

CIVIL ENGINEERING - PROGRAM EDUCATIONAL OBJECTIVES AND STUDENT OUTCOMES

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Program Educational Objectives

The Department of Civil, Environmental and Geodetic Engineering at The Ohio State University seeks to educate graduates who will be ethical, productive, and contributing members of their profession and of society. This education should form the basis for professional and personal development after graduation, as encompassed by the following objectives.

1. Graduates will apply engineering fundamentals acquired in their undergraduate program to succeed in
 - Engineering careers in the public sector, private sector, or academia
 - Non-engineering careers in research, government, education, public policy, business, law, or medicine that benefit from engineering education
2. Graduates will be motivated toward lifelong learning and the pursuit of significant, recognized post-B.S. professional development, such as
 - Professional engineering licensure
 - Graduate studies in engineering or science or other professional fields that benefit from analytic and scientific fundamentals
3. Graduates will engage in outreach to improve engineering practice or society through
 - Activity in professional organizations
 - Activity in service and community organizations

Student Outcomes

At graduation, undergraduate students seeking a B.S. degree in Civil Engineering from the Department of Civil, Environmental and Geodetic Engineering are expected to have attained the following program outcomes:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.