

# Electrical Engineering (ELEC)

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## Freshman

Fall	Hours	Spring	Hours
CHEM 1030 Fundamentals Chemistry I		3 COMP 1220 Introduction to Computing with Python <sup>2</sup>	2
CHEM 1031 Fundamental Chemistry I Laboratory		1 ENGL 1120 English Composition II	3
ENGL 1100 English Composition I		3 ENGR 1110 Introduction to Engineering	2
ENGR 1100 Engineering Orientation		0 MATH 1620 Calculus II	4
MATH 1610 Calculus I		4 PHYS 1600 Engineering Physics I	4
Core Fine Arts <sup>1</sup>		3	
	<b>14</b>		<b>15</b>

## Sophomore

Fall	Hours	Spring	Hours
<b>ELEC 2200 Digital Logic Circuits</b>		<b>3 ELEC 2110 Electric Circuit Analysis</b>	<b>4</b>
ENGR 2100 Fundamentals of Engineering Mechanics		3 <b>ELEC 2220 Computer Systems</b>	<b>3</b>
MATH 2630 Calculus III		4 MATH 2650 Linear Differential Equations	3
PHYS 1610 Engineering Physics II		4 MATH 2660 Topics in Linear Algebra	3
Core History <sup>1</sup>		3 Core History or Core Social Science <sup>1</sup>	3
	<b>17</b>		<b>16</b>

## Junior

Fall	Hours	Spring	Hours
<b>ELEC 2120 Signals and Systems</b>		<b>4 ELEC 3030 RF Systems Lab</b>	<b>1</b>
<b>ELEC 2210 Digital Electronics</b>		<b>4 ELEC 3040 Electrical System Design Lab</b>	<b>1</b>
<b>ELEC 3310 Fundamentals of Applied Electromagnetics</b>		<b>3 ELEC 3320 Electromagnetics for Wireless Communication</b>	<b>3</b>
<b>ELEC 3600 Electric Power Engineering Ethics<sup>3</sup></b>		<b>3 ELEC 3500 Control Systems</b>	<b>3</b>
		<b>3 ELEC 3700 Analog Electronics</b>	<b>3</b>
		<b>ELEC 3800 Random Signals and Systems</b>	<b>3</b>
	<b>17</b>		<b>14</b>

## Senior

Fall	Hours	Spring	Hours
<b>ELEC 3400 Communication Systems</b>		<b>3 ELEC 4020 Capstone Design II</b>	<b>3</b>
<b>ELEC 4010 Capstone Design I</b>		1 ENGR 2200 Introduction To Thermodynamics, Fluids And Heat Transfer <sup>5</sup>	3
INSY 3600 Engineering Economy		3 Core Literature <sup>1</sup>	3
Core Social Science <sup>1</sup>		3 <b>ELEC Elective</b>	<b>3</b>
<b>ELEC Elective</b>		3 Free Elective <sup>5</sup>	3
Technical Elective <sup>4</sup>		3 UNIV 4AA0 Achieve the Creed	0
	<b>16</b>		<b>15</b>

**Total Hours: 124**

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- <sup>1</sup> The AU Bulletin lists the University Core Curriculum requirements for students in the College of Engineering. Students must complete a sequence in either Literature or History. Because of the discipline specific requirements for the Humanities courses, it is recommended that a History sequence be completed in the Social Sciences courses.
- <sup>2</sup> Students take the C-programming version of COMP 1200, or they may opt for the 3 credit course COMP 1210 Fundamentals of Computing I. Only two credits of COMP 1210 will count in place of COMP 1200, and the third hour may count toward free elective credit.
- <sup>3</sup> Ethics course options: PHIL 1020 Introduction to Ethics, PHIL 1030 Ethics and the Health Sciences, PHIL 1040 Business Ethics, and PHIL 1110 Ethical and Conceptual Foundations of Science.
- <sup>4</sup> Technical elective is chosen from an approved list of MATH/SCIENCE, ELEC, and other College of Engineering electives.
- <sup>5</sup> For students completing the ROTC program, the first ROTC course may be used as the 3-hour free elective, and the second ROTC course may be substituted for ENGR 2200.

ELEC and Technical Elective: see adviser for approved course listing.