EGN: Engineering: General Courses

Courses

EGN 1008C   Concepts in Engineering  
3 sh (may not be repeated for credit)  
Stimulate and maintain the student's interest in the field of engineering. Provides an insight into the various fields of engineering as well as the appropriate computational skills required for success in subsequent courses in their respective engineering program. Credit may not be received in both EGN 1008C and EGN 1006C.

EGN 2911L   Sophomore Engineering Design I  
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  
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  
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  
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 3613   Principles of Engineering Economy  
3 sh (may not be repeated for credit)  
Prerequisite: MAC 2311  
Provides students with a broad-based understanding of finance, cash flow, and economic decision making practices. Addresses the principles and techniques needed for making economic decisions about building systems and subsystems. Explores decision making techniques pertaining to cost and value engineering. Emphasis will be placed on the time-value of money and equivalence, replacement analysis, uncertainty and life cycle costing.

EGN 3913L   Junior Engineering Design I  
1 sh (may not be repeated for credit)  
Prerequisite: (EGN 2912L AND MAC 2313 AND PHY 2048) OR PHY 2048C  
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 adviser).

EGN 3914L   Junior Engineering Design II  
1 sh (may be repeated for up to 4 sh of 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  
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  
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.