CIVIL ENGINEERING, B.S.
(ENGINEERING)

Begin Campus: Any Penn State Campus

End Campus: University Park

Program Description
The program in Civil and Environmental Engineering is designed to provide the basic undergraduate education required for private practice and public service in civil engineering and/or continue formal education. Emphasis is placed on the fundamentals of civil engineering principles and design techniques. Students utilize basic engineering science concepts in several of the different specialty areas (e.g., construction/management, environmental, materials/pavement design/geotechnical, structures, transportation, and water resources). Finally the students are able to choose an area of specialization for professional practice or graduate studies.

The program is broadened by courses in communication, arts, humanities, social and behavioral sciences, as well as other engineering disciplines. Students gain experience in working as members of a team and using interdisciplinary approaches to solve problems. These experiences, as well as those related to engineering principles and design, are provided through exercises in the classroom, laboratory, and field. The program culmination is a capstone design course wherein the students’ knowledge and skills are applied to actual engineering problems.

What is Civil Engineering?
Civil Engineering is the application of mathematics and physical science principles to solve the design, construction, and maintenance concerns of the natural and physically built environment. Civil engineering deals with public works including highways, railroads, bridges, buildings, and water and energy systems. Civil engineers work in the public sector for government agencies or in the private sector at consulting or construction firms. Some civil engineers hold supervisory or administrative positions, while others pursue careers in design, construction, or education. Civil engineers may also aim to develop solutions to environmental problems. They are involved in efforts to improve recycling, waste disposal, public health, and water and air pollution control.

You Might Like This Program If...
• You enjoy math and creative problem-solving.
• You like to build and create projects or models.
• You prefer to use analysis and the scientific method to understand things.
• You enjoy working on multidisciplinary teams on complex problems.