Program for Women in Science and Engineering

ANNUAL REPORT
2014-2015

2015 Study Abroad: Madrid, Spain
www.wise.iastate.edu
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Program for Women in Science and Engineering ANNUAL REPORT 2014-15

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In 2011-2012, WiSE developed and began implementation of a new strategic plan. This new plan builds upon the successes realized in the previous plans and incorporates feedback received through the program review process. Below are some highlights on the progress we have made on our priorities in the last year:

1. **Maintain the high quality and effectiveness of WiSE programs.**
   - WiSE enrolled the largest number of students in the WiSE Learning Communities while maintaining its high retention rates to STEM (see p. 6).
   - Conducted program evaluations, focus groups, and assessments to ensure outcomes were achieved.

2. **Increase student success by focusing on the needs of undergraduate women pursuing STEM degrees during their first two years at Iowa State.**
   - Piloted a new program: Community Leadership and Public Service (CL PS 270) with Leadership ISU for over 60 first-year women in STEM majors.
   - Created more leadership opportunities for students through the Leadership ISU initiative and SWE University program.
   - Utilized Map-works data to triage high risk students and address the top five issues for students in WiSE learning communities including homesickness, test anxiety, course difficulty, peer interactions, and financial literacy.

3. **Engage and address the needs of an increasingly diverse population of students in WiSE outreach programs.**
   - Evaluated the future of outreach programming offered by the Program for Women in Science and Engineering.
   - Piloted a new recruitment program for women in Engineering in partnership with the SWE student organization and the College of Engineering.
   - Added profiles and highlighted women of diverse backgrounds on the WiSE website as well in all of the publications.

4. **Raise awareness, disseminate knowledge, and engage others in support of women in STEM.**
   - Served on the Iowa State K-12 Working Group through 4H/Extension.
   - Developed a corporate and individual engagement plan and marketing tool for the ISU Foundation.
   - Engaged 1,567 WiSE alumnae through a Foundation mailing encouraging individuals to become involved.
   - SWE University was nominated by Provost Wickert for the Student Activities Center Diversity Award. Resubmitted NSF Proposal (service-learning for WiSE LC students) with Cinzia Cervato (GE AT), Heather Bolles (MATH), and Jane Rongerude (C R P) and received a Miller Faculty Fellow Award from the Provost for $11,000 for the same project: A STEM Neighborhood.
   - Served on the College of Engineering Diversity Committee which successfully launched a climate survey to all undergraduate students in the College of Engineering and collaborated with the Department of ECpE on a qualitative climate study of women in the department.
   - Served on the Transfer, Sophomore, and Leadership Initiatives subcommittees of the Student Success Collaborative.

5. **Provide leadership to transform cultures and support the success of women in STEM.**
   - Lora Leigh Chrystal served on the Governor's STEM Teacher Award review committee, assisted with coordinating a visit with the Lt. Governor during Women's History month, reviewed the Writing Women Back into History Contest for 6-9th graders and presented WiSE awards with Governor Branstad.
   - Lora Leigh Chrystal served as the 2015 Women in Engineering ProActive Network (WEPAN) National Forum Co-Chair with Dr. Jennifer Groh, Women in Engineering, Purdue University.
   - Lora Leigh Chrystal served as the Chair of the Women's Leadership Consortium, Iowa State University where she initiated a needs assessment for leadership among faculty, staff (P&S and Merit), and post-docs.
CONNECT WITH WiSE

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Julia Collett, First-year Programs Graduate Assistant
Emma Benson, Transition Programs Graduate Assistant
Carly Hughes, First-year Programs Coordinator
Erin Jackson, Career Conference Undergraduate Assistant
Jackie Mesenbrink, Undergraduate Office Assistant
Stephanie Hernandez, Undergraduate Office Assistant
Rachael Barnes, Student Role Model Undergraduate Assistant
Elizabeth Veldbloom, Student Role Model Undergraduate Assistant
Jen Kuenstling, Student Role Model Undergraduate Kit Assistant

WiSE Advisory Board Members
Gayle Keyes, John Deere and Advisory Board President 2014-15
LeQuetia Ancar, College of Engineering
Scott Bowman, Advisory Board President, KJWW Engineering Consultants
Alison Brooks, Undergraduate Student – Food Science
Veronica Bryant, Cargill
Karen Dau, Undergraduate Student – Chemical Engineering
Barb Hunt, Vermeer
Jennifer Lillo, Undergraduate Student – Global Resource Systems
Glenna Lovig, Undergraduate Student – Civil Engineering
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Laura Phillips, BASF
Linda Powell, Guthrie Center Community Schools
Tabetha Rabenberg, Prairie Ridge Middle School
Kathy Rogotzke, North Iowa Community College
Jennifer Serra, Rockwell Collins
Elizabeth Shroyer, Undergraduate Student – Mechanical Engineering
Pam St. John, TPI retired
Donna Van Pelt, ISU Foundation

Program for Women in Science and Engineering Annual Report
Although we met all of the FY15 goals we set forth as a Program as well as sustaining excellent outreach, recruitment, and retention programs, unexpected staffing changes gave us the opportunity to explore the future of WiSE as we prepare to celebrate our 30th anniversary. As a result we took some time this spring to gather input from students, faculty, staff, K-12 educators, and our advisory board to make programmatic and staffing decisions based on the results. While this was not a specific goal set out in FY15, this was the most valuable accomplishment of the year. I am also very proud of how the WiSE staff embraced the opportunity to reflect on past successes, examine programmatic goals, and develop a plan that will allow WiSE to meet the needs of a growing community of STEM women at Iowa State.

