PROJECT GOAL: Improve the experiences of underrepresented undergraduate students in the College of Engineering, resulting in increased participation of women, minorities, and people with disabilities.

Funded by a 2009 grant from the National Science Foundation (NSF) I-Cubed program: Innovation through Institutional Integration.

PEERs integrates four NSF-funded efforts at the University of Washington to improve the climate of underrepresented undergraduate minorities, women and students with disabilities in the College of Engineering through a core group of change agents who create more equitable relationships. The four UW campus partners in are:

- ADVANCE Center for Institutional Change
- Center for Workforce Development
- Center for Engineering Learning and Teaching (CELT)
- Disabilities, Opportunities, Internetworking, and Technology (DO-IT).

PEERs efforts are focused in five engineering transformation interventions and three student-centered interventions:

**PEERs Engineering Transformation Interventions:**

1. **A Capacity-Building Institute (CBI) in Years 1 and 5.** In 2009, a CBI was held to discuss challenges students from underrepresented populations face; strategies that can make engineering more welcoming and accessible; and ways to measure the success of PEERs. The second CBI that will be held in year 5 will focus on continuing to improve climate campus-wide after the grant ends.

2. **A campus-climate survey** to compare the experiences of underrepresented students in engineering with underrepresented students in other disciplines.

3. **Education of faculty and department chairs about bias** against students and the importance of a collegial and inclusive classroom climate through leadership workshops for department chairs in STEM and through PEER Leader presentations at department faculty meetings.

4. **Education of staff of existing diversity programs** to address issues of students who identify with more than one underrepresented group.

5. **An ongoing online Community of Practice** of stakeholders who discuss strategies for improving the experiences of underrepresented engineering students.

**PEERs Student-Centered Interventions:**

1. **A peer-to-peer workforce of students,** to be known as PEER Leaders, that will be trained to educate other students about bias against underrepresented students and how it impacts their success.

2. **A one-credit seminar for undergraduate students.** Students who complete the seminar are eligible to become PEER Leaders and eligible for paid internship opportunities.

3. **Presentations and panel discussions on the underrepresented student experience in engineering** for students in engineering classes and through other student venues. Presenters and panelists will include students from various underrepresented groups and PEER Leaders. Engineering students attending these programs will also be informed of existing mentoring and other support programs at UW.

http://www.engr.washington.edu/peers • peers@uw.edu
Innovation through Institutional Integration (I3) NSF Grant

The NSF I3 program seeks to leverage and connect current NSF funded projects, with particular emphasis on awards managed by programs in the Directorate for Education and Human Resources (EHR), to broaden and deepen the impact of these efforts. Specifically, the I3 program “challenges faculty, administrators and others in institutions to think strategically about the creative integration of NSF-funded awards towards a whole that exceeds the sum of its parts.”

In 2009 the University of Washington (UW) was one of six inaugural awardees of the I3 grants. With this 5-year award, UW created PEERS: Promoting Equity in Engineering Relationships.

Diversity in Engineering

“At a fundamental level, men, women, ethnic minorities, racial minorities, and people with handicaps, experience the world differently. Those differences of experiences are the ‘gene pool’ from which creativity springs.”

- William A. Wulf, former president, National Academy of Engineering

When asked to imagine what an engineer looks like, most everyone will envision a white non-disabled male. Indeed, women make up fewer than 20% of the undergraduate engineering students, a number inconsistent with their proportion in the broader undergraduate population (more than 50%). African American, Hispanic and Native American students earned fewer than 12% of engineering bachelor degrees, a percentage far below their proportion in the school-age population. Additionally, students with disabilities experience more barriers to academic success than their non-disabled peers. It’s no wonder people associate white non-disabled men with engineering.

Engineering and other STEM fields thrive on creativity, innovation, and persistence. More diversity in engineering will help generate more creativity and innovation. To increase the numbers of women and minorities who persist in engineering, universities have a responsibility to create campus communities that welcome and support students from all backgrounds. Supportive peers and peer groups can contribute to campus climate, student aspirations and achievement, career choice, and lead to improved persistence for underrepresented students. Because of this, efforts to improve the climate for women, minority, and disabled students in academia should include peer-led educational opportunities.

For more resources about UW engineering and campus-wide diversity, visit http://engr.washington.edu/peers/about/diversity.html

PEERs Partners Across Campus

PEERs is a partnership of NSF-funded groups across campus.

ADVANCE CIC web site: http://www.engr.washington.edu/advance
CELT web site: http://depts.washington.edu/celtweb
NW-ETEP web site: http://www.engr.washington.edu/nwetep/
DO-IT web site: http://www.washington.edu/do-it