

General Engineering Course Descriptions

GE 1103 Engineering Design

4 QH

Presents the engineering design process using case studies from a variety of engineering disciplines. Topics include problem formulation and specification, creativity, evaluation tools, patents, product liability, ergonomics, systems design, failure analysis, hazard prevention, manufacturing, ethics in engineering, and presentation techniques. Presents engineering graphics, focusing on developing three-dimensional visualization skills and computer-aided design (CAD) application. Students will develop an original design solution to a technical problem as a term project and use CAD software extensively.

GE 1101 Engineering Problem-Solving and Computation

4 QH

Uses developing and structuring approaches to solve engineering problems. Draws applications from a variety of engineering disciplines, which serve as a tool for introducing students to engineering analysis and design. Includes the design of problem-solving algorithms along with an introduction to a programming language.

GE 1102 Engineering Problem-Solving with Application Software

2 QH

Develops fundamental problem-solving skills essential to all engineering disciplines. Introduces students to spreadsheet and math application packages and their use in solving engineering problems. Topics include data reduction and transformation, visualization of data and functions, problem structuring, and matrix applications. Examples stress real-life engineering analysis and design as tools for introducing students to the engineering profession.

GE 1002 Introduction to Engineering Cooperative Education

1 QH

Introduces engineering freshmen students to the cooperative education curriculum and assists them through self-assessment in relation to the engineering profession. Uses the Myers Briggs Type Indicator and Super's Work Values Inventory, to provide students with an introduction to how personalities, work styles, personal values, and interests relate to work performances and career choices. Students examine the engineering profession, develop resume writing, interviewing, and time-management skills, and are introduced to professional ethics.

GE 1001 Introduction to the Study of Engineering

1 QH

Presents an introduction to the various disciplines of engineering and strategies for success, both in the classroom and in practice within the profession.