

Students today are looking for careers that are truly satisfying. They want to be challenged! Equally important, they want careers that pay well.

Additionally, they are looking for careers that allow them to contribute in meaningful ways to our society.

For students who enjoy math and science, have a creative spark, and are socially aware, civil engineering is a great choice.

Look inside to learn about the many specialties in civil engineering and career guidance materials available from ASCE.

THE COMMITTEE ON CAREER GUIDANCE

The Committee on Career Guidance (CCG) is made up of civil engineer volunteers who work to develop career guidance materials and programs. These materials and programs are used to introduce kindergarten through undergraduate students to the civil engineering world, and to encourage students to choose civil engineering as a field of study.

Products and Deliverables

The committee is actively engaged in developing self-contained and self-explanatory career guidance materials and presentations that support the outreach activities of ASCE members to elementary, middle, and high schools, undergraduate students, parents, teachers, and counselors. The CCG also assists with developing career guidance materials on the ASCE web site.

The committee's outreach to the professional community includes providing articles on CCG activities for publication in the ASCE News and other media sources within ASCE. The CCG also provides career guidance topics for the educational track at the ASCE Annual Conference and Exposition.

FOR MORE INFORMATION, CONTACT:

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Career Guidance Programs
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Reston, VA 20191
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Website: www.asce.org/kids
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CAREERS IN CIVIL ENGINEERING

- Putting science and math to work to help people
- Using creativity and problem solving skills
- Selecting from a wide array of opportunities
- Having fun finding solutions to many of today's most important problems



Career Guidance

THE CIVIL ENGINEERING PROFESSION

The civil engineering profession encompasses many of the most exciting areas in science, math, and technology today. A civil engineer may:

- Design tunnels such as the Channel Tunnel — or “Chunnel” — linking Britain and France. At 38 kilometers underwater, it is the longest undersea tunnel ever built.
- Help create the world’s tallest building or largest sports stadium.
- Help clean up local harbors and restore the water quality of an area with new wastewater treatment plants.
- Meet increasing energy needs with computer controlled mirrors that provide solar power for electricity.
- Create a 3-D computer model of a new highway to preview how it will appear to the drivers.



THERE ARE MANY SPECIALTIES IN CIVIL ENGINEERING:

CONSTRUCTION ENGINEER. Construction engineers help turn designs into reality! They take designs — or blueprints — created by structural engineers and turn them into actual buildings.

ENVIRONMENTAL ENGINEER. Environmental engineers care about the planet. They make our water safe to drink, purify our air, and clean up contaminated sites.

GEOTECHNICAL ENGINEER. Geotechnical engineers investigate, test, and analyze the properties of soil and rock for projects ranging from dams and building foundations to landfills and the ground below roads. Geotechnical engineering is required in all aspects of civil engineering because most projects are supported by the ground.

STRUCTURAL ENGINEER. Structural engineers design structures to support their own weight and to resist forces like hurricanes and earthquakes. They are involved in designing everything from houses, office buildings, skyscrapers, and bridges to stadiums, arenas, space platforms, and roller coasters.

TRANSPORTATION ENGINEER. Transportation engineers deal with the challenge of meeting increasing travel needs on land, air, and sea. They design, construct, and maintain all types of transportation facilities, including highways, railroads, airfields, and ports. They also work to improve traffic control and mass transit by using new transportation methods, such as high-speed trains and people movers.

URBAN PLANNER. Urban planners coordinate projects to identify park and recreation areas, plan street patterns, and determine areas for industrial and residential growth. They help plan freeways, airports, and other facilities. Urban planners help make a community what it is.

WATER RESOURCES ENGINEER. Water resources engineers help ensure that the quality and quantity of water is adequate to maintain our lifestyle. They are also involved in the design, construction, and maintenance of hydroelectric power facilities, canals, dams, pipelines, pumping stations, locks, and seaport facilities.

CAREER GUIDANCE RESOURCES AVAILABLE FROM ASCE

On-Line Resources

Visit ASCE’s Career Guidance Web Site at www.asce.org/public/resources.cfm to find resources on line.

- Information on civil engineering careers and how to prepare for them, www.asce.org/public/careers.cfm
- Information on technical specialties within civil engineering, www.asce.org/public/tech.cfm

Publications

For a list of publications available on careers in civil engineering visit www.asce.org/public/resources.cfm.

- Interviews with civil engineers. Visit with civil engineers and learn about their specialties and the career challenges civil engineering has provided them, www.asce.org/public/future.cfm
- Links to more than 300 College and University Civil Engineering programs, www.asce.org/educational/instlist.cfm
- Links to other organizations and companies with valuable information on careers in civil engineering, www.asce.org/public/resources.cfm

