical Drawing
Fall, Winter, Spring. 2(0-4) 160 or 161.
Continuation of 161 with emphasis on freehand lettering and sketching, advanced working drawings.

200. Technology and Society
Fall, Winter. 3(3-0) ATL 111.
An attempt to describe and analyze portions of current technology and its desired and undesired consequences; an exploration of avenues for assessing such consequences for future technologies.

260. Machine Drawing
Fall, Winter, Spring. 3(0-6)
Advanced orthographic projection, detail, and assembly drawing, sections and conventions, tracings, illustration and other pictorial drawings of mechanical elements.

263. Structural Drawing
Winter. 3(0-6) An engineering graphics course.
A comprehensive study of space planning relative to residential and light-commercial interiors. Building materials, fixtures, and mechanical equipment will be studied with respect towards application and installation.

267. Architectural Drafting I
Fall, Winter, Spring. 3(0-6)
House construction detailing. Analysis and drawing of typical standard details.

285. Descriptive Geometry
Fall. 3(2-2) 160, 161.
Problems involving relations of points, lines, and planes. Intersections, developments, conic sections, and nonco-planar vectors.

270. Computer Graphics
Spring. 3(3-0) 160 or 161; CPS 110 or 120 or LBC 125; or approval of department.
Use of computer controlled display systems for the solution of multidimensional problems.

364. Architectural Drafting II
Winter. 3(0-6) 267.
Functional and standard procedure in the layout of floor plans in traditional and modern houses. Rendered plot plan and required details.

385. House Planning
Fall, Winter, Spring. 3(1-4)
Elementary house architecture. Drawing plans from sketches. Kitchen planning, house styles, elements of design, financing, heating, lighting, 366. Architectural Perspective
Drawing Fall. 3(0-6) Any engineering graphics course.
One-point and two-point perspective, revolved plans and perspective, pencil rendering, problems in shade and shadows. House model to scale, optional.

463. Architectural Drafting III
Spring. 3(0-6) 364 or 365.
Traditional and modern elevations. One- and two-point perspective. Functional plans drawn in 364 or 365 required.

480. Special Problems
Fall, Winter, Spring. 2 to 4 credits. May re-enroll for a maximum of 8 credits. Approval of department.

ENGLISH

College of Arts and Letters

091. English for Foreign Students—Elementary
Fall, Winter, Spring. 3(0-6) to 15(25-0)!
1 English language proficiency examination.
Spoken structures, pattern practice, reading, writing and laboratory in the English language for foreign students on the elementary level.

092A. English for Foreign Students—Low Intermediate
(092) Fall, Winter, Spring. Zero credit. (3-5-0) to 15(25-0)!
English language proficiency examination.
Spoken structures, pattern practice, reading, writing and laboratory in the English language for foreign students on the low-intermediate level.

092B. English for Foreign Students—High Intermediate
(092) Fall, Winter, Spring. Zero credit. (3-5-0) to 15(25-0)!
English language proficiency examination.
Spoken structures, pattern practice, reading, writing and laboratory in the English language for foreign students on the high-intermediate level.

093. English for Foreign Students—Advanced
Fall, Winter, Spring. Summer. Zero credit. (3-5-0) to 15(25-0)!
English language proficiency examination.
Spoken structures, pattern practice, reading, writing and laboratory in the English language for foreign students on the advanced level.

094. English for Foreign Students—Supplementary
Fall, Winter, Spring. Summer. Zero credit. (3-5-0) to 6(10-0)!
English language proficiency examination.
Composition in the English language for foreign students on the supplementary level.

101. Freshman Composition I
Fall. 4(4-0) Arts and Letters Freshmen only.
A student or experience-centered writing course that explores personal and public modes of writing and composing. An option to ATL for Arts and Letters students.

References

A-47
### Courses

#### 229. Poetry Writing
- **Fall, Winter, Spring.** 4(4-0) 208 and written approval of department.
- 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.

