

SUPERB-IT

Summer Undergraduate Program in Engineering Research at
Berkeley – Information Technology



Electrical Engineering and Computer Sciences

College of Engineering

University of California, Berkeley

www.eecs.berkeley.edu/Programs/superb/superb.html

Program Overview

Objective:

- To increase diversity in the information technology graduate school pipeline by affirming students' motivation for graduate study and strengthening their qualifications

Strategy:

- Offer talented underrepresented undergraduate engineering students the opportunity to gain research experience by participating in ongoing research with electrical engineering and computer sciences faculty and graduate students

What makes SUPERB-IT unique?

- The goal of serving underrepresented minority and underserved students

Program Components

Undergraduate Research

- 8-week research project in IT
- Faculty and graduate student mentors
- Written technical reports and oral presentations

Educational Activities

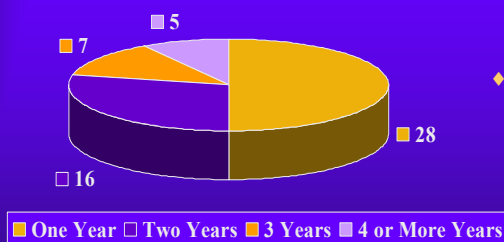
- Expose students to the various research areas at UCB
- Industry Field Trips, tours of research facilities, and research group presentations

Graduate Study Preparation

- Workshops: Graduate application process, fellowship and financial aid information, graduate academic life
- GRE preparation course

Faculty Participation

Frequency of Faculty Participation
SUPERB-IT 1990-2002



- ◆ 56 Faculty SUPERB-IT Mentors
 - 50 % are repeater mentors
- ◆ Many repeat faculty mentors have served as leaders of the EECS Department

The significant faculty representation demonstrates departmental buy-in and confidence in SUPERB-IT

Evaluation Methodology

- ◆ Pre-Program
 - Short-term corrections such as research mismatches, insufficient mentoring, or logistic difficulties
- ◆ Post-Program
 - Students' and graduate mentors' perception of the value of SUPERB-IT experience
- ◆ Longitudinal follow-up
 - 1990-1998
 - 1996-2001 (67% response rate)

Participants & Graduate Study

- ◆ 66% of participants pursued graduate study

Degree Type	No. of Participants
PhD	4
MS	18
JD	1
MBA	1
PhD Pipeline	18
MS Pipeline	3
Applying to Graduate School	12

Key Accomplishments

- ◆ Program is perceived by students to have increased their motivation to aspire to graduate school
- ◆ Students from smaller institutions with no Ph.D programs were learning about research universities for the first time
- ◆ Students Leverage Research
 - Continuity of research at undergraduate institution
 - Dissemination of research: presentations, publications
- ◆ Support for graduate applications

Challenges

- ◆ Anti-affirmative action legislation and its affect on SUPERB-IT student diversity
- ◆ Faculty Availability
- ◆ Fiscal Sustainability



Background Slides

California Anti-Affirmative Action Legislation

UC Board of Regents Standing Policies SP1,SP2 – July 1995

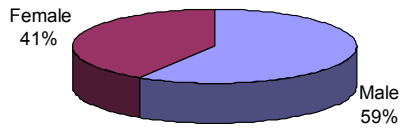
- SP-1 eliminated consideration of race and gender in the admission of students to the university.
- SP-2 eliminated race and gender as considerations in UC's hiring and contracting practices, except where such action would result in the university's loss of federal or state funds.
- The first full entering freshman class admitted under SP-1 enrolled at UC in fall 1998.

Proposition 209 – November 1996

- Prohibits consideration of race and gender in state employment, education and contracting programs – regardless of the University of California's Regental or administrative policies.

SUPERB-IT Demographics

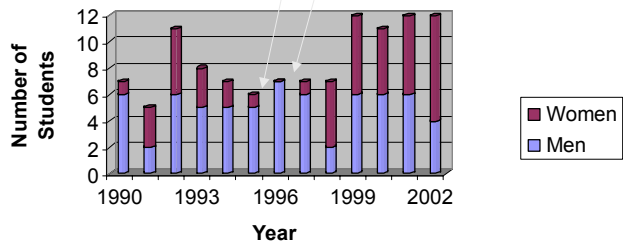
SUPERB-IT 1990-2000
% Men and Women Overall



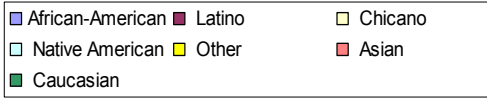
SP1 & SP2 become UC Policy

Proposition 209 becomes State Law

SUPERB-IT 1990-2002
Number of Men and Women By Year



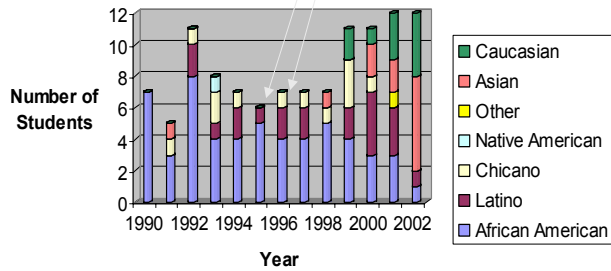
SUPERB-IT 1990-2002 % Ethnicity Overall



SP1 & SP2 become UC Policy

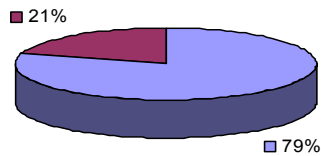
Proposition 209 becomes State Law

SUPERB-IT 1990-2002 Ethnicity By Year



SUPERB-IT 1990-2002 Institution Type

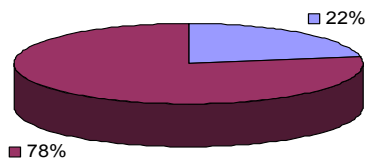
PhD Granting Institution vs. Non-PhD Granting Institutions



PhD Granting Institutions Non-PhD Granting Institutions

SUPERB-IT 1990-2002 Institution Type

Underrepresented Institutions vs. Majority Institutions



Underrepresented Institutions Majority Institution

- Underrepresented Institutions include Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions, and All-Women Colleges