Programs and Objectives

Electrical Engineering is a rapidly changing and diverse discipline encompassing many of the smallest man-made objects, ranging from integrated circuits and submicron devices to powerful computational systems and massive communications networks, such as those used in the information superhighway.

The invention of the transistor several decades ago sparked technological revolution that continues unabated today. As a result of the invention of the transistor, devices such as lasers, fiber optics, microcomputers, satellite communications, control systems, and complex signal processing integrated circuits are being developed.

The Electrical Engineering department encourages students with solid preparation in mathematics and the sciences. To prepare its graduates to compete in a fast-changing technological environment, the department has prepared a curriculum with a strong core of required courses in mathematics physical sciences, and engineering science. In addition, students have considerable freedom to choose electives in these and other areas of study.

The school has well equipped laboratory where students reinforce what is learned in the lecture halls with hands-on practical training. Hence, our graduates are industry ready and are prepared to face the challenges in industry.

Declaration of Major

Students in the four-year Bachelor of Engineering program can declare their major after the first year, or they can declare their major at the time of admission. All engineering major require hundred and forty one credits to graduate.

Four – Year Engineering
Curricula
First – Year Program
Pre-Engineering Courses

Biology 90 Introduction to Biology (0 cr.)

The strategy of life: The basic properties of living Systems with emphasis on human beings as functioning Biological entities. Prereq. Math 80

English University Skills 1 (0 cr.)

This course is designed to prepare the students for successful performance in university courses. Assignment to this course is based on the level of competence indicated by the student's high school English record.

English University Skills 2 (0 cr.)

Evaluation of individual reading and study skills in English. Instruction and practice is based on individual basic reading Comprehension, vocabulary, and study skills to university Content areas.

Chemistry 90 Introduction to Chemistry (0 cr.)

The fundamental principles of chemistry and their applications to social issues. Problem solving in chemistry. Prereq. Math 80, Coreq. Math 90

Math 70 Elementary Algebra (0 cr)

Review of arithmetic, algebraic expressions, Linear equations, monomial fractions, graphing lines, polynomials, verbal problems.

Math 80 Fundamentals of Algebra and Geometry (0 cr.)

Linear equations and graphs, functions, the point-slope equation, linear in qualities, polynomial functions, rational expressions, radicals, quadratic equations, sequences, series, and the binomial theorem. Prereq. Math70

Math 90 Intermediate Algebra and Trigonometry (0 cr.)

Rational expressions, rational exponents and radicals, conic sections and systems of equations, binomial

Math 100 Pre-calculus (3 cr.)

Intervals, inequalities, introduction to functions, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions and formulas Prereq. Math 90

Physics 100 Introductory Physics (0 cr.)

This course is with two themes:

1. How nature works the interplay of space, time, matter, and energy;

2. Structures are born, live out their life cycles, and die. These include us, the stars, and perhaps the universe. This theme may be called scientific story of genesis. Prereq. Math 80, Coreq. Math 90

First- Year (Freshman year)		**Credits**
First-Term		
Math 101	Analytic Geometry and Calculus I	(3 cr.)
Chem 103	General Chemistry for Engineers	(3 cr.)
Engl 101	Freshman Composition	(3 cr.)
Phys 107	General Physics 1	(4 cr.)
Engr 101	Engineering Graphics (Design)	(1 cr.)
Engr 102	Engineering Orientation	(3 cr.)
Total		**(17 cr.)**
Second –Term		
Math 102	Analytic Geometry and Calculus II	(3 cr.)
Chem 104	General chemistry for Engineers II	(3 cr.)
Phys 108	General Physics II	(3 cr.)
Engr 103	Introduction to Computers for Engineers	(3 cr.)
Econ 101	Engineering Economics	(3 cr.)
Engl 102	Freshman Composition II	(3 cr.)
Total		**(18 cr.)**
Second-Year Program (Sophomore Year)		
First-Term		
Math 203	Analytic Geometry and Calculus III	(3 cr.)
Engr 204	Engineering Circuit Analysis 1	(3 cr.)
EE 205	Circuit analysis Lab.	(1 cr.)
EE 206	Digital Logic Design	(3 cr.)
EE 207	Digital Logic Design Lab	(1 cr.)
Engr 210	Thermodynamics	(3 cr.)
Csc 102	Introduction to Computing	(3 cr.)
Total		**(17 cr.)**
Second-Term		
Math 291	Methods in Differential Equations	(3 cr.)
Math 292	Linear Algebra	(3 cr.)
EE 208	Linear Systems Analysis I	(3 cr.)
EE 221	Electrical Engineering Lab I	(1 cr.)
EE241	Electronics I	(3 cr.)
EE 210	Engineering Circuit analysis II	(4 cr.)
Total		**(17 cr.)**

Third-Year (Junior year)		
First-Term		
EE 306	Linear Systems Analysis II	(3 cr.)
EE307	Probability and Random Processes	(3 cr.)
EE 331	Engineering Electromagnetics I	(3 cr.)
EE 342	Electronics II	(3 cr.)
Csc 357	Computer Architecture and Micro. Sys.	(3 cr.)
EE 357	Electric Power Engineering	(3 cr.)
Total		**(18 cr.)**
Second-Term		
EE 312	Communication Engineering	(3 cr.)
EE 332	Engineering Electromagnetics	(3 cr.)
EE 339	Semiconductors I	(3 cr.)
EE 371	Linear Feedback Systems	(3 cr.)
Csc 306	Fundamental Concepts of Computer Sc.	(3 cr.)
EE 366	Digital Electronics	(3 cr.)
Total		**(18 cr.)**
Fourth- Year (Senior year)		
First-Term		
EE 417	Stochastic Processes and Systems	(3 cr.)
EE 441	Semiconductors II	(3 cr.)
EE 444	Digital Computer Systems	(3 cr.)
EE 416	Engineering Project I	(3 cr.)
EE442	Communication Modulation Sys.	(3 cr.)
EE 443	Introduction to Fiber Optics	(3 cr.)
Total		**(18 cr.)**
Second-Term		
EE 418	Engineering Project II	(3 cr.)
EE 445	Fiber Optics II	(3 cr.)
EE 446	Introduction to Microwave	(3 cr.)
EE 448	Digital Signal Processing	(3 cr.)
Elective From Social Sciences		(3 cr.)
Elective From Philosophy		(3 cr.)
Total		**(18 cr.)**