#### 300A. Advanced Fiction Writing
- **Fall, Winter, Spring, Summer.** 4(4-0) May re-enroll in 300A and/or 300B for a maximum of 12 credits. 228B 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 on the basis of manuscripts submitted to him.

#### 300B. Advanced Poetry Writing
- **Fall, Winter, Spring, Summer.** 4(4-0) May re-enroll in 300A and/or 300B for a maximum of 12 credits. 229 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 on the basis of manuscripts submitted to him.

#### 301. Literature and the Adolescent
- **Fall, Winter, Spring.** 4(3-1) 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.

#### 345. Classic Myths and Literature
- **Fall, Winter, Spring.** Summer of even-numbered years. 4ATL 113.
- Greek myths that have been wrought into later poetry, fiction, drama, painting, sculpture, and music.

#### 351. English Literature I
- **Fall.** 4(4-0) English major or minor.

#### 352. English Literature II
- **Winter.** 4(4-0) English major or minor.
- 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) English major or minor.
- Survey of English literature, Blake to Hardy. Major representative writers and literary forms of the specified period.

#### 360. Masterpieces of American Literature
- **Fall, Winter, Spring, Summer.** 3(3-0) ATL 113.
- Not applicable to major or minor requirements.
- Selected masterpieces of American literature.

#### 381. Masterpieces of English Literature
- **Fall, Winter, Spring, Summer.** 3(3-0) Not applicable to major or minor requirements.
- Selected masterpieces of English literature.

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

#### 400. Tutorial
- **Fall, Winter, Spring, Summer.** 1 to 5 credits. May re-enroll for a maximum of 10 credits. Major; approval of department.
- Reading, discussion, and writing under the guidance of a faculty member.

#### 400H. Honors Work
- **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
- **Fall, Winter, Spring, Summer.** 4(4-0) ATL 113; English education majors or written approval of department.
- Descriptive, structural, and transformational analysis of present-day American English in light of current linguistic theory and practice: phonetics, phonology, morphology, syntax, and dialects; applications to teaching.

#### 403. The Development of Modern English
- **Winter.** Summer of even-numbered years. 4(4-0) ATL 113.
- Historical development of the language; native and foreign elements; changes in inflections, pronunciation, vocabulary, meaning.

#### 404. American American English
- **Fall.** 4(4-0) ATL 113.
- Characteristic American dialects, standard and non-standard, with analysis of usage and explanations of origins and differences.

#### 406. Comparative Linguistics
- **Spring.** 4(4-0) 402, 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.

#### 407. Methods of Teaching English as a Second Language
- **Fall.** 4(4-0) 402.
- Applications of linguistic principles to teaching of English pronunciations, structure, and vocabulary to native speakers and to native speakers of other languages. Preparation of materials and discussion of techniques.

#### 409. Problems in the Teaching of English
- **Fall, Winter, Spring.** 4(3-1) 314, 301, ED 327D.
- Problems in the teaching of writing and reading for prospective English teachers.

#### 410. Chaucer
- **Fall, Winter, Spring, Summer.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Chaucer's poetry, especially The Canterbury Tales.

#### 411. Spencer
- **Winter.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Emphasis on The Faerie Queene.

#### 412. Milton
- **Fall, Winter, Spring, Summer.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Milton's prose and poetry, especially Paradise Lost.

#### 421. Shakespeare
- **Fall, Winter, Spring, Summer.** 4(4-0) Majors: 208; others: 6 credits of literature.

#### 422. Shakespeare
- **Fall, Winter, Spring, Summer.** 4(4-0) Advanced study of several representative plays exclusive of those taught in 421.

#### 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 requires a conference with the instructor and will usually be on the basis of manuscripts submitted to him. Prior course work in writing will normally be expected.

#### 426A. Comparative Drama
- **Fall.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Studies in the development of drama: classical and medieval.

