

**SCHOOL OF ENGINEERING
2005-2009 Diversity Strategic Plan**

School Diversity Goal 1: Provide support for the recruitment of a diverse student body that is inclusive of women and students traditionally underrepresented in engineering.

Objective 1-1. Expand the Pre-College Component pipeline for increased access to STEM careers for women, under-represented students and students with physical disabilities by helping them with early skills development that will positively impact the quality of their academic performance (math and science, GPA, class ranking, and SAT) by the end of the high school senior year.			
Strategies and Actions	Outcomes	Responsible Person(s)	Assessment
Offer school year workshops on foundational math skills, vocabulary building and standardized test preparation.	Measurable improvement	PECAP Staff	Pre- and post-test
Reinforce need for higher-level math and science in Preparing for College workshop and Career Awareness seminar.	80% of graduates take four years of math or four years of science.	PECAP Staff	Percentage of graduates with 4 years of math and science.
Provide structured tutoring for PECAP Pre-College students. Monitor student achievement and follow-up with parents through letters and phone calls. Continue incentive programs.	Increase number of students who achieve above a “C” in tutored subject. 90% of students who achieve below a B grade in math and/or science classes will enroll in PECAP Pre-College tutoring.	PECAP Staff	Direct measure
Provide advising for PECAP Pre-College students. Coordinate CARE summer engineering projects and presentations.	Increase student knowledge of strategies to improve academic performance. 50% of students will pursue STEM majors.	PECAP Staff	Student survey; percentage of graduates pursuing STEM majors.

Objective 1-1 continued			
Strategies and Actions	Outcomes	Responsible Person(s)	Assessment
Provide summer instruction in math, science, writing and standardized test preparation.	Increased mastery in subject areas.	PECAP Staff	Pre- and post-test results
Provide hands-on engineering and science activities.	Increased exposure to selected work activities of various engineering and science disciplines.	PECAP Staff	Student survey
Monitor progress on college planning process; and timing of preparation for college admission and testing.	95% of graduates will enter college.	PECAP Staff	Percentage of graduates who enter college.
Invite EXCEL staff and students to conduct introduction to SOE activity for juniors.	Coordinate activities through EXCEL to recruit 25% of engineering majors to SOE each year.	PECAP Staff	Percentage of engineering majors enrolled in SOE.
Objective 1-2. Build relationships and provide meaningful contacts with students and their families to support positive admissions decisions.			
Initiate parental contact with at least 50% of prospective students for 06-1 freshmen class. Continue to conduct phone-a-thon with NSBE, SHPE, and SWE. Continue process of phoning/emailing admitted under-represented students and explore possibility of newsletter directed to parents. Mail bimonthly activities calendar.	Increase in contact with parents and provide solid information around choices and decision making. Increased information to parents regarding PECAP programming. Increased amount of college planning/selection information to parents.	EXCEL/PECAP	Note the increased percentage of contacts and chart the matriculation yield of contacted families. List of relevant workshops and correspondence.

Objective 1-2 (Continued)			
Strategies and Actions	Outcomes	Responsible Person(s)	Assessment
Provide OAFA with names of juniors and seniors for recruitment purposes; hire STEM majors as tutors; invite students/advisors to Insiders' View of College Workshop.	Increased opportunities for students to interact with University of Pittsburgh students, faculty and staff.	PECAP	List of activities involving interaction with University of Pittsburgh students, faculty and staff.
Invite and provide incentives for parents who attend/facilitate workshops and/or other activities.	Increased number of parents who participate in PECAP activities.	PECAP	Monitor number of parents who attend and/or participate in workshops and advising sessions.

Objective 1-3. Increase interest in the SOE by forging collaborative partnerships with schools, community stakeholders, and organizations serving youth to increase the connectivity to students in the greater Pittsburgh area and beyond.			
Expand contacts with local and non-local high schools, youth- serving programs and churches.	Increase community awareness of pre-college programs with a broader audience.	PECAP Staff	Inquiries/applications from new referral sources.
Do informational and recruitment presentations for local programs, community organizations and churches.	Increase community awareness of pre-college programs with a broader audience.	PECAP Staff	Inquiries/applications from new referral sources.

