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2012-13 Staff
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PWSE Advisory Board Members
Scott Bowman, Advisory Board President, KJWW Engineering Consultants
LeQuetia Ancar, College of Engineering
Colleen Becker, Rockwell Collins International
Elizabeth Chambers, Undergraduate Student – Industrial Engineering
Brittany Duffy, Undergraduate Student – Electrical Engineering
Katie Gibson, Undergraduate Student – Animal/Dairy Science
Mary Hallman, Undergraduate Student – Kinesiology
Carol Hendrick, Pioneer Hi-Bred International
Gayle Keyes, John Deere
Janine McCormick, Emerson Process Management
Jennifer Owens, College of Liberal Arts and Sciences
Linda Powell, Guthrie Center Community Schools
Ann Smiley-Oyen, College of Human Sciences
Pam St. John, TPI
Julia Weinberg, Cargill
Martin Wesemann, Pella

Services Provided
K-12 and Community College Outreach
Taking the Road Less Traveled Career Conferences
Student Role Models
Scholarships
Individual group visits with prospective students
Success/Retention
WiSE Learning Communities
Sophomore Success Seminar
Scholarships
Support for student organizations
Academic support
Leadership development programming
Study Abroad Short Program
Student Ambassador Program

Resource to Others
Leadership on committees for other STEM or gender issues on campus and statewide
Involvement with other programs/grants on campus: NSF Advance, Women’s Leadership Consortium, Learning Communities, NSF SEEC Grant with the College of Engineering, Project Lead the Way, etc.
Support of STEM department efforts to recruit and retain female students and to address current cultural issues.

Corporate Sponsors
Boeing Co.
Emerson Process Management
John Deere Foundation
Rockwell Collins
Reflections from the Out-Going Director

Since I officially left PWSE at the end of this past year, for a full-time position in the Office of the Senior Vice President and Provost, I’d like to reflect back on my time as director, looking back to (2001-2002) when I started up until this year, highlighting some of the changes the program has experienced.

No longer with us.

• Probably the most difficult loss we have experienced was the discontinuance of the PWSE Summer Intern program. In 2001-2002 we had 16 high school and 20 undergraduate students participating in a multi-week summer research intern program. As budgets decreased and demand for other programs increased, the PWSE staff and advisory board made the difficult decision to discontinue this successful program a few years ago.

• We have seen a decline in the number of corporate sponsors, based on a shift to use of Greater University Funds for Excellence, a presidential decision many years ago.

Still in place and achieving their goals.

• The Taking the Road Less Traveled Career Conferences continue to be offered six times a year, just like in 2002. However, in 2002 the six conferences handled the student demand. In 2012-2013 all six conferences filled up and several hundred students were turned away due to capacity issues.

• The WISE first-year learning community was 12 floors of 15-20 students each in fall 2001, compared to 12 floors with 22-25 students per floor in fall 2012.

• Course-based learning team participation has doubled since fall 2001.

• Student role model program is growing stronger, reaching 10,247 students this past year compared to 3500 students in 2001-2002.

• Scholarships awarded grew ten-fold from $11,000 in fall 2001 to $117,000 this past year.

• Academic support through tutoring services has grown from serving 161 students to 275 students.

• Undergraduate enrollment of women in STEM has grown from 3135 to 4426.


• Sophomore learning community activities and academic course

• Transfer learning community

• Study abroad experience in Madrid

• PWSE ambassador program

• Our physical space: Moving from outdated space in Lab of Mechanics and Pearson into larger, remodeled space in Carver Hall.

• Staffing configuration, with a full-time outreach coordinator and graduate assistants for learning communities

• Increased emphasis on assessment, such as the new OWLS for learning communities

• Increased collaborations and support of gender STEM activities of others (e.g. working with Project Lead the Way, SP@ISU for faculty across campus, faculty grant support, etc.)

• Increased national leadership on the issue of women in STEM (Karen two terms on WEPAN board, Carol serving as conference chair two years ago, etc.)

• The number of prospective students and families we see has grown from ‘an occasional student with their parent’ to ‘seeing multiple families four to five days a week’.

