ADVANCE

INCREASING THE PARTICIPATION AND ADVANCEMENT OF WOMEN IN ACADEMIC SCIENCE AND ENGINEERING CAREERS

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National Organization of Research Development Professionals Meeting
Alexandria, VA
Description of ADVANCE
ADVANCE Program

- **Program Goal**: Increase the representation and advancement of women at all levels in academic science and engineering careers

- **Program History**
  - Initiated at the National Science Foundation in 2001
  - Over $135M invested to support various ADVANCE projects
  - >100 ADVANCE projects funded thus far at institutions of higher education and STEM related not-for-profit organizations in 41 states, the District of Columbia and Puerto Rico
ADVANCE Program Evolution

- **Leadership** (2000 - 2007)
- **Fellows** (2000 - 2006)
- **Institutional Transformation** (2000 - present)
- **PAID** (2006 - present)
- **IT-Catalyst** (2007 - present)
ADVANCE Awards, 2000-2011

- Fellows
- ITC
- Leadership
- IT
- PAID

Year  | Fellows | ITC | Leadership | IT | PAID |
----- | ------ | --- | ---------- | -- | --- |
2001-02 | 9      | 12  | 9          | 10 | 22  |
2003-04 | 10     | 10  | 9          | 9  | 19  |
2005-06 | 9      | 15  | 9          | 9  | 15  |
2007-08 | 9      | 14  | 9          | 9  | 11  |
2009-10 | 7      | 13  | 9          | 7  | 9   |
2011-12 | 11     |     |            |    |     |
**ADVANCE** Institutional Characteristics

- **Major Characteristics**
  - Support new approaches to **improving the climate/changing the culture** for women in U.S. academic institutions
  - Based on **conceptual framework** grounded in existing **social science literature** regarding organizational change and diversity
  - Identification of and demonstrated commitment to:
    - **Institutional leadership**
    - **Policy** review, revision and implementation
    - **Sustainability**
  - **Facilitates women's advancement** to the highest ranks of academic leadership
ADVANCE Award Mechanisms
Current Award Mechanisms

- **Institutional Transformation Catalyst (IT-Catalyst)**
  - Planning grants to support basic work to prepare for transformation

- **Institutional Transformation (IT)**
  - Comprehensive, *institution-wide*, projects transform the culture of the institution

- **Partnerships in Adaptation, Implementation and Dissemination (PAID)**
  - Support for *use of existing innovative materials and practices*
IT - Catalyst

- **PURPOSE**
  - Planning grants to support basic work to prepare for transformation at institutions with limited resources

- **FUNDING**
  - 2-year project period; $200,000 maximum for 2 years

- **IT CATALYST PROJECT CHARACTERISTICS/EXAMPLES OF ACTIVITIES**
  - Data collection on faculty, administrators
  - Awareness building
  - Policy review
  - Pilot activity implementation
  - Institutional needs assessment

- **DEADLINES FOR SUBMISSION (ODD YEARS):**
  - October (letter of intent, required)
  - November (full proposal)
IT, Institutional Transformation

- **PURPOSE**
  - Comprehensive, **institution-wide**, projects to **transform** the culture of the university or college

- **FUNDING**
  - **5-year** projects at average **$2M to $4M funding level**

- **IT PROJECT CHARACTERISTICS/EXAMPLES OF ACTIVITIES**
  - Policy changes to enhance the potential for demonstrable and sustainable change
  - Professional/leadership development for women faculty
  - Focus on accountability for diversity initiatives
  - Gender bias training for chairs, deans, search committees

- **DEADLINES FOR 2011 SUBMISSION (ODD YEARS):**
  - **October** (letter of intent, required)
  - **November** (full proposal)
Partnerships in Adaptation, Implementation and Dissemination

**PURPOSE**
- **Adaptation** and implementation of materials, tools, research, and practices that have been demonstrated to be effective
- Dissemination and diffusion
- **Scientific research** designed to advance understanding of gender in the STEM academic workforce

**FUNDING**
- 1 to 5 year projects; maximum $750K for up to 5 years

**PAID PROJECT CHARACTERISTICS/EXAMPLES OF ACTIVITIES**
- Workshops
- Leadership Development Programs
- Investigator Initiated Social Science Research

**DEADLINES FOR 2011 SUBMISSION (EVEN YEARS):**
- **October** (letter of intent, required)
- **November** (full proposal)
ADVANCE Best Practices
### Best Practices: Cohorts 1-3