Objective 1-4. Increase students' opportunities to explore and utilize their talents in a challenging academic research environment and place in appropriate freshman engineering fall class.			
Strategies and Actions	Outcomes	Responsible Person(s)	Assessment
Match students with faculty mentors to participate in research activities. Instructional emphasis will be placed on the student's ability to complete a quality scientific research project. All participants meet twice weekly with advisors to learn basics of conducting research.	Increased opportunities for faculty-guided research experience through the Summer Engineering Academy (Research Component) for students in STEM fields transitioning from high school to the University of Pittsburgh.	EXCEL	Actual % of CARE students entering research experience. Pre- and post- survey on research experience and knowledge of the elements of basic research. Pre- and post-quality of five-week research project.
Provide placement testing that identifies student deficiencies and provide intensive instruction in engineering integrated pre-calculus and Study skills, along with academic counseling to assist students making appropriate transition from high school to university life and the University of Pittsburgh.	Significantly increase the placement of participants into calculus I and freshman engineering classes in the fall and recommend the appropriate levels of freshman instruction for students identified with on going deficiencies	EXCEL	Results of standard university placement test (Pre-Test) and results of Final Exam (Post-Test): % gaining math competencies to place into Calculus 1 in Fall term of Freshman year.

School Diversity Goal 2: RECRUITMENT: Provide support for the recruitment of a diverse workforce (Staff and Faculty) that is inclusive of women and groups traditionally under-represented in engineering

Objective 2-1: Increase collaborative partnerships with professional organizations, academic institutions and organizations serving under-represented scholars and administrators to increase the connectivity to potential applicants nation-wide.			
Strategies and Actions	Outcomes	Responsible Person(s)	Assessments
Identify and work with recruiting departments early in the process to place ads in magazines.	Increased number of under-represented applicants.	EOD	Measured increase in applicant pool.
Identify the organizations to make partnerships	Increased number of under-represented applicants.	EOD	Measured increase in applicant pool.
Attending conferences and network with established contacts	Increased number of under-represented applicants.	EOD	Measured increase in applicant pool.
Objective 2-2 Build relationships and provide meaningful contacts with potential staff and faculty to promote a positive school image and promote positive decisions on offers extended.			
Create support groups/networking events for current members of this population	Increased community building among under-represented staff and faculty members.	EOD	Number of staff and faculty attending events and support groups.
Establish mentoring program for new members of the community with established members of the community	Increase in employee satisfaction and investment in SOE and diversity initiatives.	EOD	Number of staff and faculty involved in the mentoring program/ end of the year surveys of participants.

Objective 2-2 continued			
Strategies and Actions	Outcomes	Responsible Person(s)	Assessments
Compile information/resources/list of established groups that support diversity efforts	Increased distribution of diversity information to SOE community.	EOD	Number of leaflets distributed.
Identify members of current under-represented staff and faculty population	Increased communication among faculty and staff contacts.	EOD	Number of visits to EOD office/attending at networking events.
Have meetings with applicants to faculty and staff positions.	Increase in recruitment of under-represented faculty and staff.	EOD	Number of new under-represented faculty and staff.
Draft letter/informational materials about the diversity of the SOE community	Increased distribution of diversity information to SOE community.	EOD	Number of letters/informational materials distributed.

School Diversity Goal 3: RETENTION- Provide support for the retention and ultimate graduation of increased numbers of women and students traditionally under-represented in engineering.

