

**GOALS AND ACCOMPLISHMENTS
ENGINEERING OFFICE OF DIVERSITY
ANNUAL REPORT
2003-2004**

School Diversity Goal 1: RECRUITMENT- To recruit a diverse workforce (faculty/staff) and student body that are inclusive of our multi-cultural society and individual differences, and provide access to quality education to all, including under-represented students.

ACTIVITIES

PECAP implements hands-on activities designed to develop and reinforce problem-solving skills and to motivate students to pursue careers in Math, Science and Engineering.

- Hands On Science- Ninth graders participated in a Hands-On Science activity in the School of Pharmacy and School of Nursing. Tenth graders participated in a Hands-on-Physics activity in April. The activities were well attended.
- Hands On Engineering-CARE I and II students participated in three School of Engineering activities in the departments of Electrical Engineering, Materials Science Engineering and Mechanical Engineering. INVESTING NOW students also participated in an Electrical Engineering activity, using electrical circuitry to build a simulated traffic light.

Pre-college Recruitment Activities-Intensive recruitment activities are held to bring talented high school students into the pipeline for math, science, and engineering.

- Regional Recruitment-To achieve our goal of making CARE a truly regional program, CARE applications and brochures were mailed to 36 out of area schools and programs
- Local Recruitment-CARE recruitment materials were mailed to local school districts, recruitment presentations to local parents and students were held, and the CARE program was presented to a meeting of counselors in the Pittsburgh Public Schools.

College Recruitment activities help bring and keep students in the engineering pipeline.

- World of Possibilities (11/7/03)EXCEL staff participated in this Office of Admissions and Financial Aid (OAF) program specifically for all under-represented populations who had applied to Pitt.
- Telemarketing (2/17-20/04) –The goal of the phone calls was to increase participation in both FMEW and Career Day – with the ultimate goal of all participants matriculating to the School of Engineering at the University of Pittsburgh.
- Honors Day- (3/19/04 and 4/2/04)EXCEL staff met with participants in Honors Day, who also learned more about the opportunities afforded by the UHC, and participated in Discover Pittsburgh city bus tours.
- A Day for Admitted Students- (3/20/04, 3/27/04, 4/03/03, 4/16/04) EXCEL program staff participated in programming for students attending this OAF sponsored event.
- Future Minority Engineers Weekend- (3/6/04)-All ten attendees agreed that they would recommend this program to other students interested in engineering and agreed that attending the event was important to making their final decision to attend Pitt.
- Continued Collaborations with Freshman Program and the Pre-College program ensured the continuous recruitment of under-represented students in the SMET pipeline

Graduate Recruitment-The Engineering Office of Diversity is committed to recruiting bright minority students and building strong relationships with these students at Pitt.

- Graduate diversity fellowships are awarded to eligible under-represented graduate students for structured skill-building activities and continued research involvement during the academic year.
- The Pre-Phd and PhD Scholar programs are designed to increase the number of under-represented students pursuing PhD degrees by identifying highly gifted prospective PhD students early in their academic careers. By admitting promising students as “Pre-PhD Scholars” or “PhD Scholars,” the “burnout factor” that tends to discourage students to pursue a PhD after undergraduate education is minimized. Five PhD Scholars, 1 from Rochester Institute of Technology and four from UMBC, are currently active in the program.
- Recruitment sessions were held at Fort Valley State University, and University of Maryland Baltimore County
- Recruitment Booths were staffed at SHPE and NSBE conferences, a Midyear Graduate Luncheon was held to attract University of Pittsburgh students to continuing their studies here, and Recruitment brochures for women and under-represented students are in process
- GEM membership application completed

Faculty Diversity

- Placed ads in NAMEPA, WEPAN, BLACK ISSUES IN HIGHER EDUCATION, and SHPE magazines
- Worked with departments to identify and attract applicants

