



NSF ADVANCE Academic Careers in Engineering and Science (ACES) at Case Western Reserve University

<http://www.case.edu/admin/aces/>



ACES: Purpose and Goals

The Academic Careers in Engineering & Science (ACES) program at Case Western Reserve University (CWRU) is part of the National Science Foundation's ADVANCE Institutional Transformation (IT) program to develop a science and engineering (S&E) workforce that includes the full participation of women at all levels of faculty and academic leadership.

As the first private university to be awarded a five-year ADVANCE IT award, CWRU has undertaken systematic institutional transformation to improve the recruitment, advancement, leadership and retention of women faculty and enhance transparency, accountability and effectiveness at the school/college and departmental levels.

During 2003-08, ACES has worked with 31 NSF fundable departments in 4 S&E schools (sciences, engineering, medicine, and management) as well as the university as a whole, engaging in a broad set of transformational programs and initiatives, policy and structure changes, process improvements, and faculty career and leadership development to transform the university.

Scope

The ACES grant was launched with the overall goal of increasing the percentage of S&E women faculty at CWRU over the 2003 baseline by 20% over the five-year period through four primary thrusts:

- Targeted Recruitment Initiatives** improve faculty search and recruitment processes in order to:
 - Increase the percentage of women faculty at the assistant professor level
 - Increase women as a percentage of endowed chair holders
 - Increase women as a percentage of all candidates in search pools
 - Increase women as a percentage of all candidates invited to visit CWRU

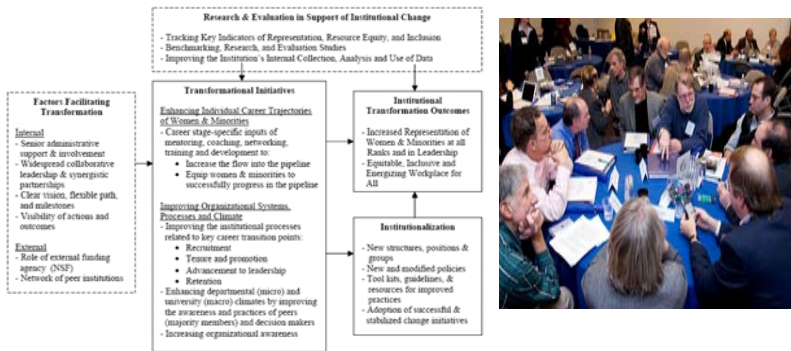
- Advancement and Retention Initiatives** improve university policies and work practices in order to:
 - Increase the percentage of women faculty at the associate professor and full professor levels through promotion from within
 - Increase the percentage of women in faculty leadership or administrative positions at the school level

- Institutional Climate Change Initiatives** transform departmental and university climate in order to:
 - Improve the leadership of departmental and school administrators
 - Improve qualitative perceptions and ratings of climate, as ascertained through focus groups, interviews, and surveys
 - Increase resource equity for women faculty, including salary equity, teaching loads, lab space, and retention efforts
 - Increase the percentage of women invited to campus as distinguished lecturers, visiting speakers and scholars

- Faculty Development Initiatives** support and empower faculty by:
 - Improving coaching and mentoring mechanisms
 - Improving faculty networking, training and education
 - Creating funding for career development of women and minorities



Figure 1: Model of Institutional Transformation for Enhanced Representation and Inclusion of Women and Minorities (adapted from Bilmora, Joy & Luang, in press)



Trends

Major Initiatives, Multiple Levels

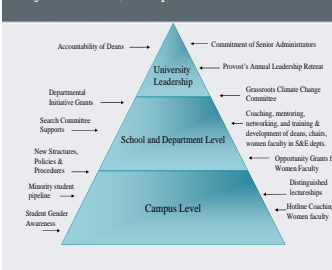


Figure 2: Number of Tenure Stream Positions for 31 Science and Engineering Departments by School and Gender, 2003-2008

