

## Mentoring: Opening Doors

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Reception Honoring Women Faculty  
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## Mentoring?

- Mentoring has become a "buzz" word in higher education - what is it?
- Mostly to promote the advancement of women and minorities, especially when underrepresented. Why do only women and minorities need mentoring?
- Typically think of mentoring students. But what other women in academia?
- What can be done to encourage and promote mentoring?
  - personal
  - departmental

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## What is a mentoring?

- Mentoring is establishing a very special relationship
  - is professional (ultimate goal to help someone achieve success) but also personal
    - care about the personal development as well as professional
    - for example, careers and families
  - develops and lasts over an extended period of time, with varying intensity
  - provides information, help, advice, and contacts
  - provides encouragement and advocacy

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## Why only women and minorities?

- Recently, study looked at how faculty envision and practice mentoring among themselves
  - Result: When faculty mentoring (informal) occurs, it is mutually negotiated, primarily between persons of the same sex and between assistant and full professors
  - In departments (ranks) where men are majority, white males are being mentored - informal mentoring
- To mentor women when underrepresented, must have structured or formal mentoring plan

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### Lots of studies about importance of mentoring for success

- Researchers have identified mentoring as the most crucial need for recruitment and advancement of women at all levels
- Members of Association of Women in Science asked about their concerns
  - Major - effective mentoring systems to support women throughout their careers
- Mentoring is a career long activity (mentoring and being mentored)

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### Mentoring: Open Doors

- By
  - encouraging and motivating
  - demanding unqualified excellence
  - developing mutual respect and trust
- Mentoring open doors
  - Opportunities - what are the possibilities
  - Abilities and talents - some cases didn't know had
  - Resources and networking - needed for success

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### Mentoring benefits women in academia at all levels

- Students
    - Undergraduate
    - Graduate students
  - Faculty
    - Assistant
    - Associate
    - Full
- Can be both mentor and mentee

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### Mentoring of women students

- Identify students with potential and encourage them to pursue degrees
  - Set high standards and challenges for the students
  - Guide, direct, encourage and foster independence
  - Help build confidence -
    - success is great catalyst for encouraging student continue and reach their potential
  - Provide a sense of community so woman student does not feel isolated
  - Help with networking
- Each student is different - mentoring is different

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### Mentoring Women Faculty at all ranks

- Women underrepresented in many fields
- Underrepresentation of women is the case in most fields as faculty rank goes up
- Disturbing
  - need women role models and mentors to encourage women students
- Generally, importance of mentoring recognized at assistant professor level
  - No/little mentoring occurs for associate and full professor

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### National Science Foundation - Advance

- Despite some progress, women significantly underrepresented in science and engineering careers
- Importantly, underrepresented in faculty ranks (little change in last 10 years).
- Lack of women faculty, especially senior faculty women not conducive to improving representation
  - faculty needed to serve intellectual, professional, and personal role models and mentors

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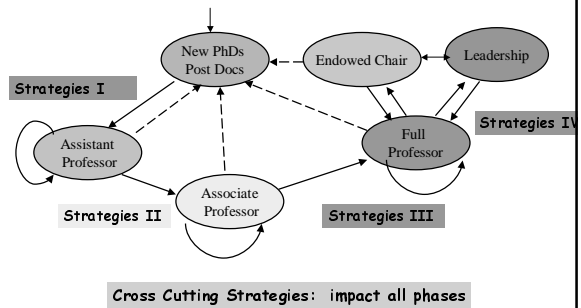
### Example: Status of women faculty at University of Pittsburgh

- In all of Biological Sciences, Chemistry, Computer Science, Geological and Planetary Science, Mathematics, Neuroscience, Physics and Astronomy (Fall 2000)
  - 12.7% tenure/tenure stream are women
  - 6.0 % of tenured faculty are women
  - 4 Full Professors; 4 Associate Professors
- Engineering - 7 departments
  - 8.2% of tenure/tenure stream are women
  - 4.5 % of tenured faculty are women
  - 1 Full Professor; 2 Associate Professors

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### Faculty Life Cycle Graph



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## Mentoring faculty

- Assistant Professor
  - tenure
  - building a research career
  - finding funding
  - begin networking
  - time management and family issues
- Associate Professor
  - network
  - international reputation
  - involved professional activities  
(e.g., program/conference chairs, journal editors)

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## Mentoring Women at all levels

- Professor
  - leadership positions
  - honors
  - networking
  - politics
  - advocate and supporter

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## How to find a mentor

- Role model
  - talk to them - ask questions
  - internal
  - external - in your field
- Trusted colleague - builds over time
- More than one mentor
  - within department
  - nationally/internationally

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## How to become a mentor

- Faculty mentor for students
  - approach good students and encourage them
  - show interest in student
- Faculty to faculty
  - offer help
  - include faculty member in research meetings, lunch
  - be interested, encourage and promote
- Think about mentoring - what is a good mentor
- Read about mentoring

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### What should a department do?

- Set up formal mentoring programs
- **Mentoring at student level and faculty**
  - Mentors can be students & faculty
- **Also good to have woman mentor, but maybe not primary mentor**
  - could have external mentors
- **Mentor training**
  - workshops
  - responsibilities

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### Why be a mentor?

- **One of the most rewarding activities**
  - helping shape the professional and personal life of someone
- **Grow and learn from mentoring**
- **Recognition for finding talent and having influence**
- **What we need to do to increase the participation of women in the University**
- **Open doors for others**
  - Inspire goals and dreams
  - Help to achieve these

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### Resources

- **"Adviser, Teacher, Role Model, Friend - On being a mentor to students in S & E", NAS, NAE, IOM**
- **CRA-W Career Mentoring Workshops Booklet**
  - Getting tenure, Building research career, Finding funding, Time management
  - <http://www.cra.org/craw>
- **Women's Studies - series of mentoring meetings**
  - 910 CL
- **Web**

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### PIs and Departments

Mary Lou Soffa, Professor of Computer Science  
Elizabeth Baranger, Associate Provost and Professor of Physics  
Eric Beckman, Associate Engineering Dean for Research and  
Professor of Chemical Engineering  
Susan Kalisz, Professor of Biological Sciences  
Tara Meyer, Assistant Professor of Chemistry  
Kim Needy, Associate Professor of Industrial Engineering  
Anne Robertson, Assistant Professor of Mechanical Engineering  
Larry Shuman, Associate Engineering Dean for Academic Affairs and  
Professor of Industrial Engineering

**Departments:**  
All Departments in School of Engineering (7)  
Sciences: Biological Sciences, Chemistry, Computer Science,  
Geology and Planetary Science, Mathematics, Neuroscience,  
Physics and Astronomy, Statistics (8)

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### Myths/truths about mentoring

- A research adviser is a mentor.
- A person only needs one mentor.
- All faculty can serve as mentors.
- Mentoring is essential for career success.
- Men can mentor women as well as women.
- Men are better mentors for women than women.
- Mentoring is for the benefit on the mentee.
- Mentors should be passive and wait for questions from mentee.

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