Developed a student-centered environment with new marketing and publicity for the Program for Women in Science and Engineering (WiSE)

In FY15 we revamped some programmatic elements and focused on enhancing the student experience. Examples of these efforts include:

- A warmer atmosphere for the WiSE Office with spaces for students to sit and study, storage for Student Role Model materials, Graduate Student workspaces, and a new conference room environment to welcome prospective students and their families.
- Updated messaging about the programs and services we provide and how students can step through WiSE programs from pre-college to graduation.
- New acronym and icon for our social media/public image – something students connect to and recognize immediately.
- Provided additional opportunities for students to engage and receive support from WiSE beyond our traditional learning communities (e.g., CL PS 270, workshops, lunch and learns).
- New marketing materials, including a pamphlet for the ISU Foundation.

Developing Internal Partnerships

- Our undergraduate programs connected with the Catt Center and the Leadership Studies Program to develop a WiSE cluster of the CL PS 270 Leadership Course. In its pilot year, over 60 first-year STEM students enrolled in the program.
- WiSE and the College of Engineering collaborated on a “reboot” of the long-standing SWE Sleepover which historically hosted 25-30 confirmed engineering seniors. The College of Engineering provided all funding for the program and a ¼-time Graduate Assistant position to coordinate the program within the WiSE office. Over 80 students who had not committed to ISU or Engineering applied to the program and 60 accepted.

Future Direction of Outreach

In FY15 we had set a goal to develop an online registration system for the Taking the Road Less Traveled Career Conference and implement a new opportunity for high school juniors and seniors in engineering. Both goals were accomplished. Due to staff departure, we re-examined the future of outreach in WiSE. As a result of discussions and feedback from a wide variety of stakeholders, internal and external to the institution, we took a comprehensive look at the two signature outreach programs within WiSE: Taking the Road Less Traveled and the Student Role Model Program.

Engaging with Others

In addition to collaborating internally, we set a goal of exploring and developing new partnerships to provide funding and student engagement opportunities. Highlights include:

- Corporate funding proposals: Alliant Energy, General Program Support (Funded - $5,000); Motorola, Student Role Model Program & Kit Development ($25,000 requested – not funded); P&G Grant, Leadership & Learning (Funded – $10,000); John Deere, Study Abroad Short Support (Funded-$10,000); New Grant to support 30th Anniversary Outreach Event, (Funded-$10,000).
- Internal/External Grant Opportunities: Women’s Enrichment Fund, Technology Grant ($3,500 – funded); Collaborated on 2 submissions for FY16; Miller Faculty Fellowship Award; Resubmitted NSF Proposal “A STEM neighborhood”, letter to WiSE Alumnae via the Foundation for general program support.

Lora Leigh Chrystal
Director, Program for Women in Science and Engineering
STEM Enrollment by Gender & Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Fall 2010</th>
<th>Fall 2011</th>
<th>Fall 2012</th>
<th>Fall 2013</th>
<th>Fall 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Female</td>
<td>1,036</td>
<td>1,095</td>
<td>1,188</td>
<td>1,310</td>
<td>1,280</td>
</tr>
<tr>
<td>Freshman Male</td>
<td>2,026</td>
<td>2,223</td>
<td>2,381</td>
<td>2,644</td>
<td>2,666</td>
</tr>
<tr>
<td>Sophomore Female</td>
<td>846</td>
<td>868</td>
<td>970</td>
<td>1,093</td>
<td>1,154</td>
</tr>
<tr>
<td>Sophomore Male</td>
<td>1,639</td>
<td>1,741</td>
<td>1,912</td>
<td>2,055</td>
<td>2,200</td>
</tr>
<tr>
<td>Junior Female</td>
<td>868</td>
<td>941</td>
<td>956</td>
<td>1,097</td>
<td>1,178</td>
</tr>
<tr>
<td>Junior Male</td>
<td>1,741</td>
<td>1,822</td>
<td>1,975</td>
<td>2,208</td>
<td>2,339</td>
</tr>
<tr>
<td>Senior Female</td>
<td>1,110</td>
<td>1,206</td>
<td>1,282</td>
<td>1,409</td>
<td>1,453</td>
</tr>
<tr>
<td>Senior Male</td>
<td>2,177</td>
<td>2,353</td>
<td>2,628</td>
<td>2,837</td>
<td>3,083</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>11,443</td>
<td>12,249</td>
<td>13,292</td>
<td>14,655</td>
<td>15,353</td>
</tr>
<tr>
<td>Total Male Enrollment</td>
<td>7,583</td>
<td>8,139</td>
<td>8,896</td>
<td>9,744</td>
<td>10,288</td>
</tr>
<tr>
<td>Total Female Enrollment</td>
<td>3,860</td>
<td>4,110</td>
<td>4,396</td>
<td>4,911</td>
<td>5,065</td>
</tr>
<tr>
<td>Percentage Female</td>
<td>33.7%</td>
<td>33.6%</td>
<td>33.1%</td>
<td>33.5%</td>
<td>33.0%</td>
</tr>
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WiSE Signature Program Participation

