

EGN: Engineering: General Courses

Courses

EGN 2911L Sophomore Engineering Design I

College of Sci and Engineering, Department of Mechanical Engineering

1 sh (may not be repeated for credit)

Prerequisite: MAC 2311

First course in a sophomore engineering design sequence. Students work in teams with other engineering design students in an active, discovery based learning environment employing practice based learning.

EGN 2912L Sophomore Engineering Design II

College of Sci and Engineering, Department of Mechanical Engineering

1 sh (may not be repeated for credit)

Prerequisite: EGN 2911L

Second course in a sophomore engineering design sequence. Students work in teams with other engineering design students in an active, discovery based learning environment employing practice based learning.

EGN 3204 Engineering Software Tools

College of Sci and Engineering, Department of Electrical & Computer Engineer

1 sh (may not be repeated for credit)

Prerequisite: MAC 2312

Gives students an introduction to important Engineering software tools such as MATLAB, Labview, MATHCAD, and FSPICE.

EGN 3365 Engineering Materials

College of Sci and Engineering, Department of Mechanical Engineering

3 sh (may not be repeated for credit)

Prerequisite: (MAC 2311) AND (CHM 1045 OR CHM 2045 OR CHM 1045C)

Fundamentals in structure, properties, and mechanical behavior of engineering materials.

EGN 3905 Directed Study

College of Sci and Engineering, Department of Mechanical Engineering

1-12 sh (may be repeated indefinitely for credit)

EGN 3913L Junior Engineering Design I

College of Sci and Engineering, Department of Mechanical Engineering

2 sh (may not be repeated for credit)

Prerequisite: (EGN 2912L) AND (EML 3011*)

First course in a junior engineering design sequence. Students work in teams with other engineering design students in an active, discovery based learning environment employing practice based learning. This course may be a continuation of the project from the Sophomore Engineering Design, or may be a starting point for Juniors who are new to the program (Students without Sophomore Engineering Design must receive permission from their advisor).

EGN 3914L Junior Engineering Design II

College of Sci and Engineering, Department of Mechanical Engineering

2 sh (may not be repeated for credit)

Prerequisite: EGN 3913L

Continuation of a Junior engineering design sequence. Students work in teams with other engineering design students in an active, discovery based learning environment employing practice based learning. This course is repeatable for elective credit with permission of the instructor.

EGN 4950 Capstone Design I

College of Sci and Engineering, Department of Electrical & Computer Engineer

1 sh (may not be repeated for credit)

Preliminary work on senior design project. This portion of the senior design will focus on the objectives and criteria, synthesis, and analysis elements of project development. After developing design concepts, researching for implementation methods, and performing a feasibility study (which will include economic, social, ethical, etc., factors), the semester will culminate with a senior design project proposal and presentation.

EGN 4952L Capstone Design II

College of Sci and Engineering, Department of Electrical & Computer Engineer

2 sh (may not be repeated for credit)

Prerequisite: EGN 4950

Continuation of Capstone Design I, with emphasis on construction, testing, and evaluation elements of project development. Material and Supply fee will be assessed. Permission is required.

EGN 4965 Fundamentals of Engineering Exam Preparation for Electrical and Computer Engineering Major

College of Sci and Engineering, Department of Electrical & Computer Engineer

3 sh (may not be repeated for credit)

Prerequisite: EGN 4950*

This course is designed to help prepare ECE senior students to take the FE exam, which is the first step in becoming a professional engineer. Course content will include review of relevant math, science, engineering economy, and ethics topics as well as fundamental concepts from the ECE engineering program including from such areas as circuits, electronics, controls, communications, electromagnetics, etc.

EGN 6429 Principles of Engineering Analysis

College of Sci and Engineering, Department of Electrical & Computer Engineer

3 sh (may not be repeated for credit)

This course will cover topics in advanced engineering analysis, including linear algebra, partial differential equations, Fourier series, complex variables, and vector calculus with numerical techniques.

EGN 6960 Engineering Project

College of Sci and Engineering, Department of Electrical & Computer Engineer

1-6 sh (may be repeated for up to 12 sh of credit)

Prerequisite: EGN 6429*

Capstone course for Masters of Engineering students who do not elect the thesis option. Students will define and carry out a project that shows mastery of some topic in Engineering and produce a final product.

EGN 6975 Thesis

College of Sci and Engineering, Department of Electrical & Computer Engineer

1-6 sh (may be repeated for up to 12 sh of credit)

Prerequisite: EGN 6429*

Design, research, and presentation of a master's thesis under the direction of a faculty committee.

* This course may be taken prior to or during the same term.