Curriculum - Electrical Engineering, BSE

Catalog Year: 2026 - 2027 **General Studies Gold**

Degree: Bachelor of Science in Engineering, BSE

College/School: Ira A. Fulton Schools of Engineering

Plan Code: ESEEEBSE

Minimum credit hours: 120

Upper division minimum credit hours: 47

Requirement	Minimum Grade	Credit Hours
Electrical Engineering Core		
CSE 100 Principles of Programming with C++ **OR** **CSE 110 Principles of Programming**	C	3
EEE 120 Digital Design Fundamentals	C	3
EEE 202 Circuits I		4
EEE 203 Signals and Systems I		3
EEE 241 Fundamentals of Electromagnetics		3
EEE 350 Random Signal Analysis (QTRS)		3
EEE 488 Senior Design Laboratory I		3
EEE 489 Senior Design Laboratory II		3
FSE 100 Introduction to Engineering		2
Electrical Engineering, Upper Division		
EEE 334 Circuits II		4

Requirement	Minimum Grade	Credit Hours
300-Level Area Pathway		
EEE 304 Signals and Systems II		16
EEE 333 Hardware Design Languages and Programmable Logic		
EEE 335 Analog and Digital Circuits		
EEE 341 Engineering Electromagnetics		
EEE 352 Properties of Electronic Materials		
EEE 360 Energy Systems and Power Electronics		
EEE 394 Topic: Quantum Mechanics for Quantum Information Science		
Upper Division Technical Electives		15
ComSigProcCtrl		
EEE 404 Real-Time DSP Systems		
EEE 405 Machine Learning Basics with Deployment to FPGAs		
EEE 407 Digital Signal Processing		
EEE 455 Communication Systems		
EEE 459 Communication Networks		
EEE 480 Feedback Systems		
EEE 481 Computer-Controlled Systems		
EEE 498 Topic: Networking for Big Data		
EEE 498 Topic: Foundations Machine Learning: From Theory to Pract		
Elect Circuits		
EEE 425 Digital Systems and Circuits		
EEE 433 Analog Integrated Circuits		

Requirement	Minimum Grade	Credit Hours
ElectroMag		
EEE 443 Antennas for Wireless Communications		
EEE 445 Microwaves		
EEE 448 Fiber Optics		
PhyElecPhoto		
EEE 434 Quantum Mechanics for Engineers		
EEE 435 Fundamentals of CMOS and MEMS		
EEE 436 Fundamentals of Solid-State Devices		
EEE 437 Optoelectronics		
EEE 439 Semiconductor Facilities and Cleanroom Practices		
Quantum Engineering		
EEE 498 Topic: Quantum Optics and Quantum Information		
Power Systems		
EEE 460 Nuclear Power Engineering		
EEE 462 Nuclear Proliferation, Security and Safeguards		
EEE 463 Electrical Power Plants		
EEE 465 Photovoltaic Energy Conversion		
EEE 470 Electric Power Devices		
EEE 471 Power System Analysis		
EEE 472 Power Electronics and Power Management		
EEE 473 Electrical Machinery		
EEE 498 Topic: Science and Technology of Solar Cell Fabrication		
EEE 498 Topic: Renewable Energy Technology and Systems		

Requirement	Minimum Grade	Credit Hours
EEE 498 Topic: Manufacturing Science of Solar Cells		
CompEngr		
EEE 404 Real-Time DSP Systems		
EEE 419 Python for Rapid Engineering Solutions		
Other (Honors)		
EEE 492 Honors Directed Study		
EEE 493 Honors Thesis		

Electrical Engineering Major GPA

Check: Minimum 2.0 Major GPA

Math, Science and Interdisciplinary Requirements

CHM 114 General Chemistry for Engineers (SCIT) **OR** **CHM 116 General Chemistry II (SCIT)** Students who have credit for CHM 113 should take CHM 116.		4
ECN 211 Macroeconomic Principles (SOBE) **OR** **ECN 212 Microeconomic Principles (SOBE)**		3
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3
MAT 275 Modern Differential Equations (MATH)	C	3
MAT 342 Linear Algebra **OR** **MAT 343 Applied Linear Algebra**	C	3
PHY 121 University Physics I: Mechanics (SCIT)	C	3

PHY 122 University Physics Laboratory I (SCIT)	C	1
PHY 131 University Physics II: Electricity and Magnetism (SCIT)	C	3
PHY 132 University Physics Laboratory II (SCIT)	C	1
PHY 241 University Physics III	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-EEE The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition **AND** **ENG 102 First-Year Composition** **OR** **ENG 105 Advanced First-Year Composition** **OR** **ENG 107 First-Year Composition** **AND** **ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses.

All undergraduate students must complete General Studies requirements.

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2026 - 2027 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.