Advancing Women
at
Virginia Tech

January 10, 2005
Women Faculty at Virginia Tech: Ready to ADVANCE!
NSF’s ADVANCE Program

- Goal: to catalyze change that will transform the academic environment in ways that will enhance the participation and advancement of women in science and engineering.

- Women are currently less than 20% of science and engineering faculty in 4-year colleges and universities in the U.S.

- Virginia Tech is one of 19 universities to receive a 5 year, $3.5 million grant from ADVANCE.
Science and Engineering Faculty Nationwide

Percent Women


Source: NSF Science and Engineering Indicators 2004
Virginia Tech Tenured and Tenure Track Faculty, Fall 2004

Number of Faculty

- Professor: 511
- Associate: 326
- Assistant: 148

Number of Faculty by Title and Gender:

- Professor:
  - Female: 66 (11%)
  - Male: 445 (89%)
- Associate:
  - Female: 119 (27%)
  - Male: 207 (73%)
- Assistant:
  - Female: 108 (42%)
  - Male: 140 (58%)
Percent Women Faculty at Benchmark Institutions, Fall 2003*

<table>
<thead>
<tr>
<th></th>
<th>SCHEV Peers</th>
<th>Top 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest</td>
<td>U. of Maryland</td>
<td>U. of Washington</td>
</tr>
<tr>
<td></td>
<td>31%</td>
<td>30%</td>
</tr>
<tr>
<td>Mean</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>Virginia Tech</td>
<td></td>
<td>22%</td>
</tr>
<tr>
<td>Lowest</td>
<td>Texas A&amp;M</td>
<td>MIT</td>
</tr>
<tr>
<td></td>
<td>18%</td>
<td>16%</td>
</tr>
</tbody>
</table>

*IPEDS 2003, Top 30 highest and lowest excluding Baylor College of Medicine and U. of CA, San Francisco
AdvanceVT contains four elements

- Advancing women into faculty careers
- Increasing representation of women and establishing a critical mass
- Empowering women as leaders and scholars
- Institutionalizing change through policy review
Pipeline Element: Advance women into faculty careers

Mission Statement

Increase the number of women electing to pursue academic careers through empowerment and skill building programs.
Pipeline Element: Advance women into faculty careers

Element Activities

• Awarded first three graduate fellowships and first post-doctoral fellowship
• Supported development of Virginia Tech post-doc network
• Held focus groups with graduate students and post-docs
• Worked with graduate school to establish Work-Life Grants for graduate students
  – 6 week leave with pay for childbirth, emergency
• Planning graduate student conference for August 2006

"As a Ph.D. student, I participated in a program attended by women engineering faculty from 13 southeastern universities. It was awesome! That was the day that I first believed that I might actually be capable of succeeding as an engineering faculty member."

Nancy Love
Associate Professor
Civil & Envir. Engr.
July 30, 2002
Recruitment and Retention Element: Increase the representation of women

Mission Statement

Increase and sustain the representation of women at all ranks in the Colleges of Science and Engineering.
Recruitment and Retention Element: Increase the representation of women

**Element Activities**

- Compiled listservs and websites for faculty recruitment
- Co-hosted several visiting scholars – one resulted in a new faculty hire
- Led and participated in numerous faculty searches in the two colleges
- Compiled research on bias in hiring
- Developing tool kit for faculty searches

"Some of the main factors resulting in my choosing Virginia Tech were the supportiveness of the hiring committee, the fact that my spouse was hired, and the quality of research in the university as a whole."

A Recent Faculty Hire, Fall 2003
Virginia Tech New Full-Time, Tenure Track Faculty by Gender


Number of New Faculty

- 1998: 26%
- 1999: 35%
- 2000: 35%
- 2001: 32%
- 2002: 29%
- 2003: 33%
- 2004: 47%
Leadership Element: Empower women as leaders and scholars in science & engineering

Mission Statement

Increase the number of women in administrative and technical leadership positions in the Colleges of Engineering and Science.
Leadership Element: Empower women as leaders and scholars in science & engineering

Element Activities

• Awarded first research seed grants and leadership fellowships
• Held individual meetings with department heads in science and engineering
• Series of distinguished speakers
• Planning leadership development program for women faculty

“I want at least two women department heads placed in our College over the next five years.”

Dean Aref
College of Engineering
April 2003
Leadership Element: Recipients of AdvanceVT Research Seed Grants and Leadership Fellowships

Dr. Kathleen Meehan
Electrical and Computer Engineering

Dr. Naira Hovakimyan
Aero and Ocean Engineering

Dr. Brenda Winkel
Biology, Fralin Biotechnology Center

Dr. Andrea Dietrich
Civil and Environmental Engineering

Dr. Corina Sandu
Mechanical Engineering

Dr. Linsey Marr
Civil and Environmental Engineering

Dr. Julie Dunsmore
Psychology
Policy Review Element:
Changing the way we do business

Mission Statement

Promote policy change to remove barriers to success, and nurture the development of every faculty member to their fullest potential.

Norman Rockwell
[after L. Sullivan, 2003]
Policy Review Element: Changing the way we do business

Element Activities

- Review policies, programs, and practices and recommend changes
- Guide policies through university governance
- Communicate and monitor implementation
  - Dual Career Guidelines
  - Flexibility in Faculty Careers
  - Work/life policies and programs

“[There is a] ‘nothing written down’ trend in our department. I have no idea what some of the policies are.”

