

# CIVIL AND ENVIRONMENTAL ENGINEERING

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Department Website ([https://sc.edu/study/colleges\\_schools/engineering\\_and\\_computing/study/civil\\_and\\_environmental\\_engineering/](https://sc.edu/study/colleges_schools/engineering_and_computing/study/civil_and_environmental_engineering/))

Juan M. Caicedo, *Chair*

The Department of Civil and Environmental Engineering offers a Bachelor of Science in Engineering degree with a major in civil engineering. Civil engineering is the planning, design, and construction of projects that define a civilization. Civil engineers have built landmarks that now stand as tributes to the profession's creative spirit and ingenuity. Civil engineering is everywhere: the buildings in which we live and work, the roads on which we travel, the water we drink, the bridges we cross. Civil engineers design industrial and commercial buildings, bridges, towers, dams, tunnels, and mass transportation facilities. They manage urban planning and public works projects, perform air quality monitoring, and plan and design waste collection and handling systems.

## Program Educational Objectives <sup>1</sup>

1. Graduates of the Civil engineering program should demonstrate their continuing successful practice as civil engineers and/or their pursuit of post baccalaureate education and/or their engagement in other professional careers that involve the application of engineering concepts.
2. Graduates of the civil engineering program should demonstrate a commitment for continuing professional development and life-long learning.
3. Graduates of the civil engineering program should demonstrate the ability to advance within their profession to positions of greater responsibility and leadership.

The first two years of the undergraduate curriculum form the necessary foundation in mathematics, computer programming, the physical sciences, and basic engineering sciences, together with courses in the liberal arts, to provide the student with a well-balanced educational experience. The upper-division civil engineering program includes the study of construction materials, structural analysis and design, soil behavior, systems analysis, water supply, and pollution control. The department offers elective courses in such areas of engineering as environmental, geotechnical, structural, transportation, and water resources.

The civil engineering graduate is prepared to enter the job market with federal, state, and municipal agencies and with private consulting firms involved with aspects of planning, design, construction, or environmental control. Students may, following graduate study, also pursue careers in teaching and in research and development.

<sup>1</sup> The Civil and Environmental Engineering Department at the University of South Carolina uses the term "program educational objective" to describe the expected accomplishments of our students in a few years (three to five years) following graduation. The term "student learning outcome" is used to describe the knowledge and skills at the time of graduation.

## Bachelor's/Master's Accelerated Program

A combined B.S.E./M.S. or M.E. degree program is available to undergraduate civil and environmental engineering students with GPAs of 3.50 or above and 90 or more hours earned toward their baccalaureate degrees. Up to 6 credit hours of 500-level or above courses may be applied toward both the B.S.E. and M.S. or M.E. in Civil Engineering degree requirements. The approval of the student's advisor and the Department of Civil and Environmental Engineering graduate director are required. Questions about this program may be directed to the civil and environmental engineering graduate director.