#### 426B. Comparative Drama
- **Fall.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Studies in the development of drama: Renaissance and seventeenth century.

#### 426C. Comparative Drama
- **Fall.** 4(4-0) Majors: 208; others: 6 credits of literature.

#### 426D. Comparative Drama
- **Fall.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Studies in the development of drama: Ibsen to the present.

#### 430. Comparative Fiction
- **Fall.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Studies in the development of narration and fiction in three courses, as follows: forerunners of the novel and eighteenth century and romantic fiction; origins of realism, naturalism, expressionism, symbolism, the psychoanalytic novel, and other experimental forms in nineteenth-century fiction; and continuation of these forms in twentieth-century fiction.

- **Winter, Summer.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Special emphasis on Hopkins, Hardy, Yeats, Auden and Thoreau.

#### 441. American Literature: Colonial and Revolutionary Period
- **Fall.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Works of Taylor, Edwards, Franklin, Frenze and others.

#### 442. American Literature: Early Romanticism
- **Fall.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Works of Cooper, Irving, Poe, Emerson, Thoreau and others.

#### 443. American Literature: Later Romanticism
- **Winter, Spring.** 4(4-0) Majors: 208; others: 6 credits of literature.
- Works of Hawthorne, Melville, Whitman, Dickens and others.
446. American Literature: Realism and Naturalism
Fall, Winter, Spring, Summer. 4(4-0)
Majors: 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, Robinson, and others.

447. Twentieth Century American Fiction
Fall, Winter, Spring, Summer. 4(4-0)
Majors: 208; others: 6 credits of literature.
Works of Fitzgerald, Hemingway, Faulkner and Twain, James, Dreiser, Robinson, and others.

448. Twentieth Century American Poetry
Fall, Spring, Summer. 4(4-0)
Majors: 208; others: 6 credits of literature.
Works of Eliot, Pound, Frost and others.

449. Afro-American Literature I
Fall, Winter, Summer. 4(4-0)
Majors: 208; others: 6 credits of literature.
Creative thought of the black American illustrated by the participation of the black man in American culture from beginnings through Harlem Renaissance.

450. Afro-American Literature II
Winter, Spring, Summer. 4(4-0)
Majors: 208; others: 6 credits of literature.
Creative thought of the black American illustrated by the participation of the black man in American culture—post-World War II.

452. Contemporary Literature
Fall, Winter, Spring, Summer. 4(4-0)
Majors: 208; others: 6 credits of literature.
Contemporary British or American fiction, drama or poetry.

455. Tudor Literature
Fall. 4(4-0) Majors: 208; others: 6 credits of literature.
Poetry, prose and non-Shakespearean drama of the sixteenth century.

456. Early Seventeenth Century Literature
Winter. 4(4-0) Majors: 208; others: 6 credits of literature.
Some of the major literary works of 1600-1680.

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

462. The Age of Johnson
Spring. 4(4-0) Majors: 208; others: 6 credits of literature.
Literature of later eighteenth century to 1795; Johnson and his circle, the novelists and others.

465. The English Romantic Period
Fall, Spring, Summer. 4(4-0) Majors: 208; others: 6 credits of literature.
The beginnings of romanticism; Blake, Wordsworth and Coleridge.

466. The English Romantic Period
Fall, Winter, Spring. 4(4-0) Majors: 208; others: 6 credits of literature.
Continuation of 465; Keats, Shelley, Byron.

467. Language and Culture
Fall, Spring. 4(3-0) Approval of department. Interdepartmental with and administered by the Anthropology 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.

470. Victorian Essayists
Fall, Summer of even-numbered years. 4(4-0) Majors: 208; others: 6 credits of literature.
Selected readings from Carlyle, Newman, Arnold, Mill, Hazlitt and other essayists.

471. Victorian Poets
Spring. 4(4-0) Majors: 208; others: 6 credits of literature.
Selected readings from Arnold, Browning, Tennyson and other poets.

