

Diversity Plan

College of Engineering

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The University of Toledo College of Engineering Diversity Plan

Introduction

The College of Engineering strives to achieve prominence as a student focused college that educates the future engineers and leaders of tomorrow. In an effort to include recognizing the richness inherent in our national diversity, the College encourages participation by all in an atmosphere in which cultural differences are valued as an integral part of the learning experience.

The College of Engineering is working diligently to increase minority representation in the student, staff, and faculty cohorts. We recognize the need and accept the challenge to respond to an increasingly multicultural student, staff, and faculty presence in ways that will require significant innovation in the infrastructure of the institution and in its programs.

This document will outline and describe our progress in creating a college atmosphere that recognizes, celebrates and promotes diversity that will include an increasingly multicultural environment, mirroring the changes in our business and society.

Furthermore, we will introduce an ongoing plan for addressing issues and problems that must be solved if we are to achieve a truly diverse community in the College of Engineering. Our plan, which focuses on meeting and exceeding the diversity efforts of the University's will include three major goals for increasing diversity within the College and identifies the strategies and actions necessary to accomplish these goals.

College of Engineering Diversity Mission Statement

We, The College of Engineering, are committed to diversity. We strive to prepare all students regardless of race, class, gender, ideology, physical size, physicality, physical or mental ability or sexual orientation for a career in the Engineering sciences and technologies. We further encourage an atmosphere among faculty and staff that values cultural differences and recognizes the contributions of a diverse body of people as an integral piece of the learning process and work environment.

We support the mission of The University of Toledo, as a student-centered public metropolitan research university, recognizing the diversity in our metropolitan area and striving to be responsive to and representative of that community. We aim to foster the highest ideas of culture, research and service.

Status Report

The data included in appendices A, B, and C. constitutes the baseline used to assess the college's current situation with regard to the diversity of its faculty, staff and students. The distribution of undergraduate student enrolled in the College of Engineering in Spring 2004 is given in Tables 1 through 3 of Appendix A. Table 1 provides a breakdown of the student ethnicity in the Engineering Sciences, Engineering Technology, and Underprepared student population. The breakdown of students based on gender is given in Table 2 of Appendix A. Engineering Science includes the following disciplines: Bioengineering (BIOE), Chemical and Environmental Engineering (CHEE), Civil Engineering (CIVE), Computer Science and Electrical Engineering (CSET), and Mechanical, Manufacturing and Industrial Engineering (MIME). Engineering Technology includes the following degree programs: Computer Science and Engineering Technology (CSET), Construction Engineering Technology (CET), Electrical Engineering Technology (ELCT and ELET) and Mechanical Engineering Technology (MCHT). The underprepared student area includes the following groups that are not currently enrolled in either Engineering Science or Engineering Technology: PMAJ and UNDA. Note in Table 1 of Appendix A that the total number of students is slightly higher than sum of students in individual ethnic groups. Some students did not include ethnic group in the response and were listed as other. These were not included in basis of calculations. A detailed breakdown of student enrollment by department is given in Table 3 of Appendix A.

In the Spring 2004, approximately 6.3 % of the undergraduate students enrolled in the College of Engineering were African American, Hispanic or Native American (AAHNA). Interestingly, there are differences in percentage enrollments of students within these groups in engineering science and technology. As shown in Table 1 of Appendix A, the enrollment of underrepresented students are considerably higher in engineering technology than engineering sciences on both a total numbers and percentage of enrollment basis. Though engineering technology represents 42 % of the total enrollment for the college of engineering, 59 % of the AAHNA students are enrolled in engineering technology. Another interesting point to note is that a relatively large percentage of under prepared students are within the AAHNA group.

In the Spring 2004, approximately 12.6 % of the undergraduate students enrolled in the College of Engineering were female. As was seen for students in the AAHNA group, there was a difference in the relative percentage of population that was female in engineering science and engineering technology. Approximately 16.2 % of the undergraduate students in the Engineering Sciences were female and 7.8 % of those in Engineering Technology were female. As shown in Table 3 of Appendix A, there is a lot of variability in enrollment of female students within the departments in Engineering Science.

The distribution of graduate students in the College of Engineering is broken down in Tables 4 and 5 of Appendix B. Table 4 gives a breakdown of graduate student population by department and ethnic background. The distribution of AAHNA students based on the US residents population is approximately 7.5 %. As shown in Table 5, approximately 21 % of the graduate students in the college are female.

The ethnic and gender diversity of the faculty and staff in the College of Engineering in Fall 2003 is presented in Tables 6 and 7 of Appendix C. As shown in Table 6, approximately 3.6 % of the college faculty and 11 % of the staff are African American or Hispanic. Approximately 11 % of the faculty and 58 % of the staff in the College of Engineering was female. Finally, there are currently no female or underrepresented faculty on the college administration. Based upon these numbers it is critical that the college focus efforts on increasing the diversity of the faculty and staff.

