Victor M. Bright
Hovlid Professor and Department Chair
Department of Mechanical Engineering
University of Colorado at Boulder
Boulder, Colorado 80309
Students

Strong Student Numbers: as of Fall 2011 census

- 571 BS, 38 BS/MS, 87 MS, 98 PhD
- 506 BS, 41 BS/MS, 90 MS, 102 PhD in Fall 2010
- 478 BS, 36 BS/MS, 67 MS, 97 PhD in Fall 2009
- 530 BS, 23 BS/MS, 45 MS, 85 PhD in Fall 2008

- 25 students (9 to graduate) in CU-CMU Partnership program.
- 100 new freshman started in Fall 2011 out of 722 first-year freshmen in college; in Fall 2012 up to 25% of college sophomores will be ME due to transfers and open-option students

- Women: 80 (15%) undergraduates; 34 (19%) graduate students; and 109 (15%) underrepresented minority students (undergrad + grad)
Faculty and Staff

Our faculty
- Boulder: 25 T/TT Faculty (1 on leave, 1 vacant), 2 full-time Instructors, 3 part-time Instructors and 1 Research faculty
- CU-CMU ME Program: 2 Instructors; and 1 more hired to start in Fall 2012
- 20 Postdoctoral Research Associates
- AY11-12: search for 2 T/TT faculty (fluids; design/energy/thermal systems); and 2 instructors hired to start in Fall 2012

Our staff
- 5 full-time equivalent staff (1 vacant)
- 1 part-time staff (vacant)
- 2 part-time IT technicians
- 1 part-time contractor
We Are a Young Department!!

Nine Assistant Professors

But, in 5 years 11 “career” awards by NSF, NIH, EPA, DARPA and 4 of the highest awards made by the American Society of Mechanical Engineers.
Frank Kreith is professor emeritus of engineering at the University of Colorado in Boulder and an ASME Honorary Member. He served as chief scientist and ASME Legislative Fellow at the National Conference of State Legislatures from 1988 to 2001 and was senior research fellow at the Solar Energy Research Institute (now the National Renewable Energy Laboratory). Kreith is the author of more than 100 articles and books, most recently Principles of Sustainable Energy (CRC Press, 2011). ASME established an award in his name in 2005.

MECHANICAL ENGINEERING | May 2012

Also, Frank Kreith has been selected as the 2012 Hoyt Clarke Hottel Award winner from the American Solar Energy Society.
Programs

 Outstanding undergraduate program

 • ABET accreditation obtained August 2006 (6 yr)
   • Just went through another accreditation review in Sept. 2011; will be accredited by Fall 2012
 • Environmental and Bioengineering certificate programs
 • Extracurricular activities in the department and college
   • ASME, Shell Eco-Marathon
   • Discovery Learning, Earn-Learn, Engineering Fellows, Engineers Without Boarders

 Exceptional industrial relations: I/UCPC & IRC

 • Annual industry-sponsored senior design projects:
   22 industry-sponsored, 1 student-originated (Shell Eco-Marathon)
 • 5 industry-sponsored graduate design projects
 • Significant leveraging of I/UCPC funds
Mechanical Engineering Students Place Second in Shell Eco-Marathon

“Mechanical engineering seniors from CU-Boulder placed second overall in this year's Shell Eco-Marathon, an annual competition challenging student teams from around the world to design, build, and test energy-efficient vehicles. The CU-Boulder team scored an impressive mileage record of 1,767 miles per gallon in the event.

Team members Jared Wampler, Joseph Gratcosky, Jeff Vankeulen, Paul Sweazey, and Matthew Feddersen worked with faculty advisor Marcelo Bergquist and lab coordinator Greg Potts on the project. The annual Shell Eco-Marathon of the Americas was held March 29-April 1 in Houston, Texas. A total of 122 teams from the U.S., Canada, Mexico, and South America competed in the gas prototype class in this year's event.

CU has competed in the Eco-Marathon of the Americas for the last five years, and placed seventh in the 2011 event.”

CU Engineering eNotes, April 2012
Strong Graduate Program

• 98 Ph.D. students in Fall 11
  (102 in F10, 97 in F09, 85 in F08, 62 in F07)
• 20 New PhD students started in Fall 11
• $11.588M research awards in FY11
  ($11.06 in FY10, $8.2M in FY09, $7.6M in FY08, $6.3M in FY07)
• As of March 2012 US News Ranking: 32 out of 163,
  18th among public institutions
• Highest ranked program in Rocky Mountain region

College is ranked 35th overall,
20th among public out of 192
(Colorado School of Mines is 63rd and Colorado State
Univ. is 67th among engineering schools)

2010 National Research Council
(NRC) Assessment of Doctorate
Programs

ME: 6-41 of 127 programs in 2010; 51 of
110 programs in 1995

5th percentile
Graduate Design Program

Started Track in Spring, 2010
- Professors Rentschler, Kotys-Schwartz, Pawlas, Reamon, and Zable

Focused on Graduate Student Design
- Consumer Products
- User-Centered Design
- Hands-on Engineering Design/Fabrication

Three-Course Sequence
- Advanced Product Design – APD (Spring), 80 students to date
- Graduate Product Design – GPD (Fall/Spring), 38 students to date

Fleming Building
- Six GPD team studios
- Mechanical and electrical fabrication facilities
- Active Learning Classroom
- Computer room
Projected Growth

- National Advertising (increase quality of student pool)
- Moving from 5 teams in GPD (20 students) to 10 teams (40 students)
- Integrate PhD Program coupled with undergraduate Senior Design mentoring
- Integration with AES and ECE programs
- CEAS Design Center
ME ... Home to Two Research Centers

Departmental Research Thrusts:
• Biomechanical Engineering
• Energy
• Environmental Engineering
• Micro/Nanoscale Engineering

Research Centers:
- DARPA Center on Nanoscale Science and Technology for Integrated Micro/Nano Electromechanical Transducers (iMINT)
- NSF Industry/University Cooperative Research Center for Membrane Science, Engineering and Technology (MAST)
As of Spring 2012 more space because of Chemical Engineering move!!

Mechanical Engineering is under construction!

ME wing
ChBE wing
Fleming Bldg
CU Football Stadium??

Since we've remodeled, you are no longer here.

(C) Original Artist
THANK YOU

...Questions, Comments?