<table>
<thead>
<tr>
<th>Year</th>
<th>First-year LC</th>
<th>Second-year LC</th>
<th>TRLT</th>
<th>Student Role Models</th>
<th>Daily Students Visits</th>
<th>Scholarships Awarded</th>
<th>Academic Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY10</td>
<td>225</td>
<td>31</td>
<td>3,177</td>
<td>5,518</td>
<td>210</td>
<td>25</td>
<td>n/a</td>
</tr>
<tr>
<td>FY11</td>
<td>259</td>
<td>26</td>
<td>2,964</td>
<td>5,927</td>
<td>265</td>
<td>44</td>
<td>122</td>
</tr>
<tr>
<td>FY12</td>
<td>270</td>
<td>75</td>
<td>2,902</td>
<td>6,423</td>
<td>334</td>
<td>39</td>
<td>286</td>
</tr>
<tr>
<td>FY13</td>
<td>263</td>
<td>99</td>
<td>2,996</td>
<td>9,832</td>
<td>353</td>
<td>94</td>
<td>275</td>
</tr>
<tr>
<td>FY14</td>
<td>280</td>
<td>100</td>
<td>2,451</td>
<td>7,129</td>
<td>312</td>
<td>81</td>
<td>300</td>
</tr>
<tr>
<td>FY15</td>
<td>375</td>
<td>122</td>
<td>1,255</td>
<td>8,709</td>
<td>291</td>
<td>78</td>
<td>376</td>
</tr>
</tbody>
</table>

WiSE 1st-Year Retention to ISU Fall 2000-2013*

<table>
<thead>
<tr>
<th>WiSE</th>
<th>STEM Female</th>
<th>Other LC Female</th>
<th>STEM Male</th>
<th>Total Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of Students</td>
<td>2,631</td>
<td>6,065</td>
<td>2,542</td>
<td>11,238</td>
<td>22,046</td>
</tr>
<tr>
<td>1st-Year Retention to ISU</td>
<td>91%</td>
<td>87%</td>
<td>79%</td>
<td>86%</td>
<td>86%</td>
</tr>
<tr>
<td>1st-year GPA</td>
<td>2.98</td>
<td>2.92</td>
<td>2.69</td>
<td>2.88</td>
<td>2.72</td>
</tr>
</tbody>
</table>

Note: "# of students" is the total number of students at the start, not the total number of students retained

WiSE 1st-Year Retention to STEM Fall 2000-2013*

<table>
<thead>
<tr>
<th>WiSE</th>
<th>STEM Female</th>
<th>Other LC Female</th>
<th>STEM Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of Students</td>
<td>2,290</td>
<td>5,304</td>
<td>2,005</td>
<td>9,599</td>
</tr>
<tr>
<td>One Year Retention to STEM</td>
<td>90%</td>
<td>87%</td>
<td>77%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Note: "# of students" is the total number of students retained to this point

Graduation Rates in STEM Fall 2000-2010*

<table>
<thead>
<tr>
<th># of Stds</th>
<th>1,802</th>
<th>4,087</th>
<th>2,035</th>
<th>7,924</th>
<th>15,841</th>
<th>23,765</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-Yr Grad</td>
<td>36%</td>
<td>40%</td>
<td>25%</td>
<td>35%</td>
<td>23%</td>
<td>27%</td>
</tr>
<tr>
<td>5-yr Grad</td>
<td>62%</td>
<td>56%</td>
<td>38%</td>
<td>53%</td>
<td>51%</td>
<td>52%</td>
</tr>
<tr>
<td>6-Yr Grad</td>
<td>64%</td>
<td>57%</td>
<td>40%</td>
<td>55%</td>
<td>55%</td>
<td>55%</td>
</tr>
</tbody>
</table>

*data provided by the Office of the Registrar
WiSE Students

Floor Events

WiSE students in the Willow Residence hall enjoying a social activity led by their WiSE peer mentor. WiSE floor events occur bi-monthly and are designed to help students build community and develop other skills necessary to their transition and success during their first year at Iowa State.
Outreach Programs

In November 2014, Dr. Carol Heaverlo resigned as our Outreach Coordinator after nine years at WiSE. As a part of the restructuring of the WiSE office, a significant amount of time was taken to examine the role of outreach in the Program for Women in Science and Engineering and update our programs and services.

Student Role Model Program

Created to generate K-12 students' interest and confidence in science, technology, engineering, and mathematics (STEM) activities and career opportunities, the Student Role Model program offers exciting challenges through hands-on activities facilitated by ISU undergraduate student role models. Through this program, undergraduate students majoring in a STEM degree visit classrooms, community centers, and school fairs across the state to increase awareness and engagement in STEM.

