



Electrical Engineering

College of Engineering

The Electrical Engineering program prepares students for a productive career in engineering through developing strong foundations in math, physics, computer, and general engineering skills necessary for contributing to a rapidly developing field. In the junior and senior years, the program includes courses in specific application areas such as computer engineering, electronics, fields and waves, optics, communications, controls, machinery, and power systems.

The undergraduate education program focuses on achieving the following goals:

- Attracting highly talented and motivated students to the electrical engineering profession;
- Developing relevant technical skills in our students;
- Developing communication and teamwork skills in our students;
- Raising awareness of professional and ethical responsibilities to society in our students; and
- Instilling a desire and ability for life-long learning in our students.

Degree Requirements

The following curriculum meets the requirements for a B.S. in Electrical Engineering, provided the student satisfies University Studies requirements and graduation requirements of the College of Engineering.

Freshman Year

First Semester

EE 101 Electrical Engineering Professions Seminar	1
MA 113 Calculus I	4
CHE 105 General College Chemistry I	3
CS 115 Introduction to Computer Programming	3
ENG 101 Writing I	3
University Studies*	3

Second Semester

MA 114 Calculus II	4
PHY 231 General University Physics	4
PHY 241 General University Physics Laboratory	1
ENG 102 Writing II	3
University Studies Oral Communication	3

Sophomore Year

First Semester

MA 213 Calculus III	4
PHY 232 General University Physics	4
PHY 242 General University Physics Laboratory	1
EE 211 Circuits I	4
EE 280 Design of Logic Circuits	3

Second Semester

MA 214 Calculus IV	3
EE 221 Circuits II	3
EE 222 Electrical Engineering Laboratory I	2
Engineering/Science Elective (A)	3
EE 360 Introduction to Semiconductor Devices	3
University Studies*	3

Junior Year

First Semester

EE 415G Electromechanics	3
EE 416G Energy Conversion Laboratory	2
or EE 481 Logical Design Laboratory	2
EE 421G Signals and Systems I	3
EE 461G Introduction to Electronics	3
EE 380 Computer Organization	3
Mathematics Selection†	3

Second Semester

Engineering/Science Elective (B)	3
EE 462G Electronic Circuits Laboratory	2
EE 468G Introduction to Engineering Electromagnetics	4
Engineering/Science Elective (A/B)	3
University Studies*	3
EE 422G Signals and Systems II	3

Senior Year

First Semester

Technical Elective††	3
Engineering/Science Elective (A/B)	3
Electrical Engineering Technical Electives	6
University Studies*	6

Second Semester

EE 499 Electrical Engineering Design	3
Electrical Engineering Technical Electives	6
Supportive Elective**	3
University Studies*	3

*To be selected from University Studies areas in Social Sciences, Humanities, Cross-Cultural and Cross-Disciplinary in consultation with the academic advisor.

**Supportive elective is to be chosen from any University courses, excluding more elementary versions of required courses, such as precalculus mathematics or PHY 211.

†To be selected from MA 320, 321, 322.

††The technical elective may be selected from upper division engineering, mathematics, statistics, computer science, physics, or other technically-related fields in consultation with the academic advisor.

Engineering/Science Electives Group A:

MSE 212; ME 220, 330; EM 221, 230, 313.

Engineering/Science Electives Group B:

CS 215, 216, 222, 315; PHY 308, 361; MA 432G, 433G.

EE Technical Electives: Any EE 500 level course other than EE 595.