Georgia Tech

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School of Civil & Environmental Engineering

People are our priority.
The world is our laboratory.

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The School of Civil & Environmental Engineering (CEE) at the Georgia Institute of Technology is committed to leading the transformation of education and research to solve problems critical to improving quality of life. Consistently ranked among the nation's most prominent programs, CEE boasts a rigorous, comprehensive curriculum, hands-on instruction, and interdisciplinary research.

The School includes six research affinity groups:

- Construction Engineering
- Environmental Engineering
- Environmental Fluid Mechanics and Water Resources
- Geo-systems Engineering
- Structural Engineering, Mechanics, and Materials
- Transportation Systems Engineering

Each research group concentrates on its own respective core discipline while collaborating with other groups within the School, as well as with other colleges and schools across Georgia Tech. This interdisciplinary approach to research allows faculty and students to address complex problems from multiple angles in order to form a new method for understanding the subject. Our program is based on engineering fundamentals and real-world experience. Our students learn how to apply core engineering principles to complex, multidisciplinary problems to meet the global challenges of the 21st Century.

What Civil & Environmental Engineers Do

Civil and environmental engineering deals with the design, construction and maintenance of the physical and naturally built environment, including works such as bridges, roads, canals, dams and buildings. Professional civil engineers work in a variety of jobs ranging from consulting to design work to owning their own business. Graduates are prepared to work with municipal, state, or federal agencies; private consulting firms involved with aspects of planning, design, construction, or sustainability; and with the development of facilities, resources, and environmental controls for industrial development.

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Degree Programs of CEE

CEE at Georgia Tech administers three degree-granting programs: civil engineering, environmental engineering, and engineering science and mechanics. In all, the School awards seven degrees. Requirements for these comprehensive programs include:

Bachelor's Degree Requirements: BSCE = 128 semester hours (hrs). Includes 26 hrs general education; 32 hrs mathematics and laboratory sciences; 34 hrs required engineering (including thermodynamics, computer science and statistics); 12 hrs general civil engineering breadth electives; 18 hrs specialized civil engineering technical electives; and 6 hrs approved elective credit. BSEnvE = 129 semester hours. Includes 26 hrs general education; 42 hrs mathematics and general science (including thermodynamics); 37 hrs required engineering (including computer science and statistics); 6 hrs environmental engineering technical and design electives; 12 hrs technical focus area electives; and 6 hrs approved elective credit.

Master's Degree Requirements: A minimum of 30 credit hrs beyond a bachelor's degree (24 hrs, plus 6 thesis hrs, if writing a Master's thesis). Each area of concentration within CEE determines its own specific courses options. Master's degrees awarded include MS, MSCE, MSEnvE, and MSESM.

Doctoral Degree Requirements: The Ph.D. is primarily a research degree. Specific course work is established for each individual student by their faculty advisory committee. Doctoral students generally take 50 - 60 credit hrs of course work beyond a bachelor's degree. All doctoral students must also complete a Minor course of study, consisting of at least 9 credit hrs in a separate field of study.

CEE Research Thrusts

CEE faculty members are leading experts in their respective research disciplines. They are working in critical areas to address pressing global challenges. Examples include:

ENERGY: Bio-fuel transportation and supply chain solutions; Wind, wave and tidal energy; Solar power using hydrodynamics; Microbial fuel cells – using waste for electricity; Energy from waste and landlls; CO2 storage; Nuclear waste disposal; Enhanced geothermal systems.

SUSTAINABILITY: Atmospheric processes related to global warming; Microbial processes needed for waste decomposition; Using y ash for materials; Sustainable infrastructure systems; Sustainability and social Interaction; Sustainable solutions for growth and development.

ENVIRONMENT & HEALTH: Water quality and treatment; Wastewater reclamation and reuse; Health eects of air pollution; Bio-remediation of hazardous waste; Pollution control and modeling.

INFRASTRUCTURE: Disaster resilient infrastructure systems; Materials for next generation infrastructure; Sensing the built environment; Infrastructure policy; Infrastructure and energy; Deterioration of bridges.

TRANSPORTATION: Innovation/analysis of freight and passenger air travel; Context Sensitive Solution (CSS) to develop scenic, historic, safe and sustainable transportation systems; Benets of transportation investment; Innovative materials and construction techniques; Highway performance during hazardous events; Policy and planning; Security, evacuation planning and modeling; Structures and bridges.

WATER: Environmentally friendly hydropower; Flood and drought management; Sustainable desalination technologies; River restoration; Water systems security; Remote and conventional sensors in water resources management; Policy, legal, and institutional frameworks for shared water resources; Coastal engineering.

Civil and environmental engineers are a critical component in supporting the global economy, securing the health and welfare of diverse communities, and maintaining and improving the environment.

Learn more at www.ce.gatech.edu

Contact Us

Explore CEE on line at http://www.ce.gatech.edu/.
To learn more about Civil & Environmental Engineering at Georgia Tech, contact CEE Student Services at 404-894-2246 or undergradinfo@ce.gatech.edu.

The Bechtel Engineering Scholarship at Georgia Tech is dedicated to increasing the number of underrepresented students within the engineering field, particularly women and minorities. Based on excellent academic standing, leadership, and application of engineering within the working world, this competitive scholarship provides the means to attract, retain, and motivate young engineering students and promote the overall visibility of the engineering profession.