2014-15 Student Role Model Program highlights include:
- Elizabeth Veldboom finished up in her position as the student assistant in December 2014 and graduated with her degree in math.
- In January, we hired a new student assistant, Rachael Barnes, sophomore in Civil Engineering.
- Hired and completed training for 12 new role models to accommodate an increase in visits due to restructuring TRLT.
- Provided StrengthsQuest® professional development opportunities for role models to learn how to leverage their strengths.
- Developed new leadership activity to be added to role model curriculum. Rachael worked with 2 students from the CL PS leadership course to create and facilitate the material and activities for 40-6th grade girls from Bondurant-Farrar that came to Iowa State on April 24th.

Thank you so much for sending such wonderful Iowa State students to our Metro Kids program yesterday. The Iowa State students did an excellent job presenting the workshops. The children were having fun while learning. I look forward to the next three weeks of workshops.

Rachael and Stephanie were wonderful! The best I’ve had!! They related well to the students. I also thought they were aware of which groups needed more assistance than others. The students were very impressed with them. It also motivates me as an educator to do more hands on activities because the kids love them so much!

Fantastic program!! I enjoy signing my classroom up for programs from PWSE. They are always interesting and educational. The Role Models do an amazing job with the students at every grade level.

Lauren & Emily did an awesome job! They were very energetic, knowledgeable, and approachable. The students enjoyed the visit very much and we all learned new things!

Science Explorations

Science Explorations is a student organization where Iowa State students studying in STEM fields have the opportunity to gain leadership experience by planning, organizing and facilitating a four-week after school camp for girls in grades 3-6 each semester. Members work with other clubs and organizations on campus to plan engaging lessons and activities for the girls to stimulate interest and excitement for STEM fields.

2014-15 Science Exploration highlights include:
- Participation in the WiSE student organization continues to increase.
- Student leaders attended Clubfest in the fall to recruit members; currently, there are 33 members.
- Continue to have higher numbers of girls participating in the after school camp each semester (25 girls for spring 2013).
- Science Explorations members were invited to participate in the StrengthsQuest professional development opportunity with the student role models.

WiSE Ambassador Program

The WiSE Ambassador program provides an additional way for undergraduates to engage with WiSE in a leadership role. Ambassadors are a small group of students who volunteer to assist WiSE by connecting with high school students during the recruitment process. Ambassadors have assisted staffing a WiSE booth at various events, meet prospective students, and their families during the regular daily visits. Following the prospective student visits, ambassadors send handwritten postcards or email messages to the students as a follow-up. In addition, students who are interested in returning to campus may schedule a time to visit with an ambassador with a similar major or interest as well as attend a class or visit their WiSE floor. This past year we had 10 very active Ambassadors.

Career Conferences

Taking the Road Less Traveled: A Career Conference for Girls (TRLT) began in the spring of 1987 with a one-day conference to provide the opportunity for 6th-12th grade girls to learn from professional women in STEM on the Iowa State University campus. The conference continued to expand, and WiSE has been offering six conferences per year since the mid-1990s. Due to the restructuring of the conferences, only fall conferences were offered in 2014-15. This year, 1,255 participants attended the conferences bringing the total number of participants, since program inception to 63,153.

2014-15 Career Conference highlights include:
- Significant progress has been made on the new online database for registering and creating conference sessions.
- Currently working with conference services to coordinate conference day logistics.
- Updating/expanding presenter pool to align with careers where women are truly underrepresented.
- Working on creating single point of contact for each college, company/organization, etc. to streamline building of conferences.
• Updating teacher contact list to ensure participant equity and target schools/locations that align with the WiSE mission.
• Working on adding new professional development sessions for teachers and parents on the importance of building confidence in girls; and tips or strategies to teachers for making STEM content appealing to girls.

SWE University

SWE University is a collaborative outreach event with the Society of Women Engineers student organization, College of Engineering, and WiSE. SWE University focuses on increasing the number of female engineers entering the College of Engineering at Iowa State. Over 85 high school junior and senior female students submitted application forms to attend SWE U. and 60 students were admitted to the program. During the two-day experience, SWE U. participants explored campus, learned about each engineering discipline, connected with current students, met other SWE U participants, and stayed overnight in an Iowa State residence hall. The event concluded with a dinner and banquet in which SWE U. participants and their parents had the opportunity to visit with engineering faculty and staff. Fifty three students attended SWE University, and 91% of students partook in an assessment survey evaluating their experience at SWE University. One hundred percent of SWE U. students agreed with the statements, “Attending SWE University increased my interest in Engineering” and “Attending SWE University has encouraged me to apply to Iowa State University.” Furthermore, 89% agreed that “Because of SWE University, I am planning on majoring in Engineering.” These results demonstrate the impact of SWE University for participants and the College of Engineering, in terms of both promoting diversity and increasing overall enrollment.