476. Canadian-American Studies
For course description, see Interdisciplinary Courses.

477. Comparative Epic
(FCL 481) Fall, Winter, Spring. 3(3-0)
May re-enroll for a maximum of 9 credits. Majors: 208; others: 6 credits of literature.
Each term will consider two epics: Fall: Odyssey and the Iliad; Winter: Dante's Inferno and Milton's Paradise Lost; Spring: Beowulf and the Song of Roland.

478. Methods of Comparative Literature
Fall. 3(3-0) Two of the following: 206, 207, 208.
Rationale and techniques of study in comparative literature.

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

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

481. Modern Critical Theory
Winter. 4(4-0) Senior majors.
An examination of the principal modern theories of literary criticism.

482. Practical Criticism
Spring. 4(4-0) 489 or 481.
Literary criticism in response to a given work.

485. The English Novel Through the Eighteenth Century
Fall, Winter, Spring. 4(4-0) Majors: 208; others: 6 credits of literature.
Study of such writers as Richardson, Fielding, Smollett, Sterne, Austen, and others.

486. The English Novel in the Nineteenth Century
Winter, Spring. 4(4-0) Majors: 208; others: 6 credits of literature.
Study of such writers as Scott, Dickens, Thackeray, Eliot, Hardy and others.

487. The Modern English Novel
(Spring, 485) Summer, Summer. 4(4-0) Majors: 208; others: 6 credits of literature.
Study of such writers as Conrad, Ford, Joyce, Lawrence and others.

497H. Senior Honors Essay
Fall, Winter, Spring. 4(4-0) May re-enroll for a maximum of 8 credits. May re-enroll for a maximum of 8 credits. To receive credit, both 491H and 492H must be completed satisfactorily. Six credits in English honors courses and approval of the departmental honors adviser.
A two-term study of some particular author, theme, problem, or other critical topic.

497H. Senior Honors Essay
Fall, Winter, Spring. 4(4-0) May re-enroll for a maximum of 8 credits. May re-enroll for a maximum of 8 credits. To receive credit, both 492H and 494H must be completed satisfactorily. Six credits in English honors courses and approval of the departmental honors adviser.
A two-term study of the conventions and techniques of a specific literary genre.

493H. Studies in Genre
Spring. 4(4-0) May re-enroll for a maximum of 8 credits. To receive credit, both 493H and 494H must be completed satisfactorily. Six credits in English honors courses and approval of the departmental honors adviser.
Continuation of 493H.

499. Senior Proseminar
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 critical papers.

801. Old English
Fall, Summer. 3 credits.
English poetic literature: selections from Old English. May re-enroll for a maximum of 2 credits. Approval of the departmental honors adviser.
A substantial piece of writing under the direction of selected faculty.

802. Beowulf
Winter. 3 credits.

803. Old English Poetry
Spring. 3(3-0) 502.
Studies in Old English poetic literature: selections from the poetry of the Exeter Book or other works exclusive of Beowulf.

804. Middle English
Winter. 3(3-0) Linguistic study of English writings, 1100-1400.

805. Studies in Comparative Drama
(C.L. 490) Spring. 3(3-0) Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits. Approval of department.
Comparative study of selected playwrights, movements, trends and developments in world drama from the beginnings to the present day.

A-49
806. Medieval Languages
Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 15 credits.
Gothic, Old Norse, and Old Irish.

810. Medieval Literature
Fall, Winter, Summer. 3(3-0) May re-enroll for a maximum of 6 credits.
Chaucer and the literature of the fourteenth century.

811. Renaissance Literature
Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits.
English nondramatic literature, 1500-1600.

815. Restoration and Eighteenth Century Literature
Fall, Winter, 3(3-0) May re-enroll for a maximum of 6 credits.
English literature, 1660-1798.

816. Nineteenth Century Literature
Fall, Winter, Spring, Summer. 3(3-0) May re-enroll for a maximum of 9 credits.
American literature, 1820-1900.

