Environmental Engineering, B.S.

Program Description

Environmental engineering is a diverse field of Civil Engineering that covers both traditional water/waste-water treatment and emerging issues of public health. Much of the world still suffers from a lack of sanitation and clean water and environmental engineers are trained to solve these and many other problems. Environment engineers apply the principles of science and mathematics to protect public health and minimize human impacts on the environment.

Challenges in energy, water resources, solid/hazardous waste, air quality, globalization, climate change, and environmental degradation must be addressed in a comprehensive effort to promote a sustainable and resilient society. Graduates of Kennesaw State University (KSU) Environmental Engineering program are prepared for careers devoted to finding solutions to these and other problems. The KSU Environmental Engineering program provides a comprehensive education with special emphasis on the demands of water pollution, air pollution, water and waste-water treatment, solid and hazardous waste management and treatment, and other emerging environmental issues, including sustainable air, water, and land resources, human health, and environmental restoration. The program prepares students for entry-level environmental engineering jobs in these fields, for admission to graduate programs, and for professional licensure anywhere in the USA and around the world.

Graduates are qualified to work for consultants, federal, state, and local governments. There are professional opportunities as an environmental design engineer, permitting engineer, compliance engineer, environmental specialist, water and waste-water engineer, environmental scientist, and more. The curriculum is tailored to develop professionals who are able to move between the technical and managerial aspects of environmental engineering projects and to serve in key leadership positions within the engineering profession.

 This program is a part of the Southern Polytechnic College of Engineering and Engineering Technology.

Admission, Enrollment, and Graduation Policies

Admission Requirements

This program does not have specific admission requirements and only admission to

Kennesaw State University is required. For more information, please visit the Admissions section of this Catalog.

Enrollment Requirements
Upper division engineering courses require Engineering Standing.

Graduation Requirements
Each student is expected to meet the requirements outlined in Academic Policies 5.0 PROGRAM REQUIREMENTS & GRADUATION.

Program Course Requirements

Core IMPACTS Curriculum (42 Credit Hours)
General Education Core IMPACTS Curriculum

Core IMPACTS Curriculum Requirements Specific to This Major
Engineering Majors: Must take MATH 1190 in Mathematics & Quantitative Skills, MATH 2202 in Applied Math, and PHYS 2211 / 2211L and BIOL 1107 /1107L in Natural Sciences.

Note: Students cannot take both PHYS 1111/L and PHYS 2211/L nor PHYS 1112/L and PHYS 2212/L.

Core Field of Study (18 Credit Hours)
Students must earn a grade of "C" or better in these courses.

- ENGR 1000: Introduction to Engineering
- ENGR 2214: Engineering Mechanics - Statics
- SURV 2221: Surveying I
- SURV 2221L: Surveying I Lab
- CHEM 1211: Principles of Chemistry I
- CHEM 1211L: Principles of Chemistry Laboratory I
- CHEM 1212: Principles of Chemistry II
  One (1) credit hour carried over from Mathematics & Quantitative Skills.
  Two (2) credit hours carried over from Technology, Mathematics, and Sciences.

Major Requirements (54 Credit Hours)
Students must earn a grade of "C" or better in these courses.

- ENVS 2202: Environmental Science
- MATH 2306: Ordinary Differential Equations

- EDG 2160: Civil Graphics and Computer Aided Drafting
- ENGR 3131: Strength of Materials
- ENGR 3305: Data Collection and Analysis in Engineering
- ENGR 3324: Project Cost Analysis
- ENGR 3343: Fluid Mechanics
- ENGR 3345: Fluid Mechanics Laboratory
- CE 1001L: Introduction to Civil and Environmental Engineering Lab
- CE 3501: Materials for Civil & Construction Engineering
- CE 3502: Materials for Civil & Construction Engineering Lab
- CE 3701: Geotechnical Engineering
- CE 3708: Geotechnical Engineering Lab
- CE 3702: Introduction to Environmental Engineering
- CE 3703: Environmental Engineering Design
- CE 3704: Introduction to Environmental Engineering Laboratory
- CE 4353: Air Pollution Control
- CE 4343: Solid Waste Engineering
- CE 4371: Environmental Engineering Laboratory
- CE 4703: Engineering Hydrology
- CE 4708: Hazardous Waste Engineering
- CE 4800: Senior Project

Major Electives (9 Credit Hours)

Students must earn a grade of "C" or better in these courses. Select 9 credit hours from the following list of courses:

- CE 3398: Internship in Civil Engineering
- CE 4363: Environmental Engineering Chemistry
- CE 4373: Environmental Engineering Microbiology
- CE 4383: Sustainability for Engineers
- CE 4400: Directed Study in Civil and Environmental Engineering
- CE 4490: Special Topics in CE/CnE
- CE 4704: Engineering Hydraulic Analysis and Design
- GEOG 3315: Introduction to Geographic Information Systems

Program Total (123 Credit Hours)