ACCOMPLISHMENTS

- This year, Pre-College students who elected Engineering as a major chose the University of Pittsburgh. One additional student plans to enter the University as an Arts and Science major and transfer to engineering.
- As has been the case for many years almost 100% of Pre-College program graduates are pursuing a college degree

Table: Pre-College Graduates 1996-2004

Participants	1996	1997	1998	1999	2000	2001	2002	2003	2004
Number in Class	35	32	37	28	33	44	37	27	42
Enrolled in College	100%	97%	100%	100%	100%	100%	100%	100%	97.6%
Engineering, Math or Science Major	54%	50%	53%	64%	48%	50%	46%	44%	50%
Enrolled in University of Pittsburgh	9%	19%	11%	7%	15%	18%	22%	26%	24%

- Undergrad enrollment for women above national average for three years

Table-Undergraduate Enrollment

	All M	All W	Af T	Hs T	Na T	Fo T
1999-0	76.54%	23.46%	8.56%	0.82%	0.35%	0.30%
2000-1	76.01%	23.99%	6.98%	0.78%	0.16%	0.25%
2001-2	75.63%	24.37%	6.56%	0.95%	0.11%	0.29%
2002-3	75.57%	24.23%	7.74%	0.84%	0.28%	0.42%
2003-4	77.11%	22.89%	7.27%	0.55%	0.05%	N/A
Average	76.21%	23.79%	7.42%	0.79%	0.19%	0.32%

Source: Engineering Office of Administration

- The enrollment of African-Americans in MS programs is steady; the enrollment of women in these programs is rising.

Table –MS Enrollment

	All M	All W	Af T	Hs T	Na T
1999-0	85.75%	14.24%	2.38%	1.19%	0
2000-1	84.13%	15.87%	1.58%	.95%	0
2001-2	83.49%	16.51%	2.18%	1.24%	0
2002-3	80.10%	19.89%	2.49%	1.10%	0
2003-2004	78.60%	21.40%	2.34%	1.46%	0
Average	82.41%	17.58%	2.19%	1.19%	0

- African-American enrollment at national average Enrollment of African-Americans in the PhD program has exceeded the national average for three years and continues to grow
- Graduate funding was secured for 3 Pitt graduates Recruitment of 2 students from UMBC Meyerhoff Program
- Due to the distribution of graduate diversity fellowships, the PhD enrollment of African-Americans has risen dramatically and the enrollment of women continues to rise.

Table-PhD Enrollment

	All M	All W	Af T	Hs T	Na T
1999-0	79.41%	20.58%	3.08%	1.85%	0
2000-1	82.82%	17.17%	2.52%	.50%	0
2001-2	76.21%	23.79%	2.42%	.49%	0
2002-3	76.47%	23.53%	2.71%	.45%	0
2003-2004	75.53%	24.47%	3.79%	1.26%	0
Average	78.09%	21.91%	2.90%	.91%	0

- 2 recent faculty hires by Bioengineering were women
- 2 African-American faculty candidates were interviewed by MSE, one was extended an offer
- The number of women and Hispanics on the faculty exceeds the national average, while the number of African-Americans is comparable to the national average.

Table:Faculty Diversity

	Pitt	Nat Avg	
Women	10/98 (10.20%)	9.20%	10%
African-American	2/98 (2.04%)	2%	7%
Hispanic	2/98 (2.04%)	3.10%	4%

DIFFICULTIES/BARRIERS

- Recruitment efforts are strained by a conservative interpretation of the Supreme Court decision, which could potentially limit targeted efforts to recruit under-represented students

School Diversity Goal 2: RETENTION- To retain a diverse workforce and student body that reflect the multi-cultural diversity and individual differences in the nation.

ACTIVITIES

Pre-College enrichment activities help better prepare students in the pipeline for a career in science, math, engineering and technology.

