

# Civil Engineering

College of Engineering and Mines  
Department of Civil and Environmental Engineering  
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[www.uaf.edu/engineer/cee.htm](http://www.uaf.edu/engineer/cee.htm)

## M.C.E., M.S. Degrees

Minimum Requirements for Degrees: 30 credits

Civil engineers plan, design and supervise the construction of facilities essential to modern life in both the public and private sectors. These facilities vary widely in nature, size and scope: space launching facilities, offshore structures, bridges, buildings, tunnels, highways, transit systems, dams, airports, irrigation projects, treatment and distribution facilities for water and collection and treatment facilities for wastewater.

Civil engineers use sophisticated technology and employ computer-aided engineering during project phases of design, construction, project scheduling and cost control. Civil engineers are problem solvers involved in community development and improvement. They meet the challenges of pollution, deteriorating infrastructure, traffic congestion, energy needs, floods, earthquakes, urban redevelopment and community planning. The opportunity for creativity is unlimited.

The civil engineering program at UAF began in 1922, had its first graduate in 1931 and since has graduated more than 800 men and women. Many of these graduates work in Alaska's cities, towns and villages in a wide range of responsible positions. More than 60 percent of Alaska's professional engineers practice in civil engineering. The UAF civil engineering program has been accredited since 1940 by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. All engineering programs in the department give special attention to problems of northern regions.

Graduate students may enter one of two programs: the master of civil engineering is for those whose goal is broad professional practice. Those whose interests or background favor a specialized program, with emphasis on research and/or advanced specialized study, will ordinarily select the master of science degree.

In addition to general civil engineering courses, specialties are available in transportation, geotechnical, structures, water resources, hydrology and environmental studies. These courses emphasize principles of analysis, planning and engineering design in northern regions.

A master's degree program can include courses in environmental engineering, engineering management and other areas. An advanced degree in environmental engineering, administered within the civil engineering department, is available.

## Graduate Program—M.C.E. Degree

1. Complete the following admission requirements:
  - a. Complete a bachelor's degree in civil engineering.
  - b. International students must complete the TOEFL with a score of 575 or better.
2. Complete the general university requirements (page 182).
3. Complete the master's degree requirements (page 186).
4. Complete a project..... 3-6
5. Minimum credits required .....30

*Note: M.C.E. candidates will have passed a fundamentals of engineering examination prior to the awarding of the degree.*

## Graduate Program—M.S. Degree

1. Complete the following admission requirements:
  - a. Complete a bachelor's degree in civil engineering.
  - b. International students must complete the TOEFL with a score of 575 or better.
2. Complete the general university requirements (page 182).
3. Complete the master's degree requirements (page 186).
4. Complete a thesis..... 6-12
5. Minimum credits required .....30

See Arctic Engineering.

See Engineering for Ph.D. program.

See Engineering Management.

See Science Management.

See Environmental Engineering and Environmental Quality Science.