With over 1300 students and 88 faculty members, the College of Applied Science and Engineering is a research-intensive college that includes four of Mines’ 14 academic departments and 2 interdisciplinary graduate degree programs.

- Chemical & Biological Engineering
- Chemistry & Geochemistry
- Metallurgical & Materials Engineering
- Physics
- Materials Science Program
- Nuclear Science & Engineering Program

**CASE Facts:**
- $24.7 million in Research Awards in FY14 (47% of the Mines’ total)
- 113 Undergraduate Students (34% female)
- 117 Masters students
- 254 PhD Students (42% of Mines’ total)
- Nationally and internationally recognized faculty
- Research conducted by faculty, post-docs, graduate students and undergraduate students
- Undergraduate and graduate students exposed to cutting-edge science and engineering research in the different departments
- Research is focused on current challenges facing our world including energy, sustainability and manufacturing
- Students heavily recruited by employers who value their quality and training

**CASE Vision:**
To capitalize on our cross-disciplinary strengths in science and engineering as we develop future leaders capable of addressing significant scientific and technological issues that challenge our world.

http://case.mines.edu/
DEPARTMENT OF **Chemical & Biological Engineering**
Provides a rigorous educational experience where faculty and top-notch students work together on meaningful research with far-reaching societal applications. Offers BS, MS, and PhD degrees in Chemical Engineering and BS degrees in Chemical and Biochemical Engineering.
- 634 undergraduate, 93 graduate students
- BS average starting salaries: $72k (chemical engineers) $68k (chemical & biochemical eng.)
- 23.5 academic faculty, including 6 NSF Career and 1 PECASE award winner
- $7,079,000 in research awards in FY2014

DEPARTMENT OF **Chemistry and Geochemistry**
Focuses on the behavior and properties of matter, the reactions and transformations that dictate chemical processes, and the creation of new substances, with emphasis on materials chemistry, energy sustainability, and environmental stewardship. Offers BS tracks emphasizing chemistry, biochemistry, or environmental chemistry. Additionally MS and PhD degrees are offered in Chemistry, Applied Chemistry & Geochemistry.
- 83 undergraduate, 67 graduate students
- BS average starting salary: $43,000
- 19.5 academic faculty
- $3,770,000 in research awards in FY2014

DEPARTMENT OF **Metallurgical & Materials Engineering**
Plays a role in all manufacturing processes which convert raw materials into useful products adapted to human needs. The primary goal is to provide students with a fundamental knowledge base associated with the processing, properties, selection and application of structural and functional materials. Offers BS, MS, and PhD degrees in Metallurgical and Materials Engineering.
- 156 undergraduate, 133 graduate students
- 19 academic faculty
- BS average starting salary: $64,000
- $7,444,000 in research awards in FY2014

DEPARTMENT OF **Physics**
Combines the deep understanding of science fundamentals with the practical knowledge and skills of engineering practice and design. Offers BS degrees in Engineering Physics and MS and PhD degrees in Applied Physics.
- 240 undergraduate, 78 graduate students
- 23 academic faculty
- BS average starting salary: $66,000
- $6,488,000 in research awards in FY2014

INTERDISCIPLINARY GRADUATE PROGRAMS

**Materials Science**
Addresses the structure and properties of materials and their applications to various areas of science and engineering. Investigates the relationship between structure of materials at atomic or molecular scales and their macroscopic properties. Involves faculty from Metallurgical and Materials Engineering, Chemistry, Chemical Engineering, Mechanical Engineering and Physics. Offers MS and PhD degrees in Materials Science. 60 graduate students enrolled.

**Nuclear Science & Engineering**
Focuses on all aspects of the nuclear fuel cycle from fuel exploration and processing, through nuclear power systems production, design and operation, to fuel recycling, storage and waste remediation and radiation damage and the policy issues surrounding each of these activities. Offers ME, MS and PhD degrees in Nuclear Science. 23 graduate students enrolled.

A FEW OF MANY **CASE RESEARCH CENTERS**
- Center for Hydrate Research
- Colorado Institute for Energy Materials & Computational Science
- Microintegrated Optics for Advanced Bioimaging & Control
- Colorado Institute for Macromolecular Science & Engineering
- Center for Environmental Risk Assessment
- Advanced Steel Processing and Products Research Center
- Colorado Center for Advanced Ceramics
- Center for Welding, Joining, and Coatings Research
- The Renewable Energy Materials Research Science and Engineering Center
- Nuclear Science and Engineering Center

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