- Problem Solving Workshop (Grades 9 – 11, Opt.) (1/24/04) During this session students reviewed basic mathematics topics in order to prepare for the PSSA examination; these students also received an introduction to the uses of the TI-83 Graphing Calculator.
- Financial Aid Workshop (Grades 12), 2/4/04 Financial Aid expert Susan Pettigrew assisted both students and parents with the completion of their FAFSA forms.
- Insiders' View of College (Grades 11-12), 3/25/04 Tiwanda Taylor (College of Business Administration advisor), Jay Bryant (INVESTING NOW and Pitt alumnus) and several undergraduate students spoke to PECAP Pre-College Students about life in college and the transition from high school to college.
- College Planning 10/1 (Grade 12) Students were presented with a brief financial aid overview and they shared their progress regarding college selection and the application process.
- A Get Acquainted Night (5/8/03) was held for new INVESTING NOW students and their parents.
- A Career Awareness Seminar (5/15/04) was held for ninth, tenth, and eleventh graders. (May 15)
- Jean Brumfield, Carnegie Library Career Education Center conducted College Selection Workshops for INVESTING NOW and CARE juniors. (5/18-19/04)
- Study Skills Seminar 10/4 (Grade 9) Ninth graders are provided with tools for organization and academic planning. This newly revised workshop replaces the former Academic Success Workshop
- Enrichment Opportunities (Grades 10, 11) Summer and school year program representatives, as well as student panelists spoke to tenth and eleventh graders about various enrichment opportunities.

- Math Workshop (Wednesdays at 4:00 PM) Workshops are conducted every Wednesday at 4:00 p.m. Students work independently and in pairs to review basic math and to prepare for PSSA math.
- Vocabulary Building-Fourteen to twenty students attend vocabulary building every Thursday. Student participants engage in activities such as games, drills, and puzzle to increase their vocabulary.
- Young Ladies' Forum This group meets every Monday during the school year. Student participants discuss common situations that females encounter as college students.
- Young Male Forum-This group met on Wednesdays (3/17, 3/24 and 3/31) from 4:00 – 6:00 p.m. Each week a different guest speaker addressed the group and they discussed topics such as resisting negative peer pressure, balancing academics and extra-curricular activities, and transitioning to college.

College Component tutoring and advising and enrichment activities work to aid students in overcoming personal, financial and economic difficulties, and to increase the retention of the School's women and minority students to above the national average. Enrichment and Graduate School Planning Workshops were held to help students better achieve academic success.

- EXCEL Meetings – Meetings during the summer component were held on an “as needed” basis in addition to nightly meetings with S.E.A. students.
- Fall Information Sessions (8/25/03, 8/27/03) were held for PREP students and EXCEL Sophomores, Juniors, and Seniors Topics discussed / to be discussed: review of “Request for Financial Assistance” policies; EXCEL staffing changes; upcoming activities; completion of directory form and scheduling preference form; and student questions / concerns.
- Counseling services 40 freshman and 50 upperclassmen received continuous counseling over the course of the academic year.
- Mandatory tutoring sessions (ENGR 0088) began on September 8th for all 30 PREP participants. Three graduate teaching assistants under the direct supervision of Dr. Dan Budny facilitate the weekly tutoring sessions. All sessions are held in B81E between the hours of 10AM and 4PM.
- Daily walk-in tutoring also began on September 8th. This component is offered to all engineering students taking first year engineering courses.
- Freshman/Sophomore Workshops: In light of a staffing shortage (in Ms. Walden's absence) an EXCEL team decision was made to cancel the annual EXCEL Midyear Motivation Workshop and Award Presentations for Freshmen and Sophomores. In its place, students were made aware of other programs taking place on campus that meet the same objectives

MPEE

- Introductory Meeting (9/18/04) An introductory meeting was held for MPEE applicants.
- Meeting for all MPEE Participants (12/1/04)-The meetings were facilitated by both Ms. Walden and Ms. Paul. The meeting agenda: progress to date; time sheet completion; contacts with mentors; questions / concerns.
- Meeting with MPEE Staff-Students met with MPEE staff on a regular basis to discuss progress.

