Colorado School of Mines

• Public research university devoted to engineering and applied science.

• The highest admissions standards of any public university in Colorado and among the highest of any public university in the U.S. (875 out of ~ 10,000 applications)
  Average ACT: 29, SAT: 1270, GPA: 3.8

• Mines is one of a very few institutions in the world having broad education and research expertise in resource exploration, extraction, production and utilization.

• Students ~ 4,800, student/faculty ratio ~15:1, average undergraduate class size ~ 34 students.
Chemical and Biochemical Engineering

• A chemical engineer is a person who applies the basic principles of physics, mathematics, biology and chemistry to provide goods and services (Engineering) for the betterment of mankind.

• Avg. 2009/10 ChemE B.S. Salary Offer: $64,916

Employers

• Energy – BP, ExxonMobil, Shell, Chevron, ...
• Chemicals – Dow, Chevron-Phillips, Eastman, . . .
• Engineering – KBR, Air-Liquide, MSI, ATK, Washington Group, URS Corp, . . .
• Microelectronics – Intel, Motorola, Atmel, Lexmark, . . .
• Consulting – CH2M Hill, EAI, Earth Tech/Tyco, . . .
• Biomedical – CaridianBCT, Reglera, Sandoz. . .
Chemical and Biochemical Engineering

• In 2008, 10th Largest Chemical Engineering Department in the US (out of 157)
• Enrollment
  – ~550 Undergraduates (~40% women)
  – ~60 Graduate students
• Largest Chemical Engineering Program in Colorado
  – World leader in computer-aided chemical engineering education
  – Recipient of Colorado Commission on Higher Education Program Excellence Award
• 134.5 credit hours to graduate (6 semesters of chemistry, 2 semesters of physics, 4 semesters of math)
Ning Wu – Assistant Professor in Chem. Eng.

• Born in: China

• Undergraduate: Chemical Engineering, Singapore, 1996-2000

• Master. Eng: Singapore, 2001-2002

• Ph. D.: Princeton University, Chemical Engineering, 2003-2008

• Postdoctoral: Harvard University, Applied Science, 2008-2010

• Assistant Professor: Colorado School of Mines, Aug. 2010 -

• Living in a girls’ dorm
My research – Advanced Materials (new structure, new property)

Making and Packing Non-spherical Objects

2 micron, 1/100 of the diameter of your hair

Mr. Peanut  Mrs. Peanut
C. Mark Maupin – Assistant Professor in Chem. Eng.

Computational Evaluation of Alternative/Renewable Energy Solutions & Biological Systems

- Born: Boise, ID
- Undergraduate: BSU – Chemistry
- Masters: BSU – Biochemistry
- Ph.D.: UofU – Physical Chemistry
- Assistant Professor: CSM
- Hobbies:
  - Fly Fishing
  - Hiking & Camping
  - Photography

http://www.biofuels.mines.edu/
http://chemeng.mines.edu/faculty/cmmaupin/
cmmaupin@mines.edu
Research

• **Earth, Energy, Environment**
  - Viability of a cellulosic feedstock.
  - Ionic liquids.
  - Functionalized channels.
  - Biological systems.

• **Goal**
  - Understand the underlying bio/physics driving various catalyzed chemical reactions.
  - Create more efficient, cost effective, and greener (renewable) energy alternatives.
Questions