821. Nineteenth Century American Literature
Fall, Winter, Spring, Summer. 3(3-0) May re-enroll for a maximum of 9 credits.
American literature, 1820-1900.

824. Twentieth Century Literature
Winter, Spring. 3(3-0) May re-enroll for a maximum of 6 credits.
English nondramatic literature, 1600-1660, including Milton.

828. Colonial and Revolutionary American Literature
Winter. 3(3-0)
American literature, from the beginnings to 1789.

829. Twentieth Century Literature
Winter. 3(3-0) May re-enroll for a maximum of 6 credits.
English and American literature, 1900 to the present, with attention to foreign backgrounds.

830. Major Writers of American Literature
Fall. 3(3-0) Major in English—Secondary School Teaching or approval of department.
Franklin through Whitman.

831. Major Writers of American Literature
Winter. 3(3-0) Major in English—Secondary School Teaching or approval of department.
Twin to the present.

840. Writing Workshop for Teachers
Fall, Spring, Summer. 3(3-0) Major in English—Secondary School Teaching or approval of department.
Emphasis on personal and public modes of writing; some discussion of methods of teaching writing; class discussion and evaluation of student writing; individual conferences.

845. Approaches to Language
Fall. 3(3-0) Major in English—Secondary School Teaching or approval of department.
Modern linguistic approaches to language and their application to writing.

846. Approaches to Language
Fall. 3(3-0) Major in English—Secondary School Teaching or approval of department.
Continuation of 845.

855. Shakespeare
Fall, Spring. 3(3-0) Major in English—Secondary School Teaching or approval of department.
Intensive study of selected plays.

862. Approaches to Literature
Winter, 3(3-0) Major in English—Secondary School Teaching or approval of department.
Literature through thematic, genre and historical approaches.

871. Methods of Literary Research
Fall, Summer. 3(3-0)
Bibliography and use of library: preparation of reports, reviews, and scholarly papers.

900. Proseminar for Master's Degree Candidates
Fall, Winter, Spring, Summer. 3(3-0)
Individual scholarly work under guidance.

905. College Teaching of English
Fall, Winter, Spring. 1 to 3 credits.
May re-enroll for a maximum of 3 credits.
Graduate teaching assistant.
Supervised teaching of college classes in English language and literature.

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

902. Studies in Form and Genre
Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits.
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.

904. Studies in Influence
Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits.
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 odd-numbered years. Winter and Spring of even-numbered years. 3(3-0) May re-enroll for a maximum of 9 credits.
Litratural beginnings to 1642, excluding Shakespeare.

940. Studies in Shakespeare
Winter of odd-numbered years. 3(3-0) To receive credit, both 940 and 941 must be completed satisfactorily.

941. Studies in Shakespeare
Spring of odd-numbered years. 3(3-0) To receive credit, both 940 and 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.

972. Rationale of Literary Research
Spring. 3(3-0) Candidacy for the Ph.D. degree.
Principles and methods of research in literary problems.

980. Studies in English Language
Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits.
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) May re-enroll for a maximum of 9 credits.
Special problems in English literature, beginning to 1600.

982. Seminar: Later English Literature
Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits.
Special problems in English literature, 1660-1900.

983. Seminar: American Literature
Fall, Winter, Spring. 3(3-0) May re-enroll for a maximum of 9 credits.
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) May re-enroll for a maximum of 9 credits.
Forms, genres, and movements.

986. American Literature and Culture
Fall, Winter. 3(3-0)
American literature in a cultural context, drawing upon popular and fine arts, the history of ideas, the history of social movements.

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

ENTOMOLOGY

College of Natural Science

301. General Entomology
Fall, Spring. 3(3-0) B S 211 and 212 recommended.

302. General Entomology Laboratory
Fall, Spring. 2(0-0) 301 or concur-
ently.
Experiments in morphology, physiology, behavior of insects. Populations and classification of major groups.