SEA

The objectives of the SEA component of PECAP are to: (1) make a solid improvement in the academic performance of the participants in freshman science, mathematics, and engineering problem solving; (2) make solid improvement in performance in technical research, writing, and analytical problem solving; and (3) provide direct access for full participation in quality engineering education at Pitt.

- Study Skills seminars were presented (6/21/03 and 7/19/03). Student feedback via completed evaluations was generally favorable.
- A residential setting was provided to ease students' transition from college to high school life.
- Courses in Foundational Engineering Mathematics, Introduction to Engineering Science, Writing and Communication, Engineering Software Tools, and Research Methods were implemented in the Summer of 2003
- Restructuring-The SEA program was restructured for the summer of 2004 to place an increased emphasis on Pre-Calculus and to broaden the diversity of the participants.
- Research-The summer research program expanded to include 10 students in the summer of 2004, up from 2 students in the summer of 2003.

Changes in admissions policies facilitate greater retention and place an increased emphasis on student quality.

- **PREP Designation**-As decided by Larry Shuman and Betsy Porter, the PREP designation was eliminated. The Office of Diversity and the PECAP program supports the elimination of this distinction and feels that this admissions decision will allow our programs to focus more closely on the students with the potential to succeed and excel in the School's increasingly competitive climate.

ACCOMPLISHMENTS

- Undergraduate freshman retention for African-Americans is comparable to white male retention

Table-Freshmen Retention

	2000	2001	2002
African-American (%)	79	77	88
Female (%)	69	83	85
White male (%)	81	75	88
All (%)	78	77	86

- The quality of incoming students is on the rise

Table:Student Quality

	DIVERSITY					
	African-American	Hispanic American	Native American	Asian American	Female	White Male
2002-3	1167	1005	1225	N/A	N/A	N/A
2003-4	1206	1230	1290	N/A	N/A	N/A
2004-5	1255	1302	1247	1339	1258	1268

- The number of African-Americans earning degrees has risen significantly since 1998

Table: BS Degrees

	All M	All W	AA T	HS T	NA T	Fo T
1998-9	78.31%	21.68%	3.98%	.88%	0	3.5%
1999-0	77.81%	22.18%	5.80%	1.37%	.68%	2.04%
2000-1	77.56%	22.44%	9.09%	.85%	0	1.42%
2001-2	74.92%	25.08%	4.95%	1.24%	0	1.54%
2002-3	73.40%	26.60%	5.41%	.98%	.24%	2.46%
AVERAGE	76.40%	23.60%	5.84%	1.06%	.18%	2.20%

- The number of African-Americans earning MS degrees rose in 2002-2003

Table: MS Degrees

	All M	All W	HS T	NA T	Fo T
1998-9	87.5%	12.50%	2.94%	0	32.35%
1999-0	80.14%	19.86%	4.25%	1.21%	3.04%
2000-1	86%	14%	3.0%	2.0%	26.0%
2001-2	80.6%	19.45%	.93%	0	29.62%
2002-3	84%	16%	2.90%	.72%	31.60%
AVERAGE	83.65%	16.35%	2.80%	.82%	29.93%

- The number of women earning PhDs has risen dramatically since 2003-2004

Table: PhD Degrees

Year	All M	All W	Af T	HsT	Na T	Fo T
1998-9	90%	10%	3.33%	0%	0%	56.67%
1999-0	76.67%	23.33%	0%	3.30%	0%	70%
2000-1	76.74%	23.25%	9.30%	0%	0%	74.41%
2001-2	88.50%	12.50%	0%	0%	0%	68.75%
2002-3	73.33%	26.67%	0%	0%	0%	73.33%
Average	80.85%	19.15%	2.52%	0.67%	0%	68.63%

