



Strategies Faculty Can Employ to Retain URM and Female Students in STEM



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What can you do as one professor?

- ▶ Engage students in rich research experiences
- ▶ Engage students early in their careers
 - ▶ Connection to a faculty member increases the likelihood that they will stay – advisor as mentor
 - ▶ Research as freshman/sophomores, two year college students
- ▶ How is your research group structured?



What can you do as one professor?

- ▶ Encourage students to take part in professional development organizations
 - ▶ Society of Hispanic Professional Engineers - SHPE
 - ▶ Society of the Advancement of Chicanos and Native Americans in Science - SACNAS
 - ▶ American Indian Science and Engineering Society – AISES
- ▶ Campus chapters
- ▶ Conferences
 - ▶ Networking
 - ▶ Research presentations
 - ▶ Role models
- ▶ You should go to some of these meetings



What can you do as a member of a university community?

▶ Undergraduate programs

- ▶ Encourage student learning and progress in all courses; don't design courses to “weed out” students
 - ▶ Read: *Talking About Leaving: Why Undergraduates Leave the Sciences*, by Seymour and Hewitt, Westview Press, 1997
 - ▶ Do students feel engaged by their university?
- ▶ Proper academic advising
- ▶ Tutoring, study groups
- ▶ Peer-to-peer support, mentoring
- ▶ Ensure students have access to advanced courses



What can you do as a member of a university community?

- ▶ **Make the professoriate more diverse**
 - ▶ Hire and support diverse graduate students and post-docs
 - ▶ Faculty hiring
 - ▶ Are you looking for diverse applicants?
 - ▶ Are you willing to compete for excellent, diverse candidates?
 - ▶ Are you willing to accommodate concerns of female junior faculty?
- ▶ **Invite and highlight female and minority speakers**
 - ▶ Established leaders in their fields
 - ▶ Young scientists – post-docs and junior faculty



What can you do as PI?

- ▶ Build a meaningful diversity increasing effort into your research grant
- ▶ Design a program and get it funded
 - ▶ NSF
 - ▶ Divisions of Undergraduate/Graduate Education
 - ▶ Research Experiences for Undergraduates
 - ▶ Department of Education “Title V” programs
- ▶ Build meaningful relationships with minority-serving institutions that are ideal partners for promoting diversity



EPSCoR-Supported Opportunities

- ▶ **Innovation Working Groups**
 - ▶ 8-12 scientists or educators
 - ▶ 3-5 days on their proposed topic
 - ▶ One per year will focus on topics related to education, communication and outreach, and diversity

- ▶ **August 2010: The New Mexico STEM Higher Education Diversity Network**
 - ▶ With Marnie Carroll and Edward Martinez
 - ▶ Led to NSF STEP and DOE proposals
 - ▶ DOE successful: Intensive math summer courses established at northern New Mexico colleges (*Accelerate* program)

- ▶ **Next IWG deadline: December 1, 2011**

