Fall Faculty/Staff Meeting 2004
Agenda

- Welcome
- Department Highlights
- College Awards
- Research Update
- Academics Update
- Future of the College of Engineering

Chairs/Director
- Bob Roemer
- Patrick Tresco
- Rich Brown
Department Highlights and Introductions

• Bioengineering
• Chemical Engineering
• Civil and Environmental Engineering
• Electrical and Computer Engineering
  – Florian Solzbacher
• Materials Science and Engineering
• Mechanical Engineering
  – Meredith Metzger
  – Stacy Morris Bamberg
  – Paul Borgmeier
• School of Computing
  – Claudio Silva
University Faculty Awards

- Rosenblatt Prize        Jerry Stringfellow
- Distinguished Teaching Award  Doug Christensen
College of Engineering Awards

• Outstanding Teacher  Tim Ameel
• Outstanding Staff   Karen Feinauer
• Outstanding Teaching Assistant  Gerald Edwin Wheeler
• Outstanding Service  Rod Mitchell
College of Engineering
Research Programs
CLEAR Program

Integration of Communications and Ethics
Throughout the Curriculum
Interdisciplinary Effort with Communication and Philosophy

• 2003-2004
  – CHEN: 7 classes, 268 students
  – CVEEN: 4 classes, 164 students
  – ME EN: 7 classes, 589 students

• 2004-2005—The Above Plus
  – BIOEN: 2-4 classes
  – ECE: 5 classes

• 2005-2006—The Above Plus
  – School of Computing
  – Materials Science and Engineering
SAFETY FIRST

• CONGRATULATIONS—NO MAJOR ACCIDENTS THIS PAST YEAR

• ANNUAL SAFETY MEETING FOR STUDENTS, FACULTY AND STAFF

FRIDAY SEPT 10, 3:00 P.M.
EMCB 105
FOR MORE INFO.
Jack.Fletcher@m.cc.utah.edu
No, that’s not my EEG, its our anticipation of what the trend in the College Research Expenditures Funding will be for last year—FLAT.

Sorry--this years expenditure info is not yet available. We’ll get the information to you as soon as we receive it.
College of Engineering
Academic Programs
Overview

• Services

• State of Academic Programs

• Informational Items

• Strategic Objectives

• Planning Process
Services

• Assist faculty in creating an improved learning environment;

• Administer the faculty and student grievance process;

• Oversees admissions and transfer policies, faculty and curriculum development, learning resources, and student academic services such as advising;
Services

• Oversees orientation, registration, financial aid, disabilities services, and student organizations;

• Supports the planning and budget initiatives of the college, student recruitment, interdisciplinary educational opportunities, introduction of engineering principles into K-12 curriculum of feeder schools, and fosters industrial interactions.
Academic Groups

Year
2000 2001 2002 2003 2004 2005

Numbers of
UGs
Grad.
Reg. Faculty

Utah Engineering
Average Credit Load

Year
Average Credits / Student
UGs
Grad.
Utah Engineering
Degree Production

Year
Number of Degrees
0 50 100 150 200 250 300 350 400
UGs
MS/ME.
PhD

Utah Engineering
Student Credit Hours

![Graph showing Student Credit Hours from 2000 to 2005. The y-axis represents Total SCH-Engineering Credit Hours ranging from 25,000 to 50,000. The x-axis represents the years 2000 to 2005. The line on the graph indicates a general increase in credit hours over time, with a peak around 2004-2005.]