FY16 Outreach Goals

• Complete process of restructuring TRLT Career Conferences and evaluate changes.
• Provide increased professional development opportunities for outreach student leaders.
• Continue Role Model series visits and strategic marketing of SRM program (with a focus on meeting the needs of 6th and 7th grade students).
• Creation of marketing materials (displays and brochures) for Student Role Model Program and Science Explorations.

Conference Feedback from Educators:

“[I] look forward to this conference each school year. It’s a great experience for my students. Excellent job!”

“Always an awesome day! Very well organized!”

Conference Feedback from Participants:

“The conference was inspiring. I was aware of the opportunities waiting for me and it helped me pick my career interests.”

“It really expanded my options in physics and engineering.”

“I thought it was extremely fun. I hope to come again soon.”

“I really enjoyed this conference, and it helped me to understand what I would like to do for my future career.”
WiSE Learning Communities

The Women in Science and Engineering (WiSE) Learning Communities offer living and learning opportunities for women majoring in science, technology, engineering, and math (STEM). WiSE Learning Communities began in FY96 with 52 first-year students and has grown to 375 first-year students, with 122 students participating in the Sophomore Success Seminar and/or participating in the Sophomore Success Learning Community, as well as 30 transfer students participating in the Transfer Learning Community and/or living in Frederiksen Court apartments.

First-Year Learning Communities

WiSE works with the Department of Residence to coordinate thirteen first-year residential learning communities in seven residence halls across campus. The first-year learning community has grown exponentially from the initial 52 first-year students in 1995 to 375 in 2014-15. In order to meet the increasing demand, the Department of Residence continues to increase the number of spaces allocated to WiSE first-year learning communities. Each WiSE floor is comprised of twenty-two to twenty-five women in STEM majors and is led by a peer mentor. Peer mentors are upper-division STEM students who help first-year students transition to college. Peer mentors play a vital role in the planning and implementation of programs and activities for their mentees and also refer them to applicable campus resources. WiSE students consistently provide positive feedback about their peer mentors at end of the year evaluations.

Each year, WiSE sponsors six course clustered “learning teams” for 126 students within the first-year learning community. These six teams include a combination of Calculus I, Calculus II, General Chemistry, Advanced Chemistry, Biology, Physics, and Labs. By taking courses together, WiSE students are able to form study groups, meet other members in the learning community, and reduce feelings of isolation in large lecture classes.

Transitions Learning Communities

In response to surveys and data, WiSE introduced a learning community for sophomore students in 2004 as well as a separate learning community for transfer students in 2005. Students participating in “transition” learning communities focus on personal, professional, and leadership development while continuing to create community with other women in STEM. WiSE offers a one-credit success seminar each fall that helps students develop the skills necessary to be prepared for leadership roles on campus as well as internships. Additionally, students participate in a variety of career programs throughout the year including job shadows, mock interviews, career fair prep, resume workshops, and other networking events. There are five peer mentors in the transition learning communities and they meet with their mentees both individually and during larger group programs and events.

Multicultural (M-STEM) Learning Community

Through collaboration with IINSPIRE LSAMP, WiSE will be piloting a Multicultural Learning Community (M-STEM) in the fall of 2015 for STEM (science, technology, engineering, and math) transfer students. This new program creates an intersection for building community and exploring gender, race, and STEM identity with underrepresented STEM transfer students. The M-STEM learning community is open to all male and female multicultural transfer students in a STEM major who are new to Iowa State University and interested in connecting with other multicultural students in STEM. Students will take part in a seminar course designed to assist with career goals and paths in STEM. M-STEM learning community participants will also have a peer mentor to help them transition to Iowa State as well as access to tutoring, and introductions to multicultural departments and organizations on campus.

Developing Leaders

Leadership development is an important component of the WiSE learning community experience. By offering a variety of programs and workshop experiences focused on professional, academic, and leadership, students develop the skills to excel in college and beyond graduation. Additionally, WiSE provides over 100 leadership opportunities annually through the Student Role Model, Ambassador and Peer Mentoring Programs.

StrengthsQuest™ Retreats

The WiSE program is committed to students’ success and we are using Gallup’s StrengthsQuest™ to enhance their experience at Iowa State University. StrengthsQuest™ can help students understand how to apply their talents to the choices they make in their academic, career and personal lives. For the past two years, WiSE has hosted two fall retreats for first-year students. Second-year and transfer students continue their strengths journey through their individual learning communities.

Leadership Conference

The signature leadership program is the annual spring leadership conference. The WiSE leadership conference provides a full day of activities for 60 student participants. Throughout the day, students engage in sessions such as: micro-aggressions and micro-inequities, gender differences, supporting female peers, the impostor syndrome, and becoming confident leaders. Additionally, students participate in panels and networking activities with industry professionals and ISU Faculty. Professionals include WiSE Advisory Board members and corporate partners who share their experiences and give helpful career suggestions and other tips on how to be successful leaders in their respective fields.

Community Leadership & Public Service (270)

An introductory leadership course to provide student leaders with an understanding of effective leadership practices and information on engagement opportunities and resources on campus. Students are expected to connect course content to their own lives and to become engaged in campus activities where they can apply what they learn. In the fall of 2014, WiSE offered six sections of CL PS 270 for WiSE first-year students led by upper-division WiSE facilitators.