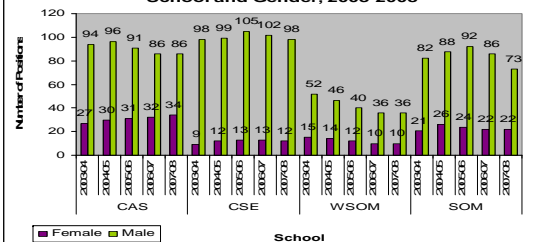


Figure 3: Proportion of Tenure-Stream Positions for 31 Science and Engineering Departments by School and Gender, 2003-2007

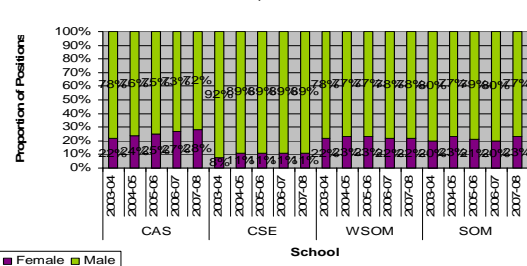


Figure 4: Number of Department Chairs for 31 Science and Engineering Departments by School and Gender, 2003 and 2008

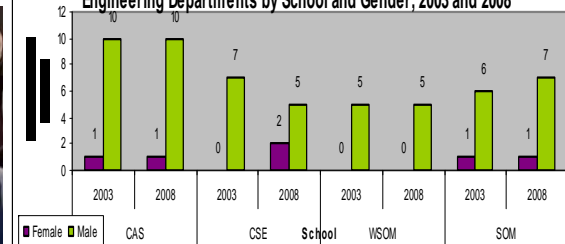
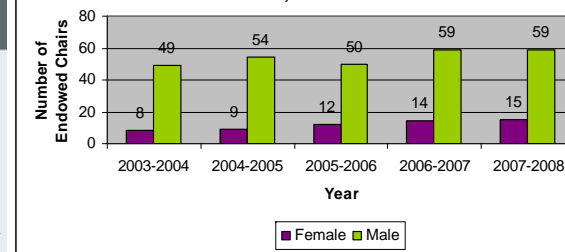


Figure 5: Number of Endowed Chairs for 31 Science and Engineering Departments By Gender, 2003-2008



Main Accomplishments (2003-2008)

- CWRU appointed a woman President of the University and a woman Dean of the School of Medicine
- New offices and positions were created across CWRU, including:
 - Assistant Dean of Faculty Development and Diversity in the School of Medicine
 - Associate Dean of Faculty Development in the School of Engineering
 - 3 new endowed chairs for women faculty in S&E
 - Diversity Specialist in the Provost's Office
 - Research Analyst in the Institutional Research office
 - Graduate student position in the Flora Stone Mather Center for Women
- Increased the overall percentage of women faculty in S&E departments from 18% to 21% during a time of general reduction in faculty size
- Almost doubled the number of women faculty in S&E departments holding endowed chairs (from 8 to 15)
- Doubled the number of women serving as S&E department chairs from 2 to 4
- Created or revised university faculty policies including automatic pre-tenure extension and work release policies
- Institutionalized an annual Provost's Leadership Retreat for all deans and chairs in the university and an annual faculty orientation for newly promoted faculty, and expanded the annual new faculty orientation
- Implemented new policies, education, and best practices that improve S&E faculty search and recruitment processes
- Institutionalized a summer internship (pipeline) program for minority women S&E students.

Reports and Publications

Over 2003-08, ACES conducted several studies of faculty diversity and equity, including annual NSF ADVANCE faculty composition indicator analyses, 2 campus climate surveys (in 2004 and 2007), faculty interviews & focus group studies, annual salary equity studies, a candidate pool composition study, annual exit interviews, annual offer letter analyses, a COACHE junior faculty survey, an Affirmative Action survey, annual new faculty surveys, and various intervention evaluation studies.

Several ACES reports and publications are available at <http://www.case.edu/admin/aces/resources.htm>