

ELECTRICAL ENGINEERING

ABOUT THE MINOR

A minor in electrical engineering is open to all students in the University with the prerequisite calculus and physics background. The minor is particularly designed for majors in math, science, computer science, or other engineering departments who would like a coherent background in the theory and laboratory practice of electrical engineering.

For additional information contact:

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A minimum of 20 semester hours of ECE courses are required:

1. 5 SH required from one of the core courses:

ECEU400 Linear Circuits	4 SH
ECEU401 Intro to Electrical Engineering Lab	1 SH
OR	
ECEU210 Electrical Engineering	4 SH
ECEU211 Electrical Engineering Lab	1 SH

2. 10 SH for two of the following required elective-core courses:

ECEU440 Intro to Electromagnetic Fields and Waves	4 SH
ECEU441 EM Fields Lab	1 SH
ECEU402 Intro to Electronics	4 SH
ECEU401 Electronics Lab	1 SH
ECEU322 Digital Logic Design	4 SH
ECEU323 Digital Systems Lab	1 SH

3. 5 SH of electrical engineering technical electives: 5 SH

Electronic Circuits and Devices

ECEU524 VLSI Design and ECEU525 VLSI Design Lab

ECEU574 Wireless Communications Circuits

ECEU576 Wireless Personal Communication Systems

ECEU600 Electronic Design and ECEU601 Electronic Design Lab

ECEU604 Semiconductor Device Theory

ECEU606 Integrated Circuit Fabrication

ECEU684 Power Electronics

Fields, Waves, and Optics

ECEU440 Intro to EM Fields and ECEU441 Fields Lab

ECEU642 Antennas

ECEU644 Microwave Networks

ECEU646 Optics

ECEU680 Electric Drives

ECEU682 Power Systems Analysis and ECEU683 Power Systems Lab

ECEU686 Electrical Machines

ECEU692 Subsurface Sensing and Imaging

Signals and Systems

ECEU464 Linear Systems and ECEU465 Linear Systems Lab

ECEU468 Noise and Stochastic Processes

ECEU524 VLSI Design and ECEU525 VLSI Design Lab

ECEU572 Communications Systems I

ECEU574 Wireless Communications Circuits

ECEU576 Wireless Personal Communication Systems

ECEU580 Control Systems and ECEU581 Control Systems Lab

ECEU666 Digital Signal Processing and ECEU667 DSP Lab

ECEU672 Communications Systems II

Notes:

- Minor is awarded to students completing the requirements and earning a minimum QPA of 2.0 in the minor coursework.
- Students outside COE and CS may have to take non-ECE pre-requisite courses to gain entry into specified courses.
- Students who complete core courses (1. above) as part of their major will be given credit towards the minor for these courses.
- One of the elective-core courses (2. above) may be taken as part of the student's major. Additional elective-core courses taken as part of the major will be considered to satisfy the requirement for two elective-core courses, but will not be otherwise credited toward the minor. Thus, students who take two or more elective-core courses as part of their major must either take one elective-core course that is not part of their major or a total of 10 semester hours credits from technical elective courses.
- Credit for technical elective courses (3. above) cannot be double counted. i.e., if a technical elective course counts towards fulfillment of the student's major it will not be counted towards the minor.
- No credit will be given for elective courses that have substantial overlap with courses the student has taken as part of the major.
- Students must file a petition with the Coordinator of Undergraduate Services in Room 404 Dana to declare the minor prior to taking any coursework.
- Students should schedule a meeting with the Coordinator of Undergraduate Services, prior to graduation, to be cleared for the minor.