

ELECTRICAL AND ELECTRONICS ENGINEERING, BACHELOR OF SCIENCE (GENERAL)

Summary of Graduation Requirements

Subject Area	Credits
General Education Core (https://catalog.nsu.edu/undergraduate/academic-information/general-education-core-program/)	40
Major Engineering Requirements	54
Mathematics and Science	34
Total Credit Hours	128

Curriculum

The B.S. degree program in Electrical and Electronics Engineering provides emphasis in microelectronics, digital and analog networks, communications, and control systems. The curriculum is designed to give students a thorough knowledge of the methods of design, application, and analysis of electronic systems.

Course	Title	Credits
First Year		
EEN 100	Introduction to Engineering	3
ENG 101	College English I	3
ENG 102	College English II	3
MTH 184	Calculus I ¹	4
MTH 251	Calculus II	4
PED 100	Fundamentals of Fitness for Life	1
PHY 160	University Physics I ¹	4
PHY 160L	University Physics Laboratory I ¹	1
CSC 170	Computer Programming I (C++)	3
EEN 101	Engineering Problem Solving	2
PHY 161	University Physics II	4
PHY 161L	University Physics Laboratory II	1
SEM 101 & SEM 102	Spartan Seminar 101 and Spartan Seminar 102	2
Credits		35
Second Year		
CHM 210	General Chemistry for Engineers ¹	3
EEE 201	Electrical Network Theory I	3
EEE 201L	Electrical Network Theory I	1
EEN 202	Electrical Network Theory II	3
EEN 202L	Electrical Network Theory II Laboratory	1
EEN 211	Material Science & Engineering, Material Science	3
EEE 231	Digital Logic Design	3
EEE 231L	Digital Logic Design Laboratory	1
MTH 252	Calculus III	4
MTH 372	Differential Equations	3

ENG 285	Public Speaking	3
HED 100	Personal and Community Health	2
XXX XXX	Social Science from the Core	3
SEM 201	Spartan Seminar 201	1
Credits		34

Third Year

EEN 301	Electronic Devices, Engineering Electronics I	3
EEN 301L	Electronic Devices Laboratory	1
EEN 305	Signals and Systems	3
EEN 311	Engineering Economics	3
MTH 300	Linear Algebra	3
Engineering Restricted Elective (p. 1)		3
EEN 321	Electromagnetic Field Theory	3
EEN 333	Digital Integrated Circuits	3
EEN 371	Control Systems	3
MTH 351	Probability & Statistics I ¹	3
XXX XXX	Humanities from the Core Tier 2	3
Credits		31

Fourth Year

EEN 401	Electronics Engineering Seminar	1
EEN 451	Communications Engineering	3
EEN 498	Sr Project I	3
EEN 499	Sr Project II	3
XXX XXX	Humanities (Core Tier 3 Cultural Perspectives Elective)	3
EEE 431	Microcontrollers	3
EEN 402	Power Electronics	3
XXX XXX	Social Sciences (Core Tier 3 Cultural Perspectives Elective)	3
Engineering Restricted Elective (p. 1)		3
XXX XXX		3
Credits		28
Total Credits		128

¹ Substitutes for General Education Core Requirements

Engineering Restricted Electives

Take one elective from this list or take one elective from any of the 3 tracks.

Code	Title	Credits
EEN 350	Scientific Instrumentation	3
EEN 451	Communications Engineering	3
EEN 462	Semiconductor Processing, Semiconductor Processing Technology	3
EEN 476	Renewable Bio Energy	3
OEN 340	Lasers and Photonics	3
OEN 380	Introduction to Quantum Optics	3

BIO Engineering Track

Code	Title	Credits
EEN 462	Semiconductor Processing, Semiconductor Processing Technology	3
EEN 481	Biomedical Engineering Micro-Devices & Systems	3

EEN 482	Bioelectronics	3
Total Credits		9

Microelectronics and Photonics Track

Code	Title	Credits
EEE 201	Electrical Network Theory I	3
EEN 462	Semiconductor Processing,Semiconductor Processing Technology	3
OEN 340	Lasers and Photonics	3
OEN 460	Optical Communications I	3
Total Credits		12

Gaming and Robotics Track

Code	Title	Credits
EEE 431	Microcontrollers	3
EEN 470	Introduction to Game Design and Development	3
EEN 471	Control Systems Analysis,Control Systems,3D Game Programming	3
EEN 475	Design of Robotic Systems	3
Total Credits		12