BACHELOR OF SCIENCE IN OPTICAL ENGINEERING

The Optical Engineering program was established in fall 2003 for the purpose of addressing diversity and high-tech workforce needs in Hampton Roads, the Commonwealth of Virginia, and the United States. The curriculum offers emphasis in optical materials, photonics, optoelectronics, and optical communications.

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

First Year		**Credits**
EEN 100	Intro Elec Eng'rng	3
EEN 102	Eng Use Computers	3
ENG 101	College English I	3
ENG 102	College English II	3
MTH 184	Calculus I [1]	4
XXX XXX	Social Science (Tier)	3
PED 100	Fundametals of Fitness for Life	1
CHM 210	General Chemistry for Engineers [1]	3
EEN 211	Material Science & Engineering	3
EEN 101	Engineering Problem Solving	2
SEM 101 & SEM 102	Spartan Seminar 101 and Spartan Seminar 102	2
	Credits	**30**
Second Year		
PHY 160	University Physics I [1]	4
PHY 160L	University Physics Laboratory I [1]	1
PHY 161	University Physics II	4
PHY 161L	University Physics Laboratory II	1
MTH 251	Calculus II	4
MTH 252	Calculus III	4
OEN 200	Geometric & Instr Optics	3
OEN 200L	Geometric & Instr Optics Lab	1
OEN 290	Optical Engineering Seminar I	1
XXX XXX	Humanities (Tier)	3
XXX XXX	Cultural Social Science (Tier)	3
ENG 285	Public Speaking	3
HED 100	Personal and Community Health	2
SEM 201	Spartan Seminar 201	1
	Credits	**35**
Third Year		
OEN 201	Geo & Inst Optics II	3
OEN 201L	Physical and Instrumental Optics Lab	1
MTH 300	Linear Algebra	3
MTH 372	Differential Equations	3
OEN 320	Optical Systems Analysis	3
OEN 340	Lasers and Photonics	3
OEN 340L	Laser and Photonics Lab	1
OEN 360	Introduction to Optical Materials	3
EEE 201	Electrical Network Theory I	3
EEE 201L	Electrical Network Theory I	1
EEN 311	Engnrng Elect Lab I	3
OEN 390	Optical Engineering Seminar II	1
EEE 203	Electronic Principles	3
XXX XXX	Cultural Humanities	3
	Credits	**34**
Fourth Year		
MTH 351	Probability & Statistics I	3
OEN 380	Introduction to Quantum Optics	3
OEN 460	Optical Communications I	3
OEN 460L	Optical Communication I Laboratory	1
EEN 321	Electromagnetic Field Theory	3
OEN 490	Sr Seminar	1
OEN 498	Sr Project !	3
OEN 499	Sr Project II	3
XXX XXX	Engineering Restrictive Elective	3
XXX XXX	Technical Elective	3
XXX XXX	Engineering Restrictive Elective	3
	Credits	**29**
	Total Credits	**128**

[1] Substitutes for General Education Core Requirements.

The Technical Elective may be chosen from the 300 level or above courses in math, computer science, chemistry, physics or engineering.