Female Associate Professor at Virginia Tech, Fall 2003
Building University-wide Awareness and Involvement

• Annual University-wide workshop
  – First workshop identified issues:
    • Child care
    • Climate
    • Dual career appointments
    • Mentoring
    • Lack of a critical mass, low numbers
    • Balancing work/life expectations
Building University-wide Awareness and Involvement

- Increasing connections and visibility among women
  - Networking receptions
  - Visiting speakers
  - Award nominations

- Creating a climate for change
  - Department head development
  - Research and assessment
  - Visible leadership from deans and provost
How to Measure Progress?

- **NSF Indicators:**
  - Faculty by appointment type, rank, and gender
  - Tenure and promotion outcomes by gender
  - Years in rank by gender
  - Time at institution by gender
  - Number and % women in leadership positions
  - Women holding professorships and chairs
  - Composition of promotion and tenure committees
  - Salaries
  - Space allocation
  - Start up packages
Women Faculty at Virginia Tech by College, Fall 2004

* Total percentage of women in tenure track positions within college
Virginia Tech Endowed Professorships & Chairs, June 2004

<table>
<thead>
<tr>
<th>College &amp; Department</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Life Sciences</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Architecture &amp; Urban Studies</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Business</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>Engineering</td>
<td>36</td>
<td>0</td>
</tr>
<tr>
<td>Liberal Arts &amp; Human Sciences</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Science</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>University Total</td>
<td>97</td>
<td>3</td>
</tr>
</tbody>
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# Virginia Tech College Level Administrators and Department Heads, June 2004

<table>
<thead>
<tr>
<th>Academic Colleges</th>
<th>Academic Deans</th>
<th>Assoc/Asst Deans</th>
<th>Department Heads</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>W</td>
<td>M</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Architecture</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Business</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
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<td>2</td>
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<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total Academic Colleges</td>
<td>7</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12.5 %</td>
<td>25.9 %</td>
<td>13.4 %</td>
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</tbody>
</table>
Virginia Tech University Level Administrators, June 2004

<table>
<thead>
<tr>
<th>Position</th>
<th>Men</th>
<th>Women</th>
<th>% Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>President, Provost, Exec VP &amp; CBO</td>
<td>3</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Vice Presidents &amp; Vice Provosts</td>
<td>9</td>
<td>2</td>
<td>18.2%</td>
</tr>
<tr>
<td>University Center Directors</td>
<td>17</td>
<td>3</td>
<td>15.0%</td>
</tr>
</tbody>
</table>
Assessment and Research

Mission Statement

To collect and disseminate data to support project goals.
Assessment and Research

Activities

• Interviews with S&E faculty and department heads
• Longitudinal tracking and interviewing of new 2003-04 S&E faculty
• Focused studies of dual career hires, use of “stop the clock” policy
• Faculty surveys

"It's important to address scientists in a scientific way. The only way you are going to convince scientists that change is needed is by giving them data. Give them a lot of data."

Associate Professor, College of Science
New faculty were asked to explain what attracted them to Virginia Tech

The majority of new faculty responses fell into the following three categories:

- Previous Positive Contact
- Dept Atmosphere
- Research Match

“Ranking of course had a big influence on the decision. Probably, however, more than that, during my interview, I really liked all the people I met.”

- New Faculty Hire, 2003
New faculty indicated a number of things that VT did right during the hiring process

1. 73 % (8) new faculty members felt that it was conveyed to them that their departments were positive and supportive work environments.

2. The ability to network with current faculty members was an important element of the interview process for 36% (4) of new faculty.

3. The department’s willingness to help with spouse employment was also important to 36% (4) of those interviewed.

“It was very important for both of us to be at the same institution. It was really important for me to be on a regular full-time faculty position because he could’ve been in a tenured position in another institution but with me being on a visiting position or on something else and neither one of us wanted to do that.”

- New Faculty Hire, 2003
Dual Career Hires

- Receptivity of colleagues to spousal hires varied by department, linked to department’s prior experience
Dual Career Hire Recommendations

• Make Virginia Tech’s willingness to work with dual hires visible to potential employees.
• Designate someone on campus who can facilitate communication across departments and colleges.
• Set aside funds to help departments with dual career hires.
• Use neutral language to communicate a positive climate.

“Some people view spouses as an opportunity, some people view them as problems. The way it’s phrased around here is it’s a two body problem…I wish they could view it more as a two body opportunity.”
- Male, Engineering
Faculty Survey

• Measure satisfaction with a variety of career related issues
• Full time instructional and research faculty
• Implemented by Survey Research Center
• Online distribution
• Approximately 10 to 15 minutes to complete
• Please encourage your colleagues to complete!
Key Ideas from Advance Institutions

• Search process crucial for recruiting diverse faculty
  – Develop tools and training for search committees

• Flexible work/life policies important for retaining both men and women
  – Make it easier to take advantage of “stop the clock” policies, reduce perceived stigma
More Ideas from Advance Institutions

- **Department heads are key to climate**
  - Increase awareness of climate issues and accountability for all faculty
  - Create job description for department heads
- **Many models for faculty development**
  - Develop a mentoring culture
More Ideas from Advance Institutions

• NSF data reporting requirements are useful in driving change
  – Share findings across the institution

• Sustainability must be built in from the start
  – Identify other campus programs and institutions that can take ownership
  – Align programs with institutional goals
  – Change the reward structure
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