

ZACHRY DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Civil engineers plan, design, supervise the construction, operate, maintain, inspect, retrofit, and manage many of the facilities and systems in both public and private sectors that are essential to modern life. The civil engineering profession is one of the most stable and most diverse of the engineering disciplines. Civil engineers are employed by consulting firms, public agencies, and start and operate their own businesses. Workplaces range from construction sites to design offices. Most civil engineers work with some engineering or construction aspect of private and/or public facilities, such as airports, bridges, buildings, coastal structures, dams, environmental remediation of contaminated sites, harbors, highways, offshore structures, pipelines, railroads, transportation systems, tunnels, water collection systems, water distribution systems, water and wastewater treatment facilities, and waterways. Civil engineers are on the forefront of applying the newest technology innovations in engineering and construction.

Civil engineering projects are unique because they require individual planning, analysis, design, construction supervision, performance monitoring, management, and retrofitting. Civil engineering projects often require technical, governmental, legal, financial, and social evaluations. The primary objective is to provide the best service for the users while minimizing costs and other undesirable impacts.

Environmental engineers use a multidisciplinary approach to solve environmental challenges facing public and environmental health, such as water treatment, waste management, and climate change. Environmental engineers work to protect human health and welfare while minimizing the adverse effects of human activity on the environment. Environmental engineers are also employed by consulting firms, public agencies, and start and operate their own businesses.

The mission of the Zachry Department of Civil and Environmental Engineering (<http://engineering.tamu.edu/civil/>) at Texas A&M University is to prepare our graduates to become professional engineers and leaders in the engineering profession by providing our students with a solid education that will enable them to integrate fundamental scientific engineering principles and that will couple with the latest technological advances to facilitate the development of their problem-solving skills. Additionally, the department provides opportunities for enhancement of the students' educational experience through meaningful interactions with the profession. In summary, we expect our graduates to be fully prepared for life-long learning experiences that will strengthen their abilities to successfully and effectively solve the complex engineering problems facing society.

The faculty of the Zachry Department of Civil and Environmental Engineering strives to ensure that our ever-evolving educational programs accomplish several objectives. First, our faculty must prepare the students to address the current and future civil and environmental engineering needs of the State of Texas, the nation and the world by being able to recognize the important geopolitical and public policy needs; and solve technical problems. In addition, the Department provides a curriculum that integrates scientific and technical knowledge with an appreciation for social, economic, and political concerns. The curriculum and programs provide opportunities for our students to:

1. build leadership skills,
2. learn professionalism and ethical responsibility, and
3. develop an understanding of the need to engage in lifelong learning.

Finally, the faculty of the Zachry Department of Civil and Environmental Engineering at Texas A&M University promotes the highest academic standards of excellence, quality, and ethics in both our undergraduate and graduate programs, and in doing so create both a culture of excellence and a community of scholars. Through our programs, our faculty and graduates provide local, state, national, and international leadership to a profession that must solve the civil and environmental engineering problems facing an increasingly complex society.

B.S. in Civil Engineering

The program educational objectives for the undergraduate civil engineering program within the Department of Civil and Environmental Engineering at Texas A&M University are to produce graduates:

1. who are prepared to enter civil engineering practice and/or continue their education through study in graduate and professional programs,
2. most of whom will become practicing civil engineers with most of these becoming licensed professional engineers, and
3. many of whom will pursue advanced studies.

The undergraduate program in civil engineering within the Zachry Department of Civil and Environmental Engineering at Texas A&M is accredited by the Engineering Accreditation Commission of ABET, www.abet.org (<http://www.abet.org/>).

Students pursuing a B.S. in Civil Engineering can follow a general track or specialize in one of seven areas. Eight tracks are available for undergraduate study within Civil Engineering as follows:

1. General Civil Engineering
2. Coastal Engineering
3. Construction Engineering and Management
4. Geotechnical Engineering
5. Environmental Engineering
6. Structural Engineering
7. Transportation Engineering
8. Water Resources Engineering

Before commencing course work in the major, students must be admitted to the major or have the approval of the department.

