

# BACHELOR OF SCIENCE IN ELECTRICAL AND ELECTRONICS ENGINEERING (TRACK)

## Summary of Graduation Requirements

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

## 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
<b>First Year</b>		
EEN 100	Introduction to Engineering	3
ENG 101	College English I	3
MTH 184	Calculus I <sup>1</sup>	4
PHY 160	University Physics I <sup>1</sup>	4
PHY 160L	University Physics Laboratory I <sup>1</sup>	1
PED 100	Fundamentals of Fitness for Life	1
CSC 170	Computer Programming I (C++)	3
EEN 101	Engineering Problem Solving	2
ENG 102	College English II	3
MTH 251	Calculus II	4
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
<b>Credits</b>		<b>35</b>
<b>Second Year</b>		
SEM 201	Spartan Seminar 201	1
XXX XXX	Social Science from the Core	3
HED 100	Personal and Community Health	2
EEE 201	Electrical Network Theory I	3
EEE 201L	Electrical Network Theory I	1
CHM 210	General Chemistry for Engineers <sup>1</sup>	3
MTH 252	Calculus III	4
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 372	Differential Equations	3
ENG 285	Public Speaking	3
<b>Credits</b>		<b>34</b>

### Third Year

XXX XXX	Humanities from the Core Tier 2	3
EEN 301	Engineering Electronics I, Electronic Devices	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 431	Microcontrollers	3
EEN 371	Control Systems	3
MTH 351	Probability & Statistics I (Engineering Section) <sup>1</sup>	3
<b>Credits</b>		<b>31</b>

### Fourth Year

XXX XXX	Humanities (Core Tier 3 Cultural Perspectives Elective)	3
EEN 401	Electronics Engineering Seminar	1
EEN 451	Communications Engineering	3
EEN 498	Sr Project I	3
Engineering Restricted Elective (p. 1)		3
XXX XXX	Social Sciences (Core Tier 3 Cultural Perspectives Elective)	3
Engineering Restricted Elective (p. 1)		3
EEN 499	Sr Project II	3
Engineering Restricted Elective (p. 1)		3
XXX XXX	Unrestricted Elective	3
<b>Credits</b>		<b>28</b>
<b>Total Credits</b>		<b>128</b>

<sup>1</sup> Substitutes for General Education Core Requirements

## EEE Engineering Restricted Elective

### Track Courses

Select at least 3 courses from selected track (may take up to one course from another track)

### BIO Engineering Track

Code	Title	Credits
EEN 462	Semiconductor Processing Technology, Semiconductor Processing	3
EEN 476	Renewable Bio Energy	3
EEN 481	Biomedical Engineering Micro-Devices & Systems	3
EEN 482	Bioelectronics	3
<b>Total Credits</b>		<b>12</b>

### Microelectronics and Photonics Track

Code	Title	Credits
EEN 302	Microelectronics, Engineering Electronics II	3
EEN 462	Semiconductor Processing Technology, Semiconductor Processing	3

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OEN 340	Lasers and Photonics	3
OEN 360	Introduction to Optical Materials	3
OEN 380	Introduction to Quantum Optics	3
OEN 460	Optical Communications I	3
<b>Total Credits</b>		<b>18</b>

**Gaming and Robotics Track**

<b>Code</b>	<b>Title</b>	<b>Credits</b>
EEN 333	Digital Integrated Circuits	3
EEN 350	Scientific Instrumentation	3
EEN 451	Communications Engineering	3
EEN 462	Semiconductor Processing Technology, Semiconductor Processing	3
<b>Total Credits</b>		<b>12</b>