Academic Support

Tutoring continues to be a significant way of providing academic support for our students. Together with the College of Engineering, WiSE offered free tutoring to over 375 students representing over 20 majors. Students were surveyed during fall semester 2014 in order to learn about the tutoring process and make improvements.
2014-15 Academic Support highlights include:

- 83% of students surveyed were either satisfied or very satisfied with their experience getting a tutor
- During Fall semester 2014, the Academic Success Center hired additional staff (Josh Mitchell) to help recruit tutors and coordinate the tutor program
- Most dissatisfaction had to do with not being paired with a tutor quickly (over 2 weeks) or not at all due to the shortage of tutors

**Study Abroad with WiSE: Madrid, Spain**

Since spring 2013, WiSE has provided women studying in STEM fields the opportunity to travel abroad during spring break and participate in a 3-credit course where they analyze issues facing women in STEM internationally. While abroad, participants are able to tour science and engineering facilities, meet students and professionals, and engage in the culture of the destination.

2014-15 Study Abroad highlights include:

- The completion of another successful class and trip; 14 students participated. Kelli Campa (WiSE GA helped plan and facilitate)
- Based on feedback from 2014 participants the course was increased from 2 to 3 credits to satisfy the international perspectives requirements
- Added several new visits, including Universidad Politecnica (Technical and Engineering school); John Deere training center in Parla; 2 pharmaceutical companies; and the Museum of Natural Sciences
- Visited several of the original locations: students’ favorites are day trips to Segovia and Toledo, flamenco lessons, and visiting the olive farm and home of Juan Carlos
- Thanks to a generous donation from John Deere, we were able to purchase tickets so all students could attend a Real Madrid futbol game

**Professional Development**

WiSE provides women with the tools necessary to thrive in industry and academia through hosting graduate school panels, networking events, and a variety of workshops to enhance resumes, interviewing skills, and career fair preparation. 2014-15 job shadows and visits included: Vermeer Corporation, Emerson Process Management, Workiva, Henry Doorly Zoo, and the ISU Veterinary School. John Deere also hosted a speed mentoring event with their Women in Operations Group.

**WiSE Learning Community**

**2014-15 First-year highlights include:**

- **Orientation:** WiSE welcomed over 300 women in STEM before school started. The orientation provided women with the opportunity to get to know their peer mentor, their learning community floor mates, and the ability to find out what services the WISE office provides including tutoring, study abroad options, leadership, and professional development opportunities.
- **Friendship event:** WiSE provided the opportunity for students in the first-year learning community to get to know each other better through a friendship building scavenger hunt across campus. They were able to learn more about resources on campus and make new friends.
- **Inclusive language seminar:** WiSE was able to bring an inclusive language speaker who discussed the importance of using the correct language in every day conversation. The students were able to participate in diversity and equity activities as well, such as a diversity circle activity and reflection activity of what diversity, equity, and inclusivity meant to them.
- **Philanthropy event:** WiSE gave back in November through crafting and card writing for Dance Marathon and the veteran’s home in Fort Dodge. WiSE was able to write over 100 cards for the veteran’s home! WiSE also spent the month collecting pop tabs for the Ronald McDonald House and ended up collecting over a thousand pop tabs by the end of the month!
- **Destress December event:** WiSE provided the opportunity for students to destress before finals by having a yoga event.
- **Janspirary event:** Janspirary helped WiSE students get ready for the career fair by providing a panel of students who have had internship experience in the past as well as helpful tips for what not to wear at the career fair.
- **Fit Feb:** WiSE came together for a fitness celebration. WiSE was able to hold a private Zumba session and helped by donating efforts to the Body Image and Eating Disorder Awareness club with their life sized Barbie event.
- **TEDtalk event:** WiSE was able to showcase TEDtalks that had to do with diversity and women’s empowerment to a group of WiSE women.
- **Impostor Syndrome Workshop:** Women across the learning community came to this event where they learned about the imposter syndrome, how it impacts them, and ways to navigate it when it lowers our confidence. Participants left with a tangible tool kit of positive affirmations to reflect on when feeling like they cannot/ will not succeed in STEM. Activities included decorating gratitude journals, creating life goals, and writing reminders of success. Women left feeling uplifted and confident.
A new initiative undertaken in this past year was to conduct a needs assessment of undergraduate students enrolled in STEM majors at Iowa State. In a study conducted by the Research Institute for Studies in Education (RISE), a total of 670 students responded to the survey about their awareness and participation in WiSE signature programs. Below are some preliminary changes to the Undergraduate Programs based on the results:

1. Awareness & Communication
   • Develop communication plan for consistent student contact through emails, social media, and monthly e-wise newsletters.
   • Develop marketing materials to make WiSE more visible on campus.
   • Fall “Welcome” event for all students, staff, faculty.
   • Educate students on the purpose of WiSE learning communities versus WiSE programs that are inclusive of all female STEM undergraduate students.
   • Recruit transfer students to WiSE LC’s (Admissions, Community Colleges).

