June 2013 – Career Center Corporate Advisory Board

An Overview of Activities and Plans in the College of Engineering

Wayne Pennington
Interim Dean
Carl Anderson
Associate Dean
Leonard Bohmann
Associate Dean
College (COE) Profile

Seven Engineering Departments with Graduate Research Programs

- Biomedical Engineering
- Civil & Environmental Engineering
- Chemical Engineering
- Electrical & Computer Engineering
- Geological & Mining Engineering & Sciences
- Materials Science & Engineering
- Mechanical Engineering-Engineering Mechanics
College Profile

- Biomedical: 39(tied)
- Chemical: 23
- Civil: 14
- Environmental: 1(tied)
- Electrical: 20
- Computer: 45(tied)
- Geology: 1st, only Geology program housed in Engineering (2008)
- Mat’l Sci. & Eng: 29
- Mechanical: 17(tied)

2012 ASEE Rankings: by Number of Undergrad Degrees Awarded*

*365 Schools reported data (updated 6/20/13)
Biomed: 39
Chemical: 23
Civil: 14
Environmental: 1
Electrical: 20
Computer: 45
Geological: 17 (2008)
Geology: 1, only Geology program housed in Engineering (2008)
Mat’l Sci. & Eng: 29
Mechanical: 17

2012 ASEE Rankings:
Undergrad Degrees*

MTU: 30th

*365 Schools reported data
Undergraduate Enrollment

As Compared to the University

20% Women
3% Under Represented Minorities
Women Enrollment

As Compared to the University

- Engineering: 39%

Graph showing the enrollment of women from 2005-06 to 2012-13.
As compared to the college

- Biomedical Engineering

42.5% Women
3.2% Under Represented Minorities
As compared with the College

28.6% Women
3.5% Under Represented Minorities
COLLEGE PROFILE
Civil & Environmental Engineering

As Compared to the College

29.6% Women
2.7% Under Represented Minorities
College Profile
Electrical & Computer Engineering

As Compared to the College

9.3% Women
5.1% Under Represented Minorities
College Profile

Engineering Fundamentals

As Compared to the College

15.6% Women
2.4% Under Represented Minorities
COLLEGE PROFILE
Geological & Mining Engineering & Sciences

As Compared to the College
43.2% Women
0% Under Represented Minorities
Material Science & Engineering

As compared to the College

- 31.5% Women
- 3.3% Under Represented Minorities

Enrollment graph:
- Yearly enrollment from 2005-06 to 2012-13
- Peak enrollment in 2011-12 with 92 students
- General trend showing slight decrease after 2008-09
COLLEGE PROFILE

Mechanical Engineering

As compared to the College

9.8% Women
2.4% Under Represented Minorities

33%
Undergraduate Engineering Enrollment (again)

As Compared to the University

- Women: 20%
- Under Represented Minorities: 3%

2005-06: 3,369
2006-07: 3,369
2007-08: 3,369
2008-09: 3,369
2009-10: 3,369
2010-11: 3,369
2011-12: 3,369
2012-13: 3,369
# Research Profile

## College of Engineering Graduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>ASEE</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master</td>
<td></td>
<td>373</td>
<td>430</td>
<td>460</td>
</tr>
<tr>
<td>PhD</td>
<td></td>
<td>255</td>
<td>280</td>
<td>297</td>
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<tr>
<td>Total</td>
<td></td>
<td>628</td>
<td>720</td>
<td>757</td>
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</tbody>
</table>

And still growing
Internationally competitive faculty – 40% in endowed positions

Student body of 8750 - $500 million scholarship endowment
- 5750 Undergraduates
- 2000 Masters
- 1000 PhD students
- 40% Female and Top 10 for engineering undergraduate degrees granted to women

Global literacy and communication skills in a variety of media as a prominent part of education

Transformational education in a residential based technologically rich learning environment

Recognized nationally and internationally for research development and innovation
Some Changes

- Mining Engineering - returning
- Biomedical Engineering – new curriculum
- Computer Education – being evaluated
Some Discussion Points

- Undergraduate programs
- Master’s programs – coursework only?
- Accelerated MS programs
- Internships and Co-ops
- Senior Design and Enterprise