ELECTRICAL & COMPUTER ENGINEERING MINOR

for the Undergraduate Minor in Electrical & Computer Engineering

Electrical and Computer Engineering (ECE) transforms our day-to-day lives through a multitude of innovative technologies and products related to energy and information exchange. The ECE minor is intended to expose students from other disciplines to the unlimited opportunities for innovation in this exciting field, and to the methodologies and tools used by electrical and computer engineers for the exploration and design of new technologies and products. The minor is open to undergraduates outside the ECE Department. Computer Science majors cannot elect the Computer Engineering Option within the minor.

Code	Title	Hours
Circuits Requirement:		**3**
Select one of the following:		
ECE 110	Introduction to Electronics	3
ECE 205	Electrical and Electronic Circuits	3
Programming Requirement: [1]		**0-3**
Select one of the following (with no particular preference) unless ECE 220 is taken:		
CS 101	Intro Computing: Engrg & Sci	3
CS 124	Introduction to Computer Science I	3
A probability or statistics course chosen from an approved list below:		**3-4**
ECE 313	Probability with Engrg Applic	3
IE 300	Analysis of Data	3
BIOE 310	Computational Tools for Biological Data	3
MATH 461	Probability Theory	3 or 4
MATH 463	Statistics and Probability I	4
CEE 202	Engineering Risk & Uncertainty	3
CS 361	Probability & Statistics for Computer Science	3
Select one of the following options below. Both the Core and Advanced Core courses from Option A or B must be completed		
A. Electrical Engineering Option		**10-11**
Core requirement:		
ECE 210	Analog Signal Processing	4
Advanced Core Electives:		
Two ECE courses chosen from an approved list below:		
ECE 310	Digital Signal Processing	3
ECE 329	Fields and Waves I	3
ECE 330	Power Ckts & Electromechanics	3
ECE 340	Semiconductor Electronics	3
ECE 342 & ECE 343	Electronic Circuits and Electronic Circuits Laboratory	4
B. Computing Engineering Option		**15-16**
Core Requirement:		
ECE 120	Introduction to Computing	4
ECE 220	Computer Systems & Programming	4
Advanced Core Electives:		
Two ECE courses chosen from an approved list below:		
ECE 385	Digital Systems Laboratory	3
ECE 391	Computer Systems Engineering	4
ECE 411	Computer Organization & Design	4
Elective ECE Courses to achieve a minimum of 18 hours of ECE course work. [2]		**0-5**

Footnotes

[1] *If the student will be taking* ECE 220 *following* ECE 120, *this requirement will be waived.*

[2] *Completion of the minor requires a minimum of 18 hours ECE course work. No additional hours are needed in this category if all courses taken to satisfy the previous requirements are ECE courses. Otherwise choose from any 300 and 400 level classes except* ECE 316, ECE 317, ECE 396, ECE 397, ECE 496, ECE 499.

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The Grainger College of Engineering (https://grainger.illinois.edu/)
Electrical & Computer Engineering Minor (https://ece.illinois.edu/academics/ugrad/ece-minor/)