2. Learning Communities: First-Year, Second-Year and Transfer
   Increase staff:
   • Hired full-time staff member to coordinate growing first-year program in June.
   • Hired PhD student for FY16 with significant teaching experience to redevelop syllabi.
   • Enhance training and structure for learning community peer mentors including job expectations and professional development objectives.
   • Provide less frequent yet intentional and diverse programming.
   • Institute formal study groups with tutors in residence halls for high demand courses.

3. Upper-Division Student Programs
   • Initiate focus groups with students and industry professionals to determine the needs to facilitate the transition of undergraduate students into the workforce.

4. Leadership Development/Leadership Studies Program
   • Build content for one-credit WiSE seminars associated with the Leadership Studies Program.
   • Collaborate with the Leadership Studies Program faculty to create a new 8-week one credit seminar for first-year learning community students in FY16.

5. Career Development/Corporate Engagement
   • Engage with corporate partners to host networking events and career workshops.
   • Increase and diversify job shadow opportunities for students.

6. Engaging Men/Other Underrepresented Populations
   • Partner with IINSPIRE LSAMP to pilot Multicultural Learning Community for underrepresented male and female transfer students in STEM Majors (M-STEM).
   • Hired male staff (Graduate Assistant and Peer Mentor *both former transfer students) for FY16.
   • Collaborate with Multicultural Student Affairs (MSA), Multicultural Liaison Officers (MLO) and external campus partners to address climate survey results.
SWE University
March 6-7, 2015
SWE University, formerly known as SWE Sleepover, is a recruitment event for female high school junior and senior students who may be interested in exploring engineering at Iowa State University. The College of Engineering, Society of Women Engineers, and the Program for Women in Science and Engineering have partnered on this event to recruit more female students to engineering. Over 85 prospective students submitted application forms to attend SWE U. and 60 students were admitted to the program. During the two-day experience, SWE U. participants explored campus, learned about each engineering discipline, connected with current students, met other SWE U participants, and stayed overnight in an Iowa State residence hall. The event concluded with a dinner and banquet where SWE U. participants and their parents had the opportunity to visit with engineering faculty and staff.
Leadership at all levels...

Student Role Model & WiSE Community Leadership and Policy Studies Partnership
Bondurant-Farrar 6th and 7th grade students explore leadership through hands-on activities with our Student Role Model Coordinator, Rachael Barnes and Leadership Peer Leader, Karen Dau.
In FY16 the Program for Women in Science and Engineering will be focused on the following priorities: training new staff, implementing the assessment and evaluation in FY15 and celebrating its 30th Anniversary. Below are the priorities for next year:

1. Training Staff. Over the past year, WiSE had the opportunity to restructure its staff to best meet the needs of the program. With a growing student population and increased demand on programs and services by K-12 positions and undergraduate students, WiSE made the following changes:
   - Eliminated two graduate student positions supporting the first-year programs and created a new P&SS Staff position focused on the first-year programs.
   - Created a 3/4-time Program Assistant position to support the WiSE office and programs.
   - Partnered with the College of Engineering to create a 1/2-time Graduate Assistant position to support WiSE Outreach programs.

2. Implementing Assessment and Evaluation. Based on feedback from our Undergraduate Needs Assessment, TRLT evaluation and feedback, Student Role Model Assessment, and Advisory Board input, WiSE will put into action the results from this work. Changes will include:
   - A restructured Taking the Road Less Traveled career conference and online registration system.
   - Communication plan to increase awareness of WiSE programs among undergraduate students.
   - New programmatic elements for undergraduate students to engage with WiSE beyond the Learning Communities.
   - Increased engagement of the Student Role Models.

3. Celebrating 30 Years. In January 2016, the Program for Women in Science and Engineering will begin to celebrate its 30th Anniversary. WiSE Staff and Advisory Board Members have created a tentative list of activities and events with the goal of bringing awareness to the accomplishments of WiSE over the past thirty years.
   - Video of individuals wishing WiSE happy 30th birthday with alumnae, faculty, staff, students and partners participation in addition to a social media campaign.
   - The Iowa State Foundation will help bring awareness to events via an electronic communication plan.
   - Special logo for the year for use on banners, website, giveaways.
   - Expand Leadership conference as the kickoff for the anniversary.
   - Invite a national speaker with broad appeal to our constituents.
   - Series of articles on programs in Des Moines register.
   - Student competition - Trivia Night and invite our alumnae, corporate partners, faculty and staff to compete in teams.
   - Outdoor Fair/STEM Fest
   - Annual football tailgate with broad invitations
   - Finale - Banquet with Awards

We are very proud of our accomplishments over the past year and look forward to another successful year. Please consider joining us in our celebration of WiSE. Look for updates and announcements at www.wise.iastate.edu/30years.html

### Financial Summary

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**Total Revenues = 756,779**