Objective 3-1: Increase educational support services for underrepresented engineering students in a more diverse and equitable environment.			
Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Continue direct & frequent interactions with NSBE, SHPE & SWE leaders. Supporting programming by augmenting funding when programs are academic in nature (i.e. nationally recognized speakers).	Increased student involvement in program planning, development of soft skills, networking and professionalism. Improvements in programming for women, underrepresented student populations and physically disabled students.	EXCEL	Speaker evaluation surveys
Build alumni support to meet and guide current students on to graduate from engineering.	Increase alumni involvement to model success to current students	EXCEL	Actual numbers participating and hours donated to assist programs
Continue monthly meetings with Freshman Program to ensure the effective and efficient communication / collaboration occur.	Increased dialogue that shapes the way information is gathered, disseminated, and utilized per the admission and recruitment tasking associated with the make up of the incoming Freshman class.	EXCEL	Access to vital information and number of collaborative events
Establish programming opportunities that introduces/reinforces Coop and Study Abroad programming opportunities to students.	Increased program exposure as well as options for career development through our counseling services	EXCEL	Number of people served and student evaluation of the services

Objective 3-1 continued			
Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Diversity training for undergraduate TA's who serve as mentors to incoming freshman students	Increase in percentage of student body that values diversity and embraces change and difference throughout their campus experience.	EXCEL	Number of people served and student evaluation of the trainings
Objective 3-2: Enhance students' critical and analytical thinking skills			
Continue to develop plans to improve critical analytic skill development into summer and school year programming by summer 2004	Increased access to undergraduate research experience for an increased number of women and minority engineering students	EXCEL	Actual numbers of participants and percentage of increase.
Revisit SEA curriculum and adjust content for new knowledge and improvements	Increased student knowledge of more Engineering problem solving	EXCEL	Pre- and post-testing and monitoring first year academic performance.
Conduct the Academy and facilitate the coordination of instruction, student scheduling, housing, and other program elements	Maintain quality service and improve organizational communications and student experience with learning	EXCEL	Student evaluation of instruction, activities, and scheduling.

Objective 3-3- Increase graduation rates of under-represented students and encourage graduate school enrollment.

Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Pair students with undergraduate mentors to navigate engineering programs. Match students with a faculty mentor to participate in research activities. Develop small groups and individualized activities to guide the student to commit to well-defined academic goals for excellence, monitor academic performance and ensure early intervention.	Continued growth & development of MPE2 program and increase the number of students participating in summer research.	EXCEL	Student Survey: % impact of graduate student mentoring on student participation in placement activities
80% of women and minority engineering freshmen entering in 2005 and succeeding years will participate in research, coop, or internship experience before graduation.	Increased work force readiness among students	EXCEL	Participation statistics and student surveys.
Provide tutorial services that encourage students to achieve and maintain strong academic performance.	Offer a variety of tutorial services (walk-in, one on one and group sessions) that will be used by at least 5% of SOE students and achieve a 10% improvement in academic performance during the school year for those students that utilize our services.	EXCEL	Student survey of % of students using services and statistics on average GPAs and % of GPAs above 3.0.

Goal 4: Increase graduate opportunities through a strong Diversity in Graduate Engineering Education Program that ensures the recruitment, retention and production of a significant number of PhDs in engineering from under-represented student groups.

Objective 4-1. Provide more structured faculty mentoring opportunities for high achieving URS students working in faculty funded research laboratories			
Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Provide collaborative hands-on educational activities	Increase in students' interests in graduate study.	EXCEL	Actual counts: number of industrial internship offers. Number of scholarship dollars aggregated to graduate education
Provide increased Summer Research opportunities for highly talented juniors and seniors from the School of Engineering and the College of Arts to work on carefully defined projects.	Increased number of students prepared for graduate education in the SOE.	EXCEL	Number of students enrolled in the Summer Research Internship (SRI) program and number of students from program admitted to graduate programs in the SOE.
Provide graduate education transition activities.	Increased number of students prepared for graduate education in the SOE.	EXCEL	Student surveys, number of students from program admitted to graduate programs in the SOE.

