

GEORGE S. ANSELL DEPARTMENT OF

# METALLURGICAL & MATERIALS ENGINEERING

[METALLURGY.MINES.EDU](http://METALLURGY.MINES.EDU)



## PROGRAM SCOPE

The Metallurgical and Materials Engineering (MME) program provides students with a fundamental knowledge base associated with the properties, selection, application and processing of materials. Mines MME graduates work in a wide spectrum of manufacturing industries including metal products, automotive and aerospace industries and semiconductor fabrication.

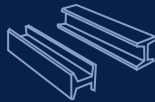
**\$75,379 AVERAGE STARTING SALARY FOR 2019-20 MME GRADUATES\***

## HANDS-ON EXPERIENCE

There are several facilities available for undergraduate classes with lab components as well as design projects.

The Hot Shop includes foundry/casting, forging, glass blowing and some welding equipment. There are other facilities that provide materials analysis tools, mechanical testing and additional welding instruments.

These all provide students with spaces to apply concepts and gain hands-on experience both for required classes (Microstructural Development, Mechanical Properties and Ceramics) and electives (Foundry, Introduction to Bladesmithing, Electron Microscopy).



## SUMMER FIELD SESSION

All students complete a summer field session focused on the following topics:

- Characterization and production of particles
- Physical and interfacial phenomena associated with particulate processes
- Applications to metal and ceramic powder processing
- Laboratory projects and plant visits

## AREAS OF STUDY

The Metallurgy and Materials Engineering Department was one of the first organized departments at Mines and has been granting degrees since 1904.

## DEGREES OFFERED

- ✓ **Metallurgical & Materials Engineering**  
Minor, bachelor's, master's and PhD offered

## MATERIALS ADVANTAGE CHAPTER (CSMMAC)

Comprised of four international professional societies, CSMMAC is a student chapter that participates in many competitions and has a long history of success.

- Awarded the Chapter of Excellence Award (2013, 2016, 2019-2020) and Most Outstanding Chapter Award (2014-2015, 2017-2018) out of over 95 chapters worldwide.
- Winners of the Materials Bowl brain bowl competition 8 times since 2019. No other school has won more than twice in the history of the materials-themed knowledge and trivia competition.



## MME RESEARCH AND CAREER OPPORTUNITIES

Our faculty have close ties with industry, government, laboratories and academia that provide opportunities for internship and employment for students and alumni. The department has a national and international reputation as a leader in metallurgy and materials engineering.

### TOP EMPLOYERS

- Ball Aerospace
- Cleveland Cliffs Steel
- Boeing
- Lockheed Martin
- Chevron
- Phillips 66
- BP
- Nucor Steel



### UNDERGRADUATE RESEARCH

The MME department has the largest research expenditures of all departments at Mines, providing paid research opportunities to interested undergraduate students.

**92%** Bachelor's graduates reporting positive outcomes within six months of graduation

## ABOUT MINES

Colorado School of Mines is a public university focused on science and engineering, dedicated to pioneering research that addresses the great challenges society faces today and committed to educating students who will do the same.

Founded in 1874 as an institution specializing in silver and gold, Mines has expanded its mission beyond the extraction and use of natural resources, becoming a world leader in advancing responsible stewardship of the Earth and developing revolutionary technologies in numerous disciplines.

### CONTACT

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## MINES BY THE NUMBERS

Mines has the highest admissions standards of any public university in Colorado and among the highest of any public university in the United States.

### No. 1

Best public college in Colorado by *BusinessFirst*

### No. 1

Mines has the largest collegiate section of the Society of Women Engineers in the United States

### 3

Rocky Mountain Athletic Conference All-Sports Competition Cup championships

### 18

Intercollegiate athletics teams at Mines

### 92%

First-year to sophomore retention percentage from 2018-19 ∞

### 200+

Student organizations on campus

### 6,605

Degree-seeking undergraduate and graduate students ∞