<table>
<thead>
<tr>
<th>Initiative</th>
<th># IT Awardees (n=26)</th>
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<tbody>
<tr>
<td>1 Recruitment/search strategies</td>
<td>15</td>
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<tr>
<td>2 Department climate change strategies</td>
<td>10</td>
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<tr>
<td>3 Mini grants/release time/ research support</td>
<td>9</td>
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<td>4 Formal mentoring program</td>
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<td>5 Professional development for faculty</td>
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<td>6 Family friendly policies</td>
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<td>7 Leadership training experience</td>
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<td>8 Showcasing women scientists</td>
<td>6</td>
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<td>9 Focus on women of color</td>
<td>5</td>
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<tr>
<td>10 Promoting dialogue w/ retreats, conferences</td>
<td>5</td>
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<tr>
<td>11 Support for department change</td>
<td>4</td>
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<tr>
<td>12 Networks for women scientists</td>
<td>3</td>
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<tr>
<td>13 Transitional support for crisis</td>
<td>3</td>
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<tr>
<td>14 Professional development for administrators</td>
<td>3</td>
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<tr>
<td>15 ADVANCE advocates “on the ground”</td>
<td>2</td>
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<tr>
<td>16 Support/recognition for senior women faculty</td>
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<tr>
<td>17 Awareness for equity in compensation/resources</td>
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</table>
Perceptions about different categories of individuals and actions that are taken based on those perceptions

University of Michigan STRIDE (Strategies and Tactics for Recruiting to Improve Diversity and Excellence) Committee

- Provides training on the unconscious bias literature for senior STEM faculty who work with recruitment committees and promotion and tenure committees is very effective
- Reduces influences of implicit bias on search committees and promotion and tenure committees

Outcomes
- Increase in women hired in science and engineering tenure track positions (14% in 2001 – 34% in 2006)
ADVANCE Best Practices - Department Leadership

- University of Wisconsin at Madison
  - Provides chairs with tools and resources to identify issues and to develop action plans to address issues:
    - Training on:
      - Need for and use of climate survey data
      - Importance of their role in mentoring new faculty
      - Implicit bias (related to letters of recommendation/commendation, annual evaluations, etc.)

- Outcomes
  - Increase in number of female department chairs (2 – 10/3 years)
  - Positive changes in faculty climate surveys (less reports of isolation, better “fit”)


**ADVANCE Best Practices – Faculty Development**

- Approaches for faculty development grants:
  - Supporting attendance at professional meetings, leadership development conferences
  - Providing funds to visit an external mentor or to bring one to campus
  - Encouraging interdisciplinary collaboration
  - Support for bridge funding: between start up funding and first external award, or between external funding awards

- Approaches for Mentoring:
  - Formal and informal networks
    - Emphasis on research networks
  - Inter and intra-institutional mentoring
  - Career coaching
  - Faculty advocates
ADVANCE Best Practices - Policies/Procedures

- Review and revision of key institutional policies
  - Tenure and promotion decision making
  - Requests for leave or tenure clock stopping
  - Access to resources or services
  - Allocation of teaching, service workload

- Work-Life Balance
  - Policies and practices that address dual career household issues
    - Dual hiring policies and practices
    - Tenure clock stopping policies and practices
    - Conversion of part-time positions to tenured or tenure track positions
**ADVANCE Best Practices - Women of Color**

- Social support for campuses in remote locations
  - Collaborations with culturally relevant organizations/institutions
  - Access to/appreciation for opportunities for civic engagement

- Mentoring

- Awareness programs focused on issues directly related to women of color

- Targeted seminar series featuring women of color scientists

- Work-life balance programs
## ADVANCE Pre-Proposal Writing

- Current and prior ADVANCE awardee institutions
  - As mentor institution
  - Grantwriting assistance

- Review ADVANCE web portal
  - Best practices
  - Gaps in knowledge and information
  - Literature review
  - [www.portal.advance.vt.edu](http://www.portal.advance.vt.edu)

- Assess institutional readiness
  - Ongoing/prior task force on gender equity
  - Climate survey/ focus group data analysis

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## ADVANCE Proposal Writing

- Letters of support
  - PAID: X
  - IT: X
  - ITC: X

- Avoid deficit model
  - PAID: X
  - IT: X
  - ITC: X

- Special populations (non TT faculty, women of color, women w/disabilities)
  - PAID: X
  - IT: X
  - ITC: X

- Partnership development
  - PAID: X

- Redirect focus away from student centeredness
  - PAID: X
  - IT: X
  - ITC: X
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ADVANCE NSF Website
www.nsf.gov/advance

ADVANCE Web Portal
www.portal.advance.vt.edu