Objective 4.1 (Continued)			
Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Begin the graduate school educational process in JR year. Continue to provide workshops on graduate school preparation.	Increased preparation and motivation of SOE undergraduates for graduate school in the SOE.	EXCEL	Student survey on motivation for graduate study.
Objective 4.2 To increase funding available for under-represented students pursuing graduate study in the SOE			
Provide diversity fellowships.	Increased number of students matriculating in the SOE.	EOD/SOE	Headcount enrollment.
Provide diversity TAs.	Increased number of students matriculating in the SOE; increased numbers of under-represented student role models for undergraduates.	EOD/SOE	Headcount enrollment.
Work with local industry to offer endowed graduate fellowships.	Increased number of students matriculating in the SOE.	EOD	Headcount enrollment.
Foster direct engineering internships with industry.	Increase in students' financial resources for graduate education.	EXCEL	Actual counts: number of industrial internship offers. Number of scholarship dollars aggregated to graduate education.

Objective 4-3: Increase the participation of quality students from HBCUs and non-PhD granting institutions in our Pre-PhD Scholar program

Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Provide opportunities for first year minority masters students and recent engineering graduates from selected non-HBCUs and non-PhD granting universities to participate in an intensive 8-10 weeks of faculty-guided advanced research projects and graduate education stimulating activities (Pre-PhD Scholar program).	Increase advanced research training for under-represented students from HBCUs.	EOD/EXCEL	Number of students enrolled in program.
Host research presentations at the close of the 8-10 week program.	Increase students' exposure to research presentation techniques.	EOD/EXCEL	Student final research presentations.
Work with faculty to design challenging research experiences for Pre-PhD Scholars.	Create more opportunities for a multi-disciplinary approach to problem solving.	EOD/EXCEL	Student evaluations of research experience.

Objective 4-4- Increase the visibility and identity of the SOE among talented under-represented students nationwide.

Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Involve organizations such as the National Society of Black Engineers (NSBE), Society of Women Engineers (SWE), Women in Engineering Program Advocates Network (WEPAN), and the Society of Hispanic Professional Engineers (SHPE) in effective dissemination of information and mailing of fellowship packages.	Increased contact between SOE students and potential graduate students from HBCUs and other institutions.	EOD/EXCEL	Number of Pre-PhD students enrolled in the program.
Develop an effective marketing instrument that will create and communicate the positive image and diverse culture of the School and the University in general.	Increases attraction of underrepresented groups to the University and the City of Pittsburgh.	EOD/EXCEL	Number of under-represented applicants to SOE graduate programs.
Visits by Associate Dean to selected minority campuses and meetings of professional societies or minority organizations to disseminate information about the program, interview students, and identify promising students.	Increased visibility of the University of Pittsburgh.	EOD	Number of under-represented students applying to SOE graduate programs.
Invite exceptionally gifted juniors and seniors who have shown some interest in Pitt graduate education for a three-day campus tour with a prospective major research advisor and graduate peer mentor.	Increased numbers of top under-represented undergraduates applying to the University of Pittsburgh.	EOD	Number of under-represented students applying to SOE graduate programs.

Objective 4-5 (Continued)			
Strategies and Action	Outcomes	Responsible Person(s)	Assessment
Place announcements in publications and national magazines such as National Society of Black Engineers (NSBE), Society of Women Engineers (SWE), Women in Engineering Program Advocates Network (WEPAN), and the Society of Hispanic Professional Engineers (SHPE).	Increased visibility of SOE graduate programs among under-represented and women students	EOD	Number of under-represented students applying to SOE graduate programs.
Personal letters of invitation and flyers will be mailed directly to a short list of prospective students.	Increased number of high-quality under-represented undergraduates applying to SOE graduate programs.	EOD	Number of under-represented students applying to SOE graduate programs.
Objective 4-6 –To increase the retention of under-represented and women students in the SOE.			
Establish a Graduate Engineering Center that allows students to gather together and work in multi-cultural groups to provide group discussions.	To reduce the isolation of any group and increase peer mentorship and academic activities.	EOD	Establishment of center, survey of student satisfaction.
Develop effective academic support staff and programs at departmental levels.	Designation of a staff person to be responsible for all diversity issues in the department.	EOD	Number of staff support persons trained and active.
The School will help spouses of graduate students in the program in finding local employment or may offer other assistance programs as needed.	Increased retention of under-represented students.	EOD	Headcount enrollment, survey of student satisfaction.

