

*Bachelor of Science*

# ENVIRONMENTAL ENGINEERING

CEE.MINES.EDU



## DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING



The Department of Civil and Environmental Engineering produces graduates who can design and maintain sustainable built and natural environments in society. The Department of Civil and Environmental Engineering offers two closely-related undergraduate programs: the B.S. Environmental Engineering and the B.S. Civil Engineering. Environmental engineers are responsible for the protection of our natural environment and its inhabitants, including ensuring the distribution of clean and safe drinking water to communities and cities.

**60%**

of Environmental Engineering majors at Mines are women.

**\$63,067**

Average starting salary for 2015-16 Bachelor's graduates\*

**15%**

2012-22 projected job market growth<sup>§</sup>

## COMBINED DEGREE PROGRAM

Students can earn the Master of Science in Civil and Environmental Engineering or the Master of Science in Environmental Engineering and Science with as little as one additional year of study after their undergraduate degree. These students further specialize in water resources, water treatment, mitigation of pollution, or numerous other subfields of Environmental Engineering. They will command a higher starting salary commensurate with their enhanced qualifications.

## PROGRAM SCOPE

### DEGREES OFFERED

- ✓ **Environmental Engineering Bachelor's**
- ✓ **Environmental Engineering Science Master's and PhD**
- ✓ **Civil and Environmental Engineering Master's and PhD**

## SAMPLE COURSEWORK

- Hydrology and Water Resources Engineering
- Water & Wastewater Treatment Processes
- Environmental Engineering Laboratory
- Site Remediation Engineering
- Sustainable Engineering Design
- Environmental Engineering Field Session
- Chemical Fate & Transport in the Environment
- Pollution Prevention: Fundamentals & Practice
- Fundamentals of Ecology

\*Information is from the 2015-16 Mines Career Center Outcomes Survey; <sup>§</sup>BLS.gov

# UNDERGRADUATE RESEARCH



Research opportunities for undergraduate students in environmental engineering are plentiful. These opportunities can be packaged in many different ways, including fellowships, scholarships, hourly jobs, or course credit. Undergraduate research may be sponsored at the faculty level, or in various research centers, such as the six that are highlighted below.

## RESEARCH CENTERS

### AQWATEC

The Advanced Water Technology Center (AQWATEC) aims to advance the research and development of novel water treatment processes and hybrid systems. The center works to enable sustainable and energy efficient utilization of polluted water sources to provide potable and non-potable water supplies.

### CERA

The Center for Environmental Risk Assessment (CERA) aims to promote and enhance environmental risk assessment research and educational activities at Mines. The Center focuses on scientific based approaches for estimating human and ecological risks associated with exposures to artificial and natural chemicals in the environment.

### CESEP

Center for Experimental Study of Subsurface Environmental Processes (CESEP) utilizes knowledge from diverse disciplines to provide a broad and thorough understanding of environmental and hydrologic processes. The center creates solutions to problems related to underground environmental issues like global climate change, groundwater pollution, landmine detection and remediation of hazardous waste in the environment.

### IGWMC

The Integrated GroundWater Modeling Center (IGWMC) supports and advances the appropriate use of digital engineering models in groundwater resources protection and management. The center organizes short courses, workshops and conferences and conducts research in groundwater hydrology and water resources.

### RENUWIT

Re-inventing the Nation's Urban Water Infrastructure (ReNUWit) is an interdisciplinary, multi-institutional research center whose goal is to reimagine the ways in which we manage the distribution of clean drinking water. The center uses technology to design novel solutions for society's need for sustainable water infrastructure.

### WE<sup>2</sup>ST

The ConocoPhillips Center for a Sustainable WE<sup>2</sup>ST at Colorado School of Mines is envisioned as the nation's premiere institution for research, education and outreach associated with the joint sustainability of water resources and energy production in arid lands. Research areas include regional water resources and management; contamination and risk mitigation; water treatment and reuse; and corporate social responsibility.