School Diversity Goal 3: SYSTEMIC DIVERSITY MANAGEMENT- to educate administrators, faculty and students on valuing and managing diversity

ACTIVITIES

- CAS Advising Symposium (11/21/03): Ms. Paul co-presented “Toward a Working Definition of Diversity” with Dr. Barbara Mellix, Asst. Dean of CAS Advising, Ms. Liz Adams, Director of CBA Advising, and Ms. Jackie Lever, Asst. Dean of the School of Nursing. The abstract of the presentation is as follows: What do we mean when we say diversity? What do we hope to accomplish when we participate in diversity training? What do we hope to accomplish when we “practice” diversity? Has the term become a cliché? This roundtable considered these and related questions as a way of beginning the process of crafting an evolving definition of diversity (and perhaps a new term to express our meaning and goals), one that student service professionals can use as a guide in their day-to-day work as advisors, counselors, teachers, and mentors to students.
- Diversity Training for Freshman Class: As part of the school-wide initiative to provide awareness and training to all first year students, the EXCEL office collaborated closely with the Study Abroad office to present a series of four (4) workshops during the month of February 2004. The main objective of all of the components is to heighten each student's awareness to the importance of developing cultural competencies (global skills) as well as valuing difference.
- Appreciating Differences and Cultivating an Inclusive Campus Environment for Excellence seminar presented to Freshman engineering students (3/3/04)

DIFFICULTIES/BARRIERS

- Retention efforts are hampered by the discontinuation of the EXCEL grant, which serves as a vital source of funding for under-represented students, many of whom face financial difficulties during their undergraduate years.

ACCOMPLISHMENTS

School Diversity Goal 4: POSITIVE ACADEMIC CLIMATE-Create and maintain a non-discriminatory climate where tolerance and respect are encouraged, and an equitable learning environment and professional development are provided

ACTIVITIES

- Women in Engineering Speaker and Dinner Series-In cooperation with the Office of Special Events, and the Society of Women and Engineers the EXCEL program presented two evenings focusing on women’s issues in Engineering—one a panel discussion and one a speaker. More speakers are planned for the following year.
- Responding to Acts of Intolerance-Acts of racial intolerance or sexual harassment were addressed quickly and effectively. An official Acts of Intolerance policy is being drafted for the Dean’s approval.
- First Robert O. Agbede award for diversity awarded to Department of Bioengineering.
- Community Recognition-PECAP efforts were recognized in the *Pittsburgh Business Times*, and the *Pittsburgh Courier*

ACCOMPLISHMENTS

- Winner of 2004 Chancellor's Award for Affirmative Action
- Women in Engineering activities were well attended. Several speakers are being planned for next semester, including African-American female engineers.

School Diversity Goal 5: ACADEMIC EQUITY- Develop and support integrated diversity programs and services that generate a positive climate and identity in the School

ACTIVITIES

- Heritage Month Celebrations-The Office of Diversity instituted the celebration of ethnic heritage months (beginning with Asian-American Heritage month) with the dissemination of emails to the entire school in acknowledgement of each month and a series of history quizzes. Themed bulletin board displays were also created for each month.
- Sponsorship of Student Organizations-through advising and financial support, the Office of Diversity supported the activities of SHPE, NSBE, and SWE. The office also held a membership drive/luncheon to attract new Hispanic students to SHPE and to encourage the participation of faculty in SHPE initiatives
- Collaboration-Work with Freshman Program to provide equitable scholarships to students who contribute to diversity
- Integrate initiatives into Freshman Program

ACCOMPLISHMENTS

- NSBE and SHPE conferences were well attended by School of Engineering students
- New members were recruited for SHPE, and the luncheon facilitated connections between Hispanic students and faculty
- The first winner of a heritage month quiz, Rob Toplak of Chemical Engineering, was awarded a prize at the end of May. Over ten faculty and staff members participated in the conference.
- PECAP Program presented at FIPSE Conference and ASEE conference as a national model for affirmative action programs