Engaging New STEM Faculty: A Cohort Model
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Abstract
Our 2012 cohort of new STEM (science, technology, engineering, and math) faculty was unusually rich with females, 5 out of 8. The influx of STEM women during the second year of the Women in Science and Engineering at Oakland University (WISE@OU) National Science Foundation (NSF) PI&D grant provided a unique opportunity to make a lasting difference in our STEM faculty gender balance. Early in fall 2012 our grant-savvy co-PI initiated individual meetings with each new hire, reviewing a detailed list of practical grant-related information. Beginning in winter 2013, WISE@OU commenced with the Center for Biomedical Research a series of new faculty luncheons, including cohorts from 2012, 2011, and eventually 2013. Topics thus far have included: junior faculty member presenting to the group her experiences at two NSF-funded workshops; welcoming of 2013 faculty and distribution of Guide for STEM Faculty at Oakland University; and, most recently, a Q&A session with a NSF grant officer. WISE@OU has received enthusiastic, positive feedback from this group. By keeping a close connection with this vital cohort, WISE@OU has been able to craft additional opportunities and discussion on interdisciplinary research at OU. Beyond formal events, this initiative has created a comfortable network in which this group can thrive.

Providing Grants Information
Our co-PI visited one-on-one with newly hired STEM professors to assist them with navigation of the available grants and research information and resources available on campus. Below is a list of the information that he shared.

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| 2. WISE@OU Advisory Board, Oakland University/Small Business Administration | "Looking into the Future"  
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- Student chapter  
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- Research Excellence Fund; OU Reamour awards; GREAT tuition program  |
| 5. Other Resources |  
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- www.michbio.org  
- www.oakland.edu/research  
- www.advantageoakland.com  
- Internal Research Guidelines manual (online)  
- Procedure to apply for grants (EPRA, budget, fringe benefits, overhead)  
- Main contacts in the grants office  
- Internal | WISE@OU Research Visits

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Guide for STEM Faculty at Oakland University

As STEM faculty expressed the desire to know more about the grant process and connect with the grants staff on campus, WISE@OU organized an informal question and answer session with a grant officer from the OU Office of Research Administration. This was an opportunity for recently hired STEM faculty to get to know one of the important members of the grants staff and ask questions related to grant applications and funding. Tips from this discussion were later posted on the WISE@OU website. (Attendance = 19)

Partnering with Sigma Xi and CETL
Oakland University has an active chapter of Sigma Xi, the national scientific research society. WISE@OU partnered with Sigma Xi to create a luncheon program focused on interdisciplinary research, an area of interest for many STEM faculty. Members of the WISE@OU team facilitated a discussion which identified the strengths of interdisciplinary research opportunities on campus and forged connections between STEM faculty from all departments. The discussion allowed faculty members to introduce their research and find colleagues who might be interested working with them. The audience members were both junior and senior faculty and shared a variety of opinions and experiences during the seminar. (Attendance = 50)

Through a partnership with the Center for Excellence in Teaching and Learning (CETL), WISE@OU hosted multiple workshops for faculty that relay information about the best practices for mentoring and time management, with a specific focus on STEM faculty careers. The workshops were facilitated by a member of the WISE@OU leadership team and the panel discussions allowed STEM faculty to share their insight and answer colleagues’ questions. Attendees included both tenured and untenured faculty members which led to beneficial exchanges of ideas and suggestions. (Attendance = 18)

Contact Information
Visit our website at www.oakland.edu/wise.
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Email: ldevreugd@oakland.edu or kmooore@oakland.edu.
Phone: 248-370-4516 or 248-370-2338

Hiring STEM Faculty

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Bio</th>
<th>Chem</th>
<th>SECS</th>
<th>Math</th>
<th>Ph.D.</th>
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<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2012</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
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This table shows the recent hiring data for assistant professors in the STEM departments at Oakland University. Departments include Biological Sciences, Chemistry, the School of Engineering and Computer Science, Mathematics and Statistics, and Physics. In 2012, the STEM faculty cohort was predominately female – a first for OU.

Sharing Experiences
WISE@OU and the Center for Biomedical Research host luncheons each semester for junior STEM faculty. During one event, a faculty member shared her experiences from two NSF-focused workshops. She discussed tips for working with a Program Director, presenting research ideas, suggesting reviewers, and budgeting. Her top advice was: “Ask Early, Ask Often!” The presentation is posted on the WISE@OU website. (Attendance = 22)

Lunch attendees praised the event: “I really enjoyed our conversation and exchange of ideas. We are so fortunate to have WISE here at OU to reach out to us. It was a lot fun to get to talk to everyone and learn from each other.” (Assistant Professor of Engineering)

“I very much appreciate this opportunity the WISE program provides.” (Assistant Professor of Engineering)

“More regular gatherings of STEM faculty sounds like a great idea to me! It was great to have a chance to meet more of you...” (Assistant Professor of Biology)

Obtaining Internal Fellowships
The University Research Committee fellowship is a competitive internal award and important source of summer salary for junior faculty. From our data, it was clear that STEM faculty were not always successful with this award.

URC Fellowships Success Rates

<table>
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<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success Rate</td>
<td>30%</td>
<td>40%</td>
<td>30%</td>
<td>20%</td>
<td>10%</td>
</tr>
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</table>

To help STEM faculty have greater success in receiving this funding, WISE@OU hosted an informational workshop about applying for this fellowship. During this event, the Vice Provost for Research discussed how to approach grant writing for a general audience. WISE@OU provided practical suggestions, using recent successful STEM applications as examples of how to apply for the award. Peer review of applications was also offered. (Attendance = 22)