• We have undergone two external program reviews and developed two strategic plans.

It is always nice to think that you have left something better than when you took it over. Mary Ann Evans, as the first director did an amazing job of getting the program up and running. I feel we have seen significant growth and impact over the past 11 years. PWSE is in a good place right now, and I look forward to seeing how the program evolves and grows under the leadership of Lora Leigh Chrystal, long time PWSE staff member and new Director.

It has been a privilege to serve as the director for the past 11 years, working with great staff, volunteers, and colleagues. I wish all of you, and the program, success in the future.

Karen Zunkel, PhD
Director

2012–13 by the Numbers....

• 4426 undergraduate women enrolled in STEM fields at Iowa State

• 33.2% of the undergraduates enrolled in STEM fields at ISU were women

• 10,247 K-12 students reached by Student Role Model program (a 57% increase over the previous year), with the addition of 61 new teachers and 52 new schools

• 2996 registrants for Taking the Road Less Traveled Career Conferences for 6-12 grade girls, parents, educators

• 263 first-year students lived on WiSE Learning Community floors in ISU Residence Halls

• 13,247 = total number of individuals reached by outreach programming during the year!! That is an increase of 8% from last year (12,205) and a 33% increase (from 8891) during the last two academic years.

• 50 students participated in the Sophomore Success Course (U ST 201) with over 44 more participating in second-year activities, including job shadowing, volunteering, and networking with professionals

• $117,000 in scholarships for women in science and engineering - an increase of $78,000 from FY12

• Over one-third of STEM bachelor degrees awarded at ISU in past year awarded to women

• 275 students were awarded funding for tutors through PWSE and the College of Engineering

• 1,174 average number of unique visitors to the PWSE website each month for the fiscal year (an increase of 144 visits per month from FY12)

• 12 students participated in PWSE’s first Study Abroad Short program in Madrid, Spain and earned two International Studies credits exploring issues facing women in STEM internationally

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Outreach Partnerships

PWSE continues to collaborate with programs across the state to offer experiential activities to stimulate the interest in STEM fields among Iowa youth. Examples of program partners and resulting programs include:

- Science Center of Iowa – STEM night and Outreach Advisory Board Member
- Marshalltown Community Summer STEM program – Role models facilitating 18 hands-on STEM activities for Latina/o, ESL, elementary students during the months of June and July
- Iowa Project Lead the Way – statewide conference presentations for educators, administrators, and counselors
- Iowa Department of Natural Resources Outdoor Journey (OJ) for Girls Program – Integrating experiential science activities into their Outdoor Journey camps
- Iowa’s Peer Alliance for Gender Equity (PAGE) – Educator workshops at TRLT conferences
- Iowa Institute for Transportation – SRM curriculum
- Iowa State University Extension & Outreach Statewide 4-H, K-12 STEM Outreach
- Iowa Commission on the Status of Women - a statewide essay contest about historical women in STEM
- Technology Association of Iowa – statewide recognition of women achieving excellence in innovation in technical fields via the Women of Innovation awards program
- International Center for Professional Development – Outreach Advisory Board Member
- State Science and Technology Fair of Iowa – awards highlighting innovation and creativity
- NW Iowa Extension - Robotix train the trainer program facilitated by our Student Role Models

Expected Outcomes for Educators:
- Enhance educator awareness of STEM career opportunities
- Provide additional resources to further increase awareness and student engagement in STEM
- Encourage connection between content knowledge and real world experiences

Expected Outcomes for classroom/group participants:
- Increase interest in STEM
- Increase student engagement in STEM
- Increase confidence through interaction and communication with undergraduate, female role models pursuing STEM degrees
- Increase confidence through experiential activities
- Increase awareness of STEM career opportunities
- Reinforce the importance and relevance of science and math courses in middle school and high school
- Increase capacity for understanding the connection between curriculum and real world experience

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 program visit classrooms, community centers, and school fairs across the state to increase awareness and engagement in STEM. During the 2012-2013 academic year, the role models worked with 10,247 K-12 students from across the state. As our efforts continue to reach all regions of the state with increasingly diverse student populations, our programmatic efforts have engaged 52 new schools and organizational groups and 61 new educators this year.