School Diversity Goal 5: Provide diversity management education to foster intercultural sensitivity and a positive non-discriminatory working, teaching, and learning environment in an inclusive engineering community.

Objective 5-1. Provide training to more than 80% of TA/RAs, staff, and students on valuing diversity			
Strategies	Outcomes	Responsible Person(s)	Assessment
Offer more workshops, and a variety of speakers	Increased school-wide participation and increased awareness of global diversity issues and their relation to engineering.	EOD	Workshop attendance and post-workshop surveys.
Offer these events at more convenient times and locations	Increase the attendance and participation of School of Engineering staff.	EOD	Workshop attendance and post-workshop surveys.
Objective 5-2. Increase the participation of the administrators and majority of the faculty in diversity training			
Emphasize at faculty meetings to the chairs the importance of these workshops	100% of department chairs and 80% of department faculty will attend a diversity workshop each year.	EOD	Attendance surveys.
Find out what types of training would be beneficial for the faculty	80% of faculty or more will rate the workshops “very useful.”	EOD	Faculty satisfaction surveys.
Have joint workshops with other colleges on campus	Increased campus-wide participation in EOD workshops.	EOD	Number of joint workshops per year/increase in attendance from outside the SOE.
Objective 5-3. Support the retention of faculty and staff from under-represented groups			
Plan and execute workshops and networking luncheons for these groups	Increased retention and sense of community among under-represented faculty and staff members	EOD	Attendance at workshops and workplace satisfaction survey.

School Diversity Goal 6: Foster the integration of diversity programs and services into the mainstream of engineering education for a global engineering world

Objective6-1. Develop and implement measures to manage behavior with accountability and rewards.			
Strategies	Outcomes	Responsible Person(s)	Assessment
Award diversity grants for faculty and departmental excellence in diversity initiatives.	Increased incentive for diversity awareness and activities.	EOD	Faculty and department activities listen on diversity awards applications.
Encourage the discussion of diversity topics at department chair meetings	Increased institutionalization of diversity initiatives.	EOD	Minutes from department chair meetings; chair participation in diversity initiatives.
Establish and award more diversity scholarships.	Recognize students' contributions to diversity and academic excellence.	EOD	Number of applicants for department and faculty diversity awards.
Work with and have joint sessions with other student and organization groups who also support these issues	Increased awareness of the EOD's multi-cultural environment.	EOD	Attendance at cultural events.

Objective 6-2. Integrate more diversity activities into engineering curriculum.			
Strategies	Outcomes	Responsible Person(s)	Assessment
Provide faculty with training in multi-cultural team building activities.	Increase workforce readiness by providing students with experience in working with multi-cultural teams.	EOD	Faculty reports on team-building initiatives.
Provide students with training in soft skills, including multi-cultural proficiency.	Increase workforce readiness by providing students with global skills.	EOD	Post-session evaluations.

School Diversity Goal 7: Build a Consortium for Corporate Partnership to generate funding for diversifying engineering education at Pitt.

Objective 7-1. Obtain additional external funding for our Diversity Program			
Strategies	Outcomes	Responsible Person(s)	Assessment
Build partnerships with local industry in conjunction with the corporate affiliates program	Increased local visibility and increased funding from local corporate affiliates.	EOD	Number of industry partnerships and increase in funding.
Work with office of development and alumni relations to explore funding opportunities.	50% increase in corporate and alumni funding.	EOD	Amount of corporate support received.
Host an annual diversifying engineering networking dinner with representatives from local industry	Connect students to opportunities in local industry	EOD	Internship and full time job offers for students
Host annual under-represented alumni dinner	Connect students to alumni working in their fields	EOD	Attendance and student surveys