Engineering

BACHELOR OF SCIENCE

NOVA SOUTHEASTERN UNIVERSITY | NSU Florida

Where It Can Take You

Put your problem-solving skills to work in a career in engineering, health care, banking and finance, manufacturing, process engineering, plant management, or transportation systems.

Become a Leader

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

Learn More
cec.nova.edu

B.S. in Engineering

Secure the technological knowledge to analyze and understand how a single component impacts the operational lifecycle of a system. 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.

What You'll Study

Explore the techniques, skills, and modern tools for engineering practice. Design a system, component, or process. Conduct experiments, and 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 Learn More

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

Unique Opportunities

- Undergraduate Student Symposium: present your research or analytical work; awards presented
- local, national conferences: attend or present your work based on your interests
- lab facilities: equipment enables students to practice assessments in various specializations
- national honor societies: join based on your academic achievement

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Curriculum | Total Credits: 85

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

Sciences (16 credits)

		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

Core Courses (50 credits)

		Credits
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
GENG 4910	Engineering Ethics Seminar	1

CONCENTRATIONS

Students can take free/open electives, or draw from the following two concentrations.

Biomedical Engineering (15 credits)

		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)

		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 *Undergraduate Student Catalog* that are in effect when the student enters the program.

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Admissions
3301 College Avenue
Fort Lauderdale, Florida 33314-7796
cec.nova.edu/admissions
(954) 262-2000 • 800-986-2247, ext. 22000
cecinfo@nova.edu

NSU Florida
College of Engineering and Computing
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