### Expenditures

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<td>Leadership Initiatives</td>
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**Total Expenditures = 756,779**
WISE has seen growth in the enrollment and graduation of female STEM students from Iowa State since the program began in 1986. For the sixth straight year, WISE has seen record enrollment of undergraduate women in STEM, with 5065 female STEM students. The percentage of undergraduate STEM students who were female maintained at 33%. The charts show the history of enrollment and percentage of women in STEM over WISE’s lifetime. Additional charts with college specific data and information about degrees awarded in STEM are available at www.wise.iastate.edu/data.html.
WiSE Women

Social Media
The WiSE office has had great success with our social media outlets in the past two years. We post fun STEM facts, keep our students informed about opportunities, and connect students to both our office and the greater Iowa State community. Using the #WeAreWiSE to unite our programs this year, the WiSE office has been able to break the 1000 mark on likes on Facebook and 500 mark with followers on Twitter. We recently launched an Instagram account during our study abroad spring break trip to Madrid, Spain too! Like Program for Women and Science and Engineering on Facebook, follow @WiSE_ISU on Twitter, and follow @WiSE_ISU on Instagram to keep updated with our WiSE happenings!
2014-15 WiSE Events

(Left Page - left to right)
Row 1: WiSE Floor Events
Row 2: Friendship Night with Second-years and Career Fair with Advisory Board member Veronica Bryant, Cargill
Row 3: StrengthsQuest™ Retreat and Science Explorations Activity
Row 4: Football Tailgate and End of the Year Celebration
Row 1: Job Shadow at Vermeer and Job Shadow at Workiva
Row 2: SWE University Activity and Taking the Road Less Traveled
Row 3: Study Abroad Group in John Deere Ankeny and WiSE Orientation
Row 4: WiSE Transitions Laser Tag Outing and WiSE First-year Peer Mentor Training
WiSE STAFF UPDATES

Sarah DuBois

In June, Sarah DuBois joined the WiSE Staff as our Program Assistant. Sarah has a degree in Sociology from the University of Dubuque and worked at Ohio Wesleyan University prior to moving to Ames, IA with her family. Her previous experience as Director of Membership and Events at the Ames Chamber of Commerce will be an asset to our programs. As Program Assistant, Sarah will serve as the initial program contact for prospective students/families, current students, donors, K-12 administrators, and internal partners.

In addition, Sarah will be responsible for coordinating all personnel and financial transactions. She will provide oversight for the general office management and coordinate all external and internal communications, including development of content for website, bulletin boards, electronic newsletters, and letters to donors. Sarah will also have oversight for coordinating prospective student visits, the WiSE tutoring program and volunteers for WiSE outreach and undergraduate programs.

Carly Hughes

In June, Carly Hughes joined the WiSE Staff as our First-Year Programs Coordinator. Her previous experience includes serving as an AmeriCorps national service member and a Master’s degree in Education with an emphasis in Student Affairs. Carly served as a graduate assistant in the WiSE office in FY15 and we are excited to have her expertise in student success and retention.

As the First-year Programs Coordinator, Carly will sustain our WiSE Learning Communities which provides students with programming and resources that support a successful transition to college in STEM fields. Her responsibilities include supervising over fourteen undergraduate peer mentors, developing policies and procedures for the program which serves over 400 students across four colleges and almost fifty majors.

Janice Crow

In April, Janice Crow was promoted to serve as our Outreach Coordinator. Janice joined the Program for Women in Science and Engineering in March 2012 and had taken on increasing levels of responsibility related to outreach and undergraduate programs over the past three years. For example, Janice worked with the Information Technology Services to develop a new database for the Student Role Model Program that increases efficiency of the program. Over the past two years, Janice served as our Study Abroad Coordinator and we are very excited that she has taken over the coordination of our outreach activities.

In her new role Janice will maintain her responsibilities with the coordination of the Study Abroad Program and will now coordinate and assess the Program for Women in Science and Engineering’s signature K-12 outreach programs including Taking the Road Less Traveled: A Career Conference for Girls and the Student Role Model program. In order to support these efforts, she will be developing and maintaining partnerships with internal and external organizations.

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AWARDS & SPONSORS

The following individuals received recognition for their excellent leadership and service in the 2014-15 academic year:

Katie Vincent  
Exemplary Peer Mentor of the Year, Learning Communities

Kelli Campa  
Exemplary Supervisor of the Year, Learning Communities

Julia Collett  
Exemplary Supervisor of the Year, Learning Communities

Lora Leigh Chrystal  
Learning Communities Institute Service Award, Learning Communities

Carol Heaverlo  
Women Impacting ISU, Calendar Honoree

Andrea Dvorak  
Women Impacting ISU, Calendar Honoree

Leadership ISU  
Learning Communities Institute Partner Award, Learning Communities

Thank you to our corporate and individual sponsors who make all of our programs and services possible. Our 2014-15 corporate sponsors include:

Saying Goodbye...  
Dr. Carol Heaverlo, Outreach Coordinator

Carol Heaverlo accepted a position as the Professional Development Director, Extension and Outreach. We thank her for her contribution to the Program for Women in Science and Engineering mission over the past nine years!
The Program for Women in Science and Engineering will enrich science, technology, engineering and math fields by engaging more women, creating the opportunity for a more competitive and diverse state, national, and global workforce.