

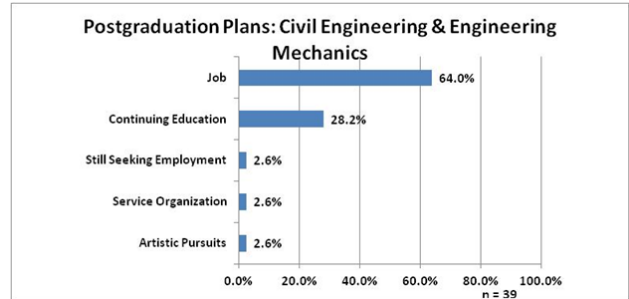
COLUMBIA UNIVERSITY CENTER FOR
Career Education

WHAT CAN YOU DO WITH A DEGREE IN **CIVIL ENGINEERING & ENGINEERING MECHANICS?**

Where do Civil Engineering & Engineering Mechanics majors go?

According to the 2015 Graduating Student Survey (with an 88.6% response rate for undergraduates in the department):

- 92.2% of graduates were employed or going to graduate school.
 - 64.0% were employed.
 - 28.2% had secure plans to attend grad school.



Examples of organizations that have hired Civil Engineering & Engineering Mechanics majors in recent years:



Graduate schools that Civil Engineering & Engineering Mechanics majors have attended in recent years:

- Columbia University
- Stanford University
- University of California, Los Angeles
- Cornell University
- Massachusetts Institute of Technology
- Northwestern University
- Georgia Institute of Technology
- University of Texas – Austin

What can you do with a degree in Civil Engineering & Engineering Mechanics?

Civil engineers are involved in the design, construction, maintenance, and operation of physical structures in the interest of the general public. A civil engineer is responsible for the creation and design of many different types of structures and is able to see the end result of the project. Major areas where civil engineers work include transportation, buildings, bridges, stadiums, dams, tunnels, water-supply, aerospace, the automotive industry, and the power industry. Organizations that recruit at Columbia include Arup, HNTB, Parsons, Gannett Fleming, Lend Lease, Skanska, Boeing, Thornton Tomasetti, STV, The Port Authority of NY & NJ, Turner Construction Co., and many others.

Career options include:

- **Consulting Industry:** Involved with the design of the infrastructure.
- **Federal/State/Local Government:** Helping to design and build structures that the public needs such as bridges, roads, tunnels, and airports.

- **Construction:** Primarily overseeing construction projects in the private industry to ensure safety and efficiency within the design specifications.
- **Academia:** Teaching in colleges and universities or conducting research.
- **Research Firms or Laboratories:** Primarily conducting field research and data collection as a function of consultation, laboratory services, and field technician services.

Use CCE's [Engineering Industry](#) pages to learn more about these, and other fields.

What do employers want?

In addition to your technical engineering skills, which might include skills in MATLAB, Architectural Desktop, Larsa, Revit, WaterCard, and MicroStation, qualities sought by employers include:

1. *Ability to work in a team structure*
2. *Ability to make decisions and solve problems*
3. *Ability to verbally communicate with persons inside and outside the organization*
4. *Ability to plan, organize, and prioritize work*
5. *Ability to obtain and process information*
6. *Ability to analyze quantitative data*
7. *Technical knowledge related to the job*
8. *Proficiency with computer software programs*
9. *Ability to create and/or edit written reports*
10. *Ability to sell or influence others*

Source: National Association of Colleges and Employers, 2015 Job Outlook

Your major can demonstrate relevant coursework and knowledge to a prospective employer, but your studies aren't the only aspect of your experience that employers are evaluating. They select people who they believe can do the job (have the right skills), want the job (have demonstrated an interest in the field), and are a personality fit for the team and organization.

What value do Civil Engineering & Engineering Mechanics majors bring?

According to the Civil Engineering Department at Columbia, the curriculum helps you to develop the ability to do the following, including:

- Apply knowledge of the civil engineering field.
- Apply math (differential equations, statistics, calculus) and science (physics, chemistry, earth science) knowledge.
- Design and conduct experiments and analyze and interpret data.
- Function on multidisciplinary teams and communicate effectively.
- Identify, formulate, and solve engineering problems.
- Understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- Use the techniques, skills, and modern engineering tools necessary for engineering practice.

What if I'm an International Student?

For international students at Columbia under student visas, selecting your major can play a significant role if you plan to work in the US after completion of your degree. STEM (Science, Technology, Engineering, Mathematics) students can receive a 24-month extension of optional practical training after the initial period of authorized post-completion OPT. Students with questions about this should visit the International Student & Scholars Office (ISSO), view ISSO's Work Opportunities for Students in F-1 Status site (columbia.edu/cu/isso/visa/F-1/index.html) and view CCE's International Students webpage at careereducation.columbia.edu/students/International-Students.