Demographics and Diversity of Mercer University’s Graduate Engineering Programs

Richard O. Mines, Jr., Ph.D., F. ASCE, P.E.
Director MSE & MS Programs

Greg Lofton, BS
Graduate Coordinator

Mercer University School of Engineering
Overview

- Share with you observations regarding the demographics and diversity of the graduate student body in MUSE.
- The information collected in this study is being used in our SACS accreditation.
- We were interested in knowing the proportion of women and minorities enrolled in graduate programs.
- Also wanted to take a snap shot of where our programs are and make recommendations for improvements.
Master of Science in Engineering Degrees

1. Computer Engineering (GCE) full time
2. Biomedical Engineering (GBE)
3. Electrical Engineering (GEE) full time
4. Engineering Management (EGM)
5. Environmental Engineering (GEV)
6. Mechanical Engineering (GME)
7. Software Engineering (SFE) on-line
Master of Science in Associated Programs

1. Environmental Systems (GES)
2. Software Systems (SFS): on-line
3. Technical Management (TCM)
4. Technical Communication Management (TCC): on-line
Literature Review

- African Americans and women comprise approximately 18% and 32% of freshmen in the freshmen class at MUSE, Butler and Hicks.
- Morley et al. purport that underrepresented groups will have to be inculcated into the workforce in order for the U.S. to remain competitive in science and engineering.
Purdy and Wasburn raised concerns about:
- under-representation of women and minorities in undergraduate/grad engineering programs
- negative impact on diversity due to declining enrollment of international students
- the elimination of diversity programs at state-supported universities.

Reichert and Absher advocate the recruitment of URM and greater institutional commitment in doing this.
Average GPA by Program 2002-03 through 2008-09

Average GPA = 3.74

Average GPA by Program 2002-03 through 2008-09
3.30
3.40
3.50
3.60
3.70
3.80
3.90
4.00
SFS TCC TCM EGM GBE GCE GEE GME SFE AVG
Average GPA
Average GPA = 3.74
Academic action taken against 16 students in 17 semesters

88% male and 12% female

50% White

25% African American

12.5% Asian and 12.5% Hispanic
Enrollment by Ethnicity

- 59% White
- 11% Asian
- 9% Afr Am
- 4% Hispanic

Percentage of Students:
- % Hispanic
- % African-American/Black
- % White
- % Native American
- % Asian
- % Unknown

Years:
- 2002U
- 2002F
- 2003S
- 2003U
- 2003F
- 2004S
- 2004U
- 2004F
- 2005S
- 2005U
- 2005F
- 2006S
- 2006U
- 2006F
- 2007S
- 2007U
- 2007F
- 2008S
- 2008U
- 2008F
- 2009S
- AVG
Ethnicity and Gender of Students Earning Master's Degrees 2002F - 2009S

Percentage of Students

- **75% Male**
- **62% White**
- **25% Female**
- **2% Hispanic**
- **11% Asian**
- **9% African Am.**
- **16% Unknown**

- **Male**
- **Female**
- **Hispanic**
- **Alaskan**
- **Asian**
- **Afr/Am**
- **Hawaiian**
- **White**
- **Unknown**
Overall Graduation Rates 2002-03 through 2006-07

- Lowest GBE 40%
- Average 55.8%
- Highest GME 62.5%

No Technical Mgt Grads

Percentage of Total Starters

- MS
- MSE
- SFS
- TCC
- TCM
- EGM
- GBE
- GCE
- GEE
- GME
- SFE
- Overall
Overall average 75%
Degrees Awarded and # of Terms to Graduation
2002-03 through 2008-09

171 MSE Degrees Awarded
Takes an average of 7 semesters to graduate
71 MS Degrees Awarded
Grad programs in Electrical and Software are the largest

Degrees Awarded and # of Terms to Graduation
2002-03 through 2008-09
Number
Degrees Awarded Minimum Terms Maximum Terms Average Terms
171 MSE Degrees Awarded
Takes an average of 7 semesters to graduate
71 MS Degrees Awarded
Grad programs in Electrical and Software are the largest

171 MSE Degrees Awarded
Takes an average of 7 semesters to graduate
71 MS Degrees Awarded
Grad programs in Electrical and Software are the largest
1. 1837 students were enrolled in graduate engineering programs with the following average percentage of students by ethnicity: 4% Hispanic, 9% African American, 11% Asian, 17% unknown, and 59% White.

2. 75% of students enrolled were male and 25% female.
3. **Ethnicity** of our students’ earning degrees was similar to the average percentages for enrollment: 2% Hispanic, 9% African American, 11% Asian, 16% unknown, and 62% White.

4. 71 MS degrees and 171 MSE degrees were awarded in 7 academic years.

5. The **overall graduation rate** of our graduate students was **55.8%**.
6. For students enrolled in the **dual-degree** program, 75% of those that started the program earned their degrees.

7. The **gender** of our graduate students was 25% **female** and 75% **male**.

8. The **overall GPA** of all graduates students was **3.74**. **Software** students averaged **3.87** and **biomedical** 3.53.
Recommendations

- We plan to **conduct exit surveys** for students that drop out of our graduate program to determine what factors led them to their decision to leave.
- It is our desire to form a **focus group** to study ways that we can better interact with the educational office at Robins AFB to promote, recruit, and retain qualified graduate students.
Questions?