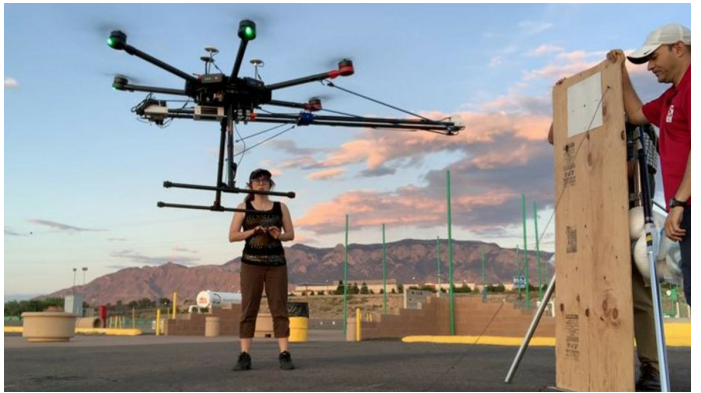




DEGREES OFFERED

- › B.S. Civil Engineering
- › M.S. Civil Engineering – Structures
- › Master of Engineering – Structures
- › Ph.D. Civil Engineering – Structures



WHAT IS STRUCTURAL ENGINEERING?

Structural engineering is a sub-discipline of civil engineering in which structural engineers are trained to understand, predict, and calculate the stability, strength and rigidity of built structures for buildings and non-building structures, to develop designs and integrate their design with that of other designers, and to supervise construction of projects on site. They can also be involved in the design of machinery, medical equipment, and vehicles where structural integrity affects functioning and safety.

**Sample job titles:** Bridge/structure inspection team leader, city engineer, civil engineering manager, county engineer, design engineer, project engineer, structural engineer, traffic engineer.

WHAT YOU MIGHT DO IN A DAY

- › Design structures such as buildings, bridges, tunnels, sports arenas
- › Consult with architects and contractors to calculate the load (such as wind, snow, earthquake forces), fit the structure to the architecture, and decide on what structural systems to use
- › Direct the demolition or dismantling of a structure, either permanently or in order to repair it, with regards to safety and without damage to surrounding structures
- › Select beams, columns and other materials for the building support
- › Inspect a structure during and after construction to ensure that it is properly constructed.

WHAT TYPE OF EDUCATION DO YOU NEED?

- › Civil engineers need a bachelor’s degree in civil engineering. Programs in civil engineering include coursework in math, statistics, engineering mechanics and systems, and fluid dynamics, depending on the specialty.
- › Courses include a mix of traditional classroom learning, work in laboratories, and fieldwork.
- › A degree from a program accredited by ABET is needed to earn the professional engineer (PE) license.
- › Further education after the bachelor’s degree, along with the PE license and previous experience, is helpful in getting a job as a manager.

JOB PROSPECTS

**Structural Engineers**

- › U.S. News ranked civil engineering (including structural engineer) as #4 in Best Engineering Jobs 2021
- › Bureau of Labor (BLS) Statistics: 2021 median salary \$88,530
- › BLS forecasts increase of 1.7% in new civil engineering jobs (including structural) 2019-2029