# Electrical Engineering (Bioengineering)

**123 credit hours total**

### YEAR 1

- **FALL**
  - **MATH 220 (4)** Analytic Geometry and Calculus I
  - **CHM 210 (4)** Chemistry I
  - **DEN 160 (1)** College of Engineering Orientation
  - **CIS 209 (3)** Computer Programming for Engineers
  - **ENGL 100 (3)** Expository Writing I
  - **COMM 106 (3)** Public Speaking

- **SPRING**
  - **MATH 221 (4)** Analytic Geometry and Calculus II
  - **ECE 241 (3)** Introduction to Electrical and Computer Engineering
  - **STAT 510 (3)** Introductory Probability and Statistics I
  - **ENGL 200 (3)** Expository Writing II
  - **K-State Core (KSC) course**

**KSC-3**

### YEAR 2

- **FALL**
  - **MATH 340 (4)** Elementary Differential Equations
  - **PHYS 213 (5)** Engineering Physics I
  - **ECE 410 (4)** Circuit Theory I
  - **ECE 511 (3)** Arts and Humanities

- **SPRING**
  - **MATH 222 (4)** Analytic Geometry and Calculus III
  - **PHYS 214 (5)** Engineering Physics II
  - **ECE 511 (3)** Arts and Humanities
  - **K-State Core (KSC) course**

**KSC-3**

### YEAR 3

- **FALL**
  - **ECE 431 (3)** Microcontrollers
  - **ECE 525 (3)** Electronics I
  - **ECE 557 (4)** Electromagnetic Theory I

- **SPRING**
  - **ECE 512 (3)** Linear Systems
  - **ECE 526 (3)** Electronics II
  - **ECE 581 (3)** Energy Conversion I

**K-State Core (KSC) course**

### YEAR 4

- **FALL**
  - **ECE 590 (3)** Senior Design Experience I
  - **ECE 591 (2)** Senior Design Experience II

- **SPRING**
  - **ECE 590 (3)** Senior Design Experience I
  - **ECE 773 (1)** Biomedical Design Laboratory

**K-State Core (KSC) course**

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**KEY**

- **PK** = Prerequisite for another course
- **PR** = Prerequisite requirement
- **PR/CO** = Prerequisite or concurrent requirement
- **= Class applies as specialization
- **K-State Core (KSC) course**
- **= K-State Core (KSC) course
- **= Only offered in the semester shown
- **= See department approved electives

Flowchart is for advising purposes only. Students are responsible for complying with University Catalog requirements.
Students pursuing a B.S. in electrical engineering degree are required to complete one of the subplan options. These options include bioengineering, electronics and communications, and power systems.

For the good and benefit of the student and their future employer, the ECE department enforces a C-prerequisite policy for all courses listed by number in the curriculum and for any in-major technical elective course applied toward the degree. A grade of C or better must be earned in all prerequisites to such a course before enrolling in that course.

**Technical Electives**
Technical electives must be selected to complete one of the option areas.

See list of option areas and required electives at ece.k-state.edu/academics/undergraduate/electrical-engineering/specialization/.

No more than 12 credit hours of courses with prefix ECE may be transferred to Kansas State University for credit toward a bachelor’s degree in either electrical engineering or computer engineering. Further, those courses selected for transfer credit must be equivalent to courses in the list below and must be such that the prerequisites for the listed course are also satisfied. Any courses transferred must be taken from ABET accredited programs: ECE 210, ECE 241, ECE 410, ECE 525, ECE 557, ECE 581.

**K-State Core**
The K-State Core (KSC) is the university’s version of the systemwide general education framework established by the Kansas Board of Regents.

- **KSC requirement 1** – English (6 hours)
- **KSC requirement 2** – Communications (3 hours)
- **KSC requirement 3** – Math and Statistics (3 hours)
- **KSC requirement 4** – Natural and Physical Sciences (4-5 hours)
- **KSC requirement 5** – Social and Behavioral Sciences (6 hours)
- **KSC requirement 6** – Arts and Humanities (6 hours)
- **KSC requirement 7** – Institutional Electives (6 hours)

To view course lists for each requirement, visit k-state.edu/provost/kstate-core.

*Requires two courses from two different subject areas.*