

ENGINEERING EGR

College of Engineering

125. Orientation to Engineering Careers
Winter. 2(2-0)

Engineering careers, history and philosophy of engineering profession, present and future challenges, industrial job functions, employment trends.

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
Winter. 3(3-0) One term of American Thought and Language. Interdepartmental with the Department of Natural Science.

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.

IDC. Introduction to Environmental Systems
For course description, see Interdisciplinary Courses.

201. Introduction to Engineering Mechanics
Winter. 4(4-0) PHY 237. Interdepartmental with and administered by the Department of Metallurgy, Mechanics and Materials Science.

Laws of mechanics governing the behavior of rigid and deformable bodies emphasizing how these laws influence engineering design. Extensive use of demonstrations.

260. Engineering Drawing
Fall, Winter, Spring. 3(0-6)

The development of the ability to communicate graphically, pictorially, and orally. Orthographic projection, freehand sketching, oral reports and creative problem solving techniques are employed to enhance learning.

267. Architectural Drafting I
Fall, Winter, Spring. 3(0-6)

House construction detailing. Analysis and drawing of typical standard details.

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

300. Technology and Utilization of Energy

Winter. 3(3-0) Initial course in any sequence of courses in the Department of Natural Science. Interdepartmental with and administered by the Department of Mechanical Engineering.

Problems of energy technology and its impact: energy sources, conversions, waste and environmental effects, future outlook for mankind.

322. Interior Lighting Design

Fall, Spring. 3(2-2) HED 213, approval of department. Interdepartmental with and administered by the Department of Human Environment and Design.

The basic principles and practices of interior design lighting, light control, distribution, quality and quantity of light as it affects man's near environment.

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.

365. 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 plan and measuring line methods. Pencil rendering, problems in shade and shadows. House model to scale, optional.

390. Value Engineering

Fall, Winter. 4(3-2) ME 280.

The basis of value engineering is function, value, and a group of special techniques developed to aid in isolating and identifying problems created by our complex society and technology.

401. Technology Assessment

Spring. 3(3-0) Seniors or approval of department. Interdepartmental with the Department of Natural Science.

Sociotechnical evaluation of impact of proposed technologies on economic, political, and cultural aspects of society. Identification of technical strategies and social goals. Techniques of assessment.

410. Systems Methodology

Winter. 3(3-0) IDC 201, MTH 113, CPS 110 or 120. Interdepartmental with and administered by Systems Science.

The systems approach in multidisciplinary large scale problem solving. The development of useful systems analysis tools; systems design; feasibility study; computer simulation for feasibility evaluation.

411. Systems Project

Spring. 2(3-0) 410. Interdepartmental with and administered by Systems Science.

Completion of a systems study initiated in 410. The project may involve the design of hardware, simulation of a solution to an interdisciplinary problem, or development of a solution concept.

463. Architectural Drafting III
Spring. 3(0-6) 364 or 365.

Traditional and modern elevations. One- and two-point rendered perspective. Functional plans drawn in 364 or 365 required.

480. Special Problems

Fall, Winter, Spring, Summer. 1 to 4 credits. May re-enroll for a maximum of 8 credits. Approval of department.

ENGLISH ENG

College of Arts and Letters

091. English for Foreign Students—Structures

Fall, Winter, Spring, Summer. Zero credits. [3(5-0)]† 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

(092A.) Fall, Winter, Spring, Summer. Zero credits. [3(5-0)]† 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(5-0)]† English language proficiency examination.

Language laboratory practice in small groups (determined by proficiency). Beginners review and supplement 091, 092. Advanced groups use carefully prepared lectures, speeches, and presentations to practice structures and vocabulary.

094. English for Foreign Students—Reading

Fall, Winter, Spring, Summer. Zero credits. [3(5-0)]† English language proficiency examination.

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

(092B.) Fall, Winter, Spring, Summer. Zero credits. [3(5-0)]† English language proficiency examination.

Frequent controlled and free writing in small groups to reduce errors and practice using structures 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 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.

† See page A-2 item 3.