The College of Engineering Plan for Diversity

A plan to be integrated within the overall strategic plan of the college has been developed to enhance diversity within the College of Engineering. It is clear that a successful strategic plan cannot be achieved without addressing diversity. To this end, we have identified three goals, which are described below, together with specific actions that will move us in the direction of greater diversity and increased excellence to the community. A critical first step will be the development of a Minority Affairs Office within the College of Engineering that oversees the diversity efforts of the College. In addition, a standing Diversity Advisory Council consisting of representatives of all constituencies will be formed to ensure implementation of the diversity plan.

Goal 1 The College of Engineering will create a college climate that celebrates and respects diversity including the formation of a Minority Affairs Office to oversee specific programs.

Strategies

- 1) Educate the members of the College community on ways to embrace diversity.
- 2) Increase awareness of issues that affect diversity within the college environment.

Actions

- 1) Provide workshops, seminars, and events in the engineering college community that specifically address diversity related issues.
- 2) Encourage students, faculty, and staff to attend university and community events that embrace diversity.
- 3) Support educational and professional development for students, faculty, and staff.

Goal 2 Increase the number of underrepresented minority and female students pursuing engineering degrees from the University of Toledo, College of Engineering through recruiting and retention programs.

Strategies

- 1) Advance recruitment efforts for recruiting underrepresented minorities and females to the engineering program.
- 2) Improve the retention efforts for underrepresented minorities and females enrolled in the College of Engineering
- 3) Increase the preparation of the applicant pool through outreach and pre-college programs.

Actions

- 1) Identify underrepresented minority students and females in grades 7-12 that excel in math and science and engage/encourage them to attend our engineering college.
- 2) Collaborate with existing community and university programs that emphasize math and science to minority and female students in grades 7-12.
- 3) Develop and implement departmental and college level outreach programs that focus on recruitment and retention of underrepresented minority and female students.
- 4) Within the college structure, make available resources and a system of rewards for programming that targets the recruitment and retention of underrepresented minorities and female students.
- 5) Recruit potential graduate students from Historically Black Institutions.
- 6) Develop appropriate assessment measures to gage the success of programming geared at recruitment and retention. Utilize the assessment to identify and fund effective programming.
- 7) Foster an ongoing environment focused on diversity by, holding at least two meetings annually to discuss college and departmental level outreach efforts that are planned or have been implemented.

Goal 3 Increase the number of underrepresented and female faculty and staff through active recruiting and retention efforts.

Strategies

- 1) Develop and implement a comprehensive recruitment plan that uses multiple recruitment strategies that will increase the diversity of college's applicant pool.
- 2) Strengthen staff and faculty professional development activities to position individuals for career advancement.

- 3) Enhance awareness of Chairs, Directors, and Administrators of current staffing profile of the College and opportunities for improvement.
- 4) Promote the engineering college as a dynamic work environment

Actions

- 1) Advertise open positions in publications whose targeted audiences are minorities and/or women.
- 2) Target minority and women graduate students through pipeline projects. Encourage undergraduate minority and female students to participate in research and to apply for graduate school. Identify internal and external funds available for minority and female graduate students.
- 3) Presence of underrepresented minorities or a member of the Diversity Committee on all College of Engineering search committees for unfilled faculty and staff positions.
- 4) Establish mentoring programs for all staff and pre-tenure faculty.
- 5) Examine and address the lack of success in attracting and retaining minority and female faculty and staff members.
- 6) Provide financial support and assistance to departments to identify and recruit minority and female faculty, in addition to the normal budget for recruitment efforts.
- 7) Supply funding for professional development activities.

Appendix A

Table 1: Ethnicity based distribution of Undergraduate Students in College of Engineering (Spring 2004)

| Major | Student Population | | | | Total | Percent (AA,H,NA) |
|---------------------|--------------------|----------|-----------------|-------|-------|-------------------|
| | African American | Hispanic | Native American | White | | |
| Engineer Science | 30 | 18 | 1 | 1104 | 1331 | 3.7 |
| Engineer Technology | 70 | 18 | 3 | 821 | 1007 | 9.0 |
| Underprepared | 9 | 1 | 0 | 35 | 48 | 20.8 |
| College | 109 | 37 | 4 | 1960 | 2386 | 6.3 |

Table 2: Gender based distribution of Undergraduate Students in College of Engineering (Spring 2004)

| Major | Student Population | | Total | Percent Female |
|---------------------|--------------------|-------------|-------------|----------------|
| | Male | Female | | |
| Engineer Science | 1115 | 216 | 1331 | 16.2 |
| Engineer Technology | 928 | 79 | 1007 | 7.8 |
| Underprepared | 43 | 5 | 48 | 10.4 |
| College | 300 | 2086 | 2386 | 12.6 |

