

# Civil Engineering

## Master of Engineering (M.E.)

*Develop the practical skills and knowledge you need to handle challenging, new water-related engineering problems*



## Overview

With an ever-growing population, today's civil engineers face the challenge of building and maintaining a sustainable infrastructure. One of our most critical resources is water, and the Master of Engineering in Civil Engineering program prepares you to tackle the evolving water concerns and other infrastructure issues facing future generations.

Through your course work, you will master concepts in:

- Water control and measurement
- Physical and engineering hydrology
- Water resources planning, management, and systems analysis
- Environmental monitoring
- Geographic information systems (GIS)
- Infrastructure management and security
- Linear programming and network flows

## Specific Admission Requirements

- Bachelor's degree in engineering from an accredited institution

## Program Completion Requirements

- 30 graduate credit hours
- 15 credits in civil engineering (CIVE) courses
- Minimum of 21 credits earned after admission to the graduate school
- 24 credits of 500 level or above earned at CSU
- This is a course work only degree and does not require completion of a thesis

## Time Frame

Can be completed in three to four years. Program duration may vary based on previous course work, intensity of study, and course availability. Most students enroll in one course per semester. Summer courses are not required.

## Contact Us

**Mike Macklin, CSU OnlinePlus**  
(970) 491-7583  
[michael.macklin@colostate.edu](mailto:michael.macklin@colostate.edu)

## For more information

[online.colostate.edu/degrees/civil-engineering/](http://online.colostate.edu/degrees/civil-engineering/)



# Degree Requirements and Curriculum

- A minimum of 30 credits must be completed.
- A minimum of 15 credits in Civil Engineering (CIVE) courses must be completed.
- At least 21 credits must be earned after formal admission to the University.
- At least 24 credits of 500-level or above must be earned at Colorado State University.
- A thesis, project paper, or final examination is not required; this is a Plan C (course-work-only) degree.
- No independent study credits will count toward graduation.
- Appropriate prerequisites for required courses under a selected track must be completed. Prerequisites will be enforced.

The curriculum for this Master of Engineering is focused on water resource management.

- CIVE 440 - Nonpoint Source Pollution (3 cr.)
- CIVE 516 - Water Control and Measurement (3 cr.)
- CIVE 520 - Physical Hydrology (3 cr.)
- CIVE 522 - Engineering Hydrology (3 cr.)
- CIVE 544 - Water Resources Planning and Management (3 cr.)
- CIVE 546 - Water Resource Systems Analysis (3 cr.)
- CIVE 547 - Statistics of Environmental Monitoring (3 cr.)
- CIVE 571 - Pipe System Engineering and Hydraulics (3 cr.)
- CIVE 577 - GIS in Civil and Environmental Engineering (3 cr.)
- CIVE 578 - Infrastructure Management and Security (3 cr.)
- CIVE 645 - Computer-Aided Water Management and Control (3 cr.)
- ENGR 510 - Linear Programming and Network Flows (3 cr.)
- ENGR 520 - Engineering Decision Support/Expert Systems (3 cr.)

**Colorado State University is a leader in water-related issues and one of the few institutions providing an online graduate degree in civil engineering with a focus on water resources and management.**



## Career Opportunities

- Gain the skills and knowledge to handle the new engineering problems that arise from our industrial-oriented society.
- Become a more environmentally-educated engineer. You will be well-situated to pursue green positions, helping with areas such as water purification, flow, containment, and transport.
- Civil engineers with a focus on water resource management are needed in a global marketplace, though specific career opportunities depend on the desired region and job market.
- As a civil engineering graduate you'll find outstanding employment prospects in public works, private consulting or regulatory organizations, and government or military agencies.

## Who should earn this degree?

- Engineers interested in working for consulting firms, government agencies, or the military, and manufacturers involved in the management and development of water resources.
- Engineers interested in sales, teaching, and research related to water resource management and development.