

# ENGINEERING

## BACHELOR OF SCIENCE (B.S.)

**NSU** Florida

### At a Glance

- Earn a degree in 123 credit hours.

### Program Format

- Program is offered at the Fort Lauderdale/Davie Campus.

### Program Highlights

- Gain top-tier engineering education, knowledge, leadership, and skills to analyze technical and societal problems and develop creative and responsible solutions.
- Obtain the highest professional standards of ethics and social responsibility to serve as engineering ambassador and leader in today's workforce.

### Future Opportunities

Explore careers, such as

- biomaterial engineer
- biomechanical engineer
- biomedical engineer
- industrial engineer
- logistics engineer
- operations engineer
- process control analyst
- sales engineer
- system analyst

**Learn More**  
[computing.nova.edu](http://computing.nova.edu)

### Prepare to Dominate

Secure the technological knowledge to analyze and understand how a single component impacts the operational lifecycle of a system, with Nova Southeastern University's (NSU's) Bachelor of Science (B.S.) in Engineering, offered at the College of Computing and Engineering (CCE). Become proficient in areas including operations, performance testing, manufacturing, cost scheduling, benefit-cost analysis, training and support, and sustainability. Establish a commitment to the professional and ethical standards of engineering, and recognize the importance of community and professional service.

Develop key skills for a career in engineering, health care, banking and finance, manufacturing, process engineering, plant management, or transportation systems. Get the NSU edge.

### What You'll Study

Explore the techniques, skills, and modern tools for engineering practice. Design a system, component, or process. Conduct experiments. Analyze and interpret data. Identify, formulate, and solve engineering problems. Analyze technical, environmental, and societal issues related to engineering designs and technology systems.

### How You'll Gain More

Beginning in the first year of the program, participate in hands-on project applications of engineering, and function on multidisciplinary teams.

### Unique Opportunities

- Present your research or analytical work at the Undergraduate Student Symposium; awards presented.
- Attend and/or present your work based on your interests at local and national conferences.
- Practice assessments in various specializations using top lab facilities and equipment.
- Join national honor societies based on your academic achievements.



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### Curriculum 2021-2022 | Total Credits: 123

Students are required to complete 30 credits hours as part of the General Education Program. Freshmen starting in fall 2016 or later are required to successfully complete the First-Year Seminar (UNIV 1000) in their first semester at NSU.

#### MAJOR REQUIREMENTS

##### Mathematics (21 credits)

			Credits
MATH 2100	Calculus I		4
		<b>OR</b>	
MATH 2100H	Calculus I Honors		4
MATH 3300	Introductory Linear Algebra		3
MATH 3400	Ordinary Differential Equations		3
MATH 2200	Calculus II		4
		<b>OR</b>	
MATH 2200H	Calculus II Honor		4
MATH 3200	Calculus III		4
MATH 4500	Probability and Statistics		3

##### Sciences (16 credits)

BIOL 1500	Biology I / Lab		4
CHEM 1300	General Chemistry I / Lab		4
PHYS 2400	Physics I / Lab		4
PHYS 2500	Physics II / Lab		4

Note: 6 credits of MATH and 6 credits of BIOL/CHEM/PHYS may fulfill the General Education requirements.

##### Core Courses (50 credits)

CENG 4910	Engineering Ethics Seminar		1
EENG 2710	Electrical Circuits/Lab		4
GENG 1000	Introduction to Engineering		1
GENG 1012	Engineering Graphics		3
GENG 1016	Introduction to Engineering Design		3
GENG 2000	Engineering Design and Project Management I		2
GENG 2022	Statics		3
GENG 2050	Computer Applications in Engineering		3
GENG 2070	Materials and Processes		3

GENG 2450	Dynamics		3
GENG 2710	Electrical Circuits/Lab		4
GENG 3000	Engineering Design and Project Management II		3
GENG 3012	Thermal and Fluid Systems		3
GENG 3024	Mechanics of Materials		3
GENG 3050	Sensors, Measurements, and Controls		3
GENG 3420	Engineering Economics		3
GENG 3800	Quality Control for Engineers		3
GENG 4010	Senior Capstone Design Project I		3
GENG 4020	Senior Capstone Design Project II		3

#### CONCENTRATIONS

Students must select one of the following concentrations:

##### Biomedical Engineering (15 credits)

BENG 2080	Foundations of Biomedical Engineering		3
BENG 4030	Biomechanics and Materials		3
BENG 4040	Physiological Systems and Modeling for Engineering I		3
BENG 4050	Physiological Systems and Modeling for Engineering II		3
BENG 4200	Biomedical Instrumentation		3

##### Industrial and Systems Engineering (15 credits)

IENG 3010	Principles and Methods of Industrial and Systems Engineering		3
IENG 3060	Systems Optimization		3
IENG 4010	Work Measurement and Human Factors		3
IENG 4020	Analysis of Production Systems and Facility Design		3
IENG 4065	Discrete System Modeling		3

This publication should not be viewed as a substitution for official program requirements and outcomes. A student is responsible for meeting the curriculum and program requirements in the student catalog that are in effect when the student enters the program.

Nova Southeastern University admits students of any race, color, sexual orientation, gender, gender identity, military service, veteran status, and national or ethnic origin. ■ Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate's, baccalaureate, master's, educational specialist, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Nova Southeastern University. 0507-2021-CCE-MCP

#### Admissions

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Fort Lauderdale, FL 33314-7796  
[nova.edu/undergraduate/admissions](http://nova.edu/undergraduate/admissions)  
(954) 262-8000 • 800-986-2247, ext. 28000  
[admissions@nova.edu](mailto:admissions@nova.edu)

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College of Computing  
and Engineering  
NOVA SOUTHEASTERN  
UNIVERSITY