Electrical Engineering (Power Systems)

FALL YEAR 1 SPRING

- MATH 220 (4) Analytic Geometry and Calculus I
  PR: MATH 220 ≥ C
  KSC-3

- MATH 221 (4) Analytic Geometry and Calculus II
  PR: MATH 221 ≥ C

- CHM 210 (4) Chemistry I

- ECE 241 (3) Introduction to Electrical and Computer Engineering
  PR: MATH 220 ≥ C

- DEN 160 (1) College of Engineering Orientation

- CIS 209 (3) Computer Programming for Engineers
  PR: MATH 220 ≥ C

- ENGL 100 (3) Expository Writing I
  PR: MATH 150

- COMM 106 (3) Public Speaking
  KSC-2

- Elective (3)
  KSC-5

- Elective (3)
  KSC-1

- Elective (3)
  PR: ENGL 100

FALL YEAR 2 SPRING

- MATH 340 (4) Elementary Differential Equations
  PR: MATH 221 ≥ C
  KSC-4

- MATH 222 (4) Analytic Geometry and Calculus III
  PR: MATH 221 ≥ C

- PHYS 213 (5) Engineering Physics I
  KSC-4
  PR: MATH 220

- PHYS 214 (5) Engineering Physics II
  PR: PHYS 213
  PR: MATH 221

- STAT 510 (3) Introductory Probability and Statistics I
  PR: MATH 221

- ECE 410 (4) Circuit Theory I
  PR: MATH 221

- ECE 511 (3) Circuit Theory II
  PR: MATH 340, ECE 410

- ECE 512 (3) Microcontrollers
  PR: ECE 241, CIS 209

- ECE 513 (3) Linear Systems
  PR: ECE 410 or ECE 519

FALL YEAR 3 SPRING

- ECE 511 (4) Circuit Theory III
  PR: PHYS 214

- ECE 512 (4) Electromagnetics
  PR: PHYS 214

- ECE 513 (3) Electronics I
  PR: ECE 410 or ECE 519

- ECE 514 (3) Electronics II
  PR: ECE 511, 525

- ECE 515 (3) Power Electronics
  PR: ECE 410

- ECE 516 (3) Control Systems Design
  PR: MATH 340, ECE 512

FALL YEAR 4 SPRING

- ECE 517 (3) Power Laboratory
  PR: ECE 511, 525

- ECE 518 (3) Technical Design

- Elective (3)
  KSC-6

- Elective (3)
  KSC-5

- Elective (3)
  PR: MATH 340

- Elective (3)
  KSC-7

- Elective (3)
  PR: PHYS 214

- Elective (3)
  KSC-6

- Elective (3)
  KSC-7

- Elective (3)
  PR: ENGL 100

- Elective (3)
  KSC-1

- Elective (3)
  KSC-2

(16 credit hours) (16 credit hours) (16 credit hours) (16 credit hours) (14 credit hours) (15 credit hours) (14 credit hours)

KEY

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

Flowchart is for advising purposes only. Students are responsible for complying with University Catalog requirements.
Electrical Engineering Curriculum Notes

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.