Table 3: Distribution of Undergraduate Students by Discipline in College of Engineering (Spring 2004)

| Major | Student Group | | | | Total | Percent (AA,H,NA) | Percent Female |
|-------------|------------------|----------|-----------------|-------|-------|-------------------|----------------|
| | African American | Hispanic | Native American | White | | | |
| BIOE | 5 | 2 | 0 | 108 | 136 | 5.1 | 40.4 |
| CET | 5 | 4 | 1 | 160 | 180 | 5.6 | 10.0 |
| CHME | 6 | 3 | 0 | 123 | 156 | 5.8 | 30.1 |
| CSE | 5 | 4 | 0 | 186 | 235 | 3.8 | 7.2 |
| CSET | 16 | 7 | 0 | 232 | 283 | 8.1 | 6.7 |
| CVLE | 3 | 2 | 0 | 158 | 178 | 2.8 | 17.4 |
| ELCE | 5 | 2 | 0 | 175 | 210 | 3.3 | 6.2 |
| ELCT | 19 | 2 | 1 | 113 | 162 | 13.6 | 7.4 |
| ELET | 1 | 1 | 0 | 0 | 2 | 100.0 | 100.0 |
| INDE | 2 | 1 | 0 | 13 | 41 | 7.3 | 29.3 |
| MCHT | 29 | 4 | 1 | 316 | 380 | 8.9 | 7.4 |
| MECE | 4 | 4 | 1 | 341 | 375 | 2.4 | 10.9 |
| PMAJ | 5 | 0 | 0 | 5 | 10 | 50.0 | 10.0 |
| UND | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNDA | 4 | 1 | 0 | 13 | 19 | 26.3 | 15.8 |
| UNDT | 0 | 0 | 0 | 17 | 19 | 0.0 | 5.3 |

Appendix B

Table 4: Distribution of Graduate Students by Discipline in College of Engineering (Fall 2003)

| Major | Resident Student Group | | | | Non Resident Alien | Percent AA&H US Res. ^a | Percent AA&H Total ^b |
|----------------|------------------------|----------|------------------------|------------|--------------------|-----------------------------------|---------------------------------|
| | African American | Hispanic | Asian Pacific Islander | White | | | |
| BIOE | 0 | 0 | 0 | 17 | 33 | 0.0 | 0.0 |
| CHEE | 1 | 1 | 0 | 6 | 39 | 22.2 | 4.2 |
| CIVE | 0 | 1 | 0 | 11 | 40 | 8.3 | 1.8 |
| EECS | 1 | 0 | 0 | 18 | 83 | 5.3 | 0.9 |
| ENGT | 1 | 1 | 1 | 26 | 28 | 7.1 | 5.7 |
| MIME | 1 | 0 | 0 | 22 | 86 | 4.3 | 1.0 |
| College | 4 | 3 | 1 | 100 | 309 | 7.4 | 1.8 |

^a Percentages of minority students from Hispanic and AA group based on Total US student population and does not include the non-resident alien population

^b Percentages of minority students is based on Total graduate student population

Table 5: Gender based distribution of Graduate Students in College of Engineering (Fall 2003)

| Major | Student Population | | Total | Percent Female |
|----------------|--------------------|-----------|------------|----------------|
| | Male | Female | | |
| BIOE | 33 | 13 | 46 | 28.3 |
| CHEE | 39 | 9 | 48 | 18.8 |
| CIVE | 40 | 15 | 55 | 27.3 |
| EECS | 83 | 23 | 106 | 21.7 |
| ENGT | 28 | 7 | 35 | 20.0 |
| MIME | 86 | 15 | 101 | 14.9 |
| College | 309 | 82 | 391 | 21.0 |

Appendix C

Table 6: Distribution of Faculty and Staff in College of Engineering (Fall 2003)

| Major | Group | | | | Percent AA&H Total ^b |
|-----------------|------------------|----------|------------------------|-------|---------------------------------|
| | African American | Hispanic | Asian Pacific Islander | White | |
| FT Faculty | 0 | 2 | 22 | 68 | 2.2 |
| PT Faculty | 1 | 1 | 0 | 18 | 10.0 |
| Full Faculty | 1 | 3 | 22 | 86 | 3.6 |
| Staff | 2 | 2 | 1 | 31 | 11.1 |
| Administration* | 0 | 0 | ? | ? | |

Table 7: Gender based distribution of Faculty and Staff in College of Engineering (Fall 2003)

| Position | Gender | | Total | Percent Female |
|-----------------|--------|--------|-------|----------------|
| | Male | Female | | |
| FT Faculty | 82 | 10 | 92 | 10.9 |
| PT Faculty | 17 | 3 | 20 | 15.0 |
| Full Faculty | 99 | 13 | 112 | 11.6 |
| Staff | 15 | 21 | 36 | 58.3 |
| Administration* | 12 | 0 | 0 | 0 |

* Based on estimates from department chairs, dean, and associate deans.