There is no fee for the requesting school or organization, but the teachers are encouraged to complete a short evaluation of their experience with the ISU student role models. During the 2012-2013 academic year we will continue to reach out and partner with school districts that have high minority enrollment (e.g. Marshalltown, Tama) to offer multiple (consecutive) visits for greater potential impact.

PWSE Poster Series

Last year, in partnership with the College of Engineering and funded by the National Science Foundation SEEC project, PWSE created a poster series highlighting female professionals from across the state working in STEM fields to visually promote Iowa women in STEM. Six female STEM professionals, representing a diversity of disciplines and backgrounds, were selected and photographed by a professional photographer in their work environments. The photographs were incorporated into posters along with information about their profession and college major. The poster theme messaging incorporated concepts from the National Academies Changing the Conversation research.

During the 2012-2013 academic year, over 750 poster series were distributed to educators and corporate partners statewide! Some avenues for distribution included:

- Six Taking the Road Less Traveled Conferences
- PWSE Role Model Classroom Visits
- Statewide Project Lead the Way Conference
- ISU Extension & Outreach Professional Development and Annual Conferences
- STEM Hub Managers
- Statewide STEM Summit
- State Science Teacher’s Conference
- Science Center of Iowa
Collaborations with Admissions

PWSE continues its strong partnership with the Office of Admissions to assist in outreach/recruitment of women into STEM fields. When students and their families schedule their campus visit through Admissions, whether as part of an Experience Iowa State Day or an individual campus visit, they have an opportunity to meet with a PWSE staff member. In 2012-2013 during the standard 3:15 p.m. visit time, PWSE had a total of 353 prospective students (a total of 878 visitors including family members) request a visit from PWSE. PWSE students also staff an informational booth for students/families prior to the ‘welcome’ session on thirteen Experiencing Iowa State days and three Transfer Visit days. PWSE typically visits with 5 prospective students and their families at each of these large visit days.

In addition, the Office of Admissions sent out postcards or letters to all women who applied to Iowa State in STEM fields, letting them know about PWSE and the learning community/support available for students. PWSE also receives contact information, including email addresses, for prospective students. PWSE uses these e-mail addresses to contact students about learning communities, scholarship opportunities, etc. These methods have allowed PWSE to reach out and attract record numbers of learning community students and scholarship applicants, without PWSE having to spend funds on extra promotions/mailings.

Scholarships for New & Current Students

During FY13, 94 scholarships totaling 117,000 were awarded to female undergraduate science or engineering students through funding provided by external gifts. This brings the total amount of scholarship money awarded by PWSE to $628,815 since program inception. Scholarships awarded this past year included:

- Endowed scholarships for Janice L. Davison, Sylvia Stoesser, Laurel Ann Crowe, Diane Brandt and Charlie Wright, Jr.
- Non-endowed scholarships awarded by PWSE to support first year and returning students in STEM fields
- Twelve scholarships totaling $12,000 were awarded to Study Abroad participations from the Mary Bell Scholarship Program.

PWSE Ambassador Program

The PWSE Ambassador program provides an additional way for undergraduates to engage with PWSE in a leadership role. Ambassadors are a small group of students who volunteer to assist PWSE by connecting with high school students during the recruitment process. Ambassadors have assisted staffing the PWSE at various events, meet with 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

PWSE has been sponsoring Taking the Road Less Traveled career exploration conferences for girls in grades 6-12 each year since 1987. Historically the format of the conference included career awareness sessions in the morning with an interactive session opportunity in the afternoon. In response to consistent, overwhelming feedback from participants we have transitioned the conference structure from a predominantly lecture oriented format to a conference in which career awareness is infused in experiential STEM activities.