Utah Engineering
Informational Items

- On-line Grade Posting;
- ABET review; and,
- Educational Benchmarking (EBI) Survey
Strategic Objectives

Guiding Principle:

What is in the best interests of our students?
Strategic Objectives

- Improve the learning environment;
- Improve retention of UGs;
- Improve career services, industrial interactions; and, recognition.
Planning Process

Identify best practices among the departments;
- Comprehensive recruitment plan;
- Increase scholarships / fellowships;
- PR campaign; and,
- Improve web presence.
Optimist: “The glass is half full.”
Pessimist: “The glass is half empty.”
Optimist: “The glass is half full.”
Pessimist: “The glass is half empty.”
Engineer: “The glass is twice as large as it needs to be.”
College of Engineering
Future
College of Engineering

- 210 Faculty (130 tenure track)
- 2,200 Undergraduate Students
- 700 Graduate Students
- $40M External Research Funding
- Entrepreneurial
  > 100 spin-out companies
Funding Picture

• Tight
• Governor’s Initiative (Senate Bill 61)
  $3.5M new base funds (state and UofU)
  $3.2M one-time funds
  $4.6M remodeling funds
  $15M for Warnock Engineering Building
• Results in past 3 years
  32% increase in enrollment
  14 new faculty
• Research Environment
  Graduate Tuition Benefit (>3M/yr to Engineering)
  Graduate Health Insurance
Development

• Accomplishments
  – $13M for Warnock Engineering Building!
  – Established ENAC and reorganized IAB
  – Provided Scholarships
  – Improved Publicity

• Future Directions
  – Governor’s Initiative
  – Broaden Donor Base
  – College Endowment
  – Endowed Faculty Professorships
  – Capital improvements in MEB, EMCB, EMRL
  – Program support: CLEAR, ESP, Outreach
  – PR Support
WEB Site Plan

Utah Engineering
Preliminary Perspective of Tower

Utah Engineering
Improving Stature

• Undergraduate
  – COE ranks 60\textsuperscript{th} (up from 66\textsuperscript{th})

• Graduate
  – COE ranks 56\textsuperscript{th} of 185 schools (up from 63\textsuperscript{rd})
  – 15\textsuperscript{th} in Biomedical Engineering
  – 29\textsuperscript{th} in Computer Science
  – 45\textsuperscript{th} in Computer Engineering
  – 47\textsuperscript{th} in Material Science
  – 54\textsuperscript{th} in Electrical Engineering
  – 66\textsuperscript{th} in Mechanical Engineering

2004 US News Rankings

• Why do we care?
  – Faculty Recruiting, Student Recruiting, Career Opportunities

Utah Engineering
Reaching Our Potential

• Have COE resemble Top Engineering Colleges
  – Ph.D.s/faculty/year
  – Publications
  – Keynote/Plenary Talks
  – Research Impact
  – Research Volume (Expenditures)
  – External Service
  – Web Presence
  – Growth

• Have COE get the Recognition it deserves
  – High-Profile Research
  – Exposure
  – Faculty Communication
Faculty Quality

- Hired Excellent Faculty in a Slow Market
- Faculty Mentoring
- Clear Faculty Expectations
  - New FAR form
- Faculty Retention
  - Salary
  - Endowed Chairs
Student Quality

- Attract Higher Quality Undergraduates
  - UG Research Scholars
  - Focused Recruiting
  - “The place to go for Engineering”
- Attract Top Graduate Students
  - Aggressively Recruit Intermountain UGs
  - Enlarge Pool (Why go to grad school?)
  - Connect to Top Foreign Universities
  - Grow Research Enterprise
- Retention
- Time to Graduation
Industrial Relationships

- Tech Transfer Policies
- Tech Transfer Task Force
- Search for new TTO Director
  - Rich Brown and Martin Berzins
- Better Communication of Capabilities to Industry
Financial

• New Administration
• Michael Young
  – August 30, 9:00 am for Engineering Faculty
  – Economic Argument to Legislature
  – Technology Initiative
  – Cross-disciplinary Research
• Research Incentive
  – Overhead Return
• Differential Tuition
Future of Engineering Education

• The Liberal Arts Education of the 21\textsuperscript{st} Century
• Communication skills
• Interdisciplinary work
• Supportive Learning Climate
• Raising the esteem of engineering
• World needs decision-makers who have engineering background
• Renaissance Engineers
• CoE Future is Bright