Graduate programs in civil engineering are also available. These programs allow further specialization and offer more in-depth study to address more complex technical and management issues. Graduate degrees also offer additional employment opportunities.

B.S. in Environmental Engineering

The program educational objectives for the undergraduate environmental engineering program within the Department of Civil and Environmental Engineering at Texas A&M University are to produce graduates:

1. who are prepared to enter environmental engineering practice and/or continue their education through study in graduate and professional programs,

2. most of whom will become practicing environmental engineers with most of these becoming licensed professional engineers, and
3. many of whom will pursue advanced studies.

Our environmental engineering curriculum is unique in that it:

1. Has a specific focus on the protection of public and environmental health by solving environmental challenges;
2. Showcases a broad range of coursework to pursue specific environmental interests in natural or engineered systems;
3. Is multidisciplinary in every approach, melding earth science, life science, chemistry, social science and engineering;
4. Provides the tools to develop solutions to solve emerging and existing issues such as water treatment, climate change, and other environmental challenges.

Before commencing course work in the major, students must be admitted to the major or have the approval of the department.

Faculty

Appleton, Robert A, Associate Professor of the Practice
Civil Engineering
BS, Texas A&M University, 1984

Aubeny, Charles P, Professor
Civil Engineering
PHD, Massachusetts Inst of Technology, 1992

Autenrieth, Robin L, Professor
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Civil Engineering
PHD, Duke University, 1989

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PHD, University of Washington, 2012

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Civil Engineering
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PHD, Louisiana State University, 1993

Quadrifoglio, Luca, Associate Professor
Civil Engineering
PHD, University of Southern California, 2005

Rogers Jr, Alton G, Associate Professor of the Practice
Civil Engineering
BS, Texas A&M University, 1976

Sakhaei Far, Maryam S, Assistant Professor
Civil Engineering
PHD, North Carolina State University, 2011

Sanchez Castilla, Marcelo Javier, Professor
Civil Engineering
PHD, Universidad Politecnica de Catalunya (UPC), Barcelona, Spain, 2004

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PHD, University of Buffalo, State University of New York, 2012

Socolofsky, Scott A, Professor

Civil Engineering

PHD, Massachusetts Inst of Technology, 2001

Torres, Jacob, Senior Lecturer

Civil Engineering

PHD, Rice University, 2016

Walewski, John A, Associate Professor of the Practice

Civil Engineering

PHD, University of Texas, 2005

Wang, Xiubin B, Professor

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PHD, University of California, Irvine, 2001

Wolf, Charles M, Professor of the Practice

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PHD, Texas A&M University, 2001

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PHD, Colorado State University, 1978

Yarnold, Matthew T, Assistant Professor

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PHD, Drexel University, 2013

Ying, Qi, Associate Professor

Civil Engineering

PHD, University of California, Davis, 2004

Zhang, Yunlong, Professor

Civil Engineering

PHD, Virginia Tech, 1996

Zollinger, Dan, Professor

Civil Engineering

PHD, University of Illinois at Urbana-Champaign, 1989

- Bachelor of Science in Civil Engineering, Structural Engineering Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/structural-engineering-track/>)
- Bachelor of Science in Civil Engineering, Transportation Engineering Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/transportation-engineering-track/>)
- Bachelor of Science in Civil Engineering, Water Resources Engineering Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/water-resources-engineering-track/>)
- Bachelor of Science in Environmental Engineering (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/environmental-engineering-bs/>)

Majors

- Bachelor of Science in Civil Engineering, Coastal and Ocean Engineering Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/coastal-ocean-engineering-track/>)
- Bachelor of Science in Civil Engineering, Construction Engineering and Management Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/construction-engineering-management-track/>)
- Bachelor of Science in Civil Engineering, Environmental Engineering Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/environmental-engineering-track/>)
- Bachelor of Science in Civil Engineering, General Civil Engineering Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/general-civil-engineering-track/>)
- Bachelor of Science in Civil Engineering, Geotechnical Engineering Track (<https://currcatalog.tamu.edu/undergraduate/engineering/civil/bs/geotechnical-engineering-track/>)