Six conferences were once again offered during FY12. Sessions are largely facilitated by female faculty members, women working in science, engineering, and other technical fields, and graduate and undergraduate role models. With the new conference format, presenters are also able to take students from the Memorial Union where the conference is hosted, to their labs on campus for a more in-depth experiential opportunity. In addition to our student-centered sessions, we continue to provide special sessions for parents and educators. This year 2996 participants attended the conferences. This brings the total number of participants, since program inception to 61,898.
Programs for Undergraduates

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 263 first-year students, with 99 students participating in the Sophomore Success Seminar and/or participating in the Sophomore Success Learning Community, as well as 16 transfer students participating in the Transfer Learning Community and/or living in Frederiksen Court apartments.

First-Year Learning Communities
Working in conjunction with the ISU Department of Residence, WiSE sponsors twelve first-year residential learning communities in seven residence halls across campus. In 2012-13, 263 women lived on twelve different WiSE floors. Each learning community is comprised of twenty-two to twenty-five women STEM majors that help to create a unique environment. Each learning community is led by a mentor, an upper division student in a STEM major. Peer mentors play a large role in the planning and implementation of programs and activities for their individual learning community, as well as initiatives for every member of WiSE. Members of the learning communities have the opportunity to participate in a variety of social, academic, and leadership programs. In order to meet the high demand among students, the Department of Residence continues to increase the number of spaces allocated to WiSE first-year learning communities.

During the 2012-2013 academic year, WiSE sponsored seven course clustered “learning teams” for over 110 students within the overall WiSE Learning Community. The teams include:
- Two Calculus I/General Chemistry Teams
- Two Calculus II and Chemistry Teams
- One General Biology/General Chemistry Team
- One Calculus/Chem for Engineering Team
- One General team for students participating in other learning communities

Second-Year Success Learning Communities
Through support from Alcoa, PWSE continued the learning community for our sophomore students. The Second-year Success Learning Community offered a seminar course focusing on professional and leadership development for our students. In addition, we planned a Job Shadow Program in order to better meet the needs of second-year students. A total of 99 students participated in the course (UST 201) and learning community, a 25% increase from FY12. These students participated in a series of optional events exclusively for second-year students which included:
- Attending cultural events and discussions
- Professional development luncheons on early careers and graduate school
- Networking events with faculty
- Networking events with professionals
- Resume and Mock Interview Preparation Sessions
- Job Shadow Program at Blue Bunny
- Job Shadow Program at Rockwell Collins
- Job Shadow Program at Pella
- Job Shadow Program with the Department of Natural Resources
- Job Shadow Program with Des Moines University
- Networking opportunities and development with each other through learning community events
- Volunteering events throughout the Ames community

Transfer Learning Communities
In the fall of 2005, the WiSE Learning Community expanded to include options for transfer students. Each year, the program has a small group of transfer students who choose to participate in the residential program. Utilizing the feedback from the results of our 2012 Engaging Female Community College STEM Transfer Students project, this year 16 students participated in this option. Doubling the number of students who participated in the program.

Academic Support
In addition to group study sessions for key introductory courses (such as calculus and chemistry) formed through the WiSE learning community peer mentors, PWSE, in partnership with the College of Engineering, sponsored free tutoring for 273 women participating in the WiSE Learning Communities in 2012-13.

Study Abroad with WiSE: Madrid, Spain
Through a 2011 Study Abroad Center grant, PWSE developed a 2-credit academic experience to analyze issues facing women in science and engineering here in the United States and how those issues are different/similar for women internationally. Madrid, Spain was selected due to the high percentage of women in the STEM workforce (42% in Spain, compared to 23% in the U.S.). Twelve students from the Colleges of Engineering, Human Sciences, Agriculture and Life Sciences and Liberal Arts and Sciences participated. Outcomes of the program included:
- developing a basic understanding of the geography, cultural, economic, political, educational, and social systems of Spain,
- being able to compare and contrast the experiences and issues (in higher education and in the workplace) surrounding women in STEM (science, technology, engineering, and math) disciplines in the U.S. and Spain,
- gaining an understanding of the globalization of STEM, and
- understanding the relationship and intersection of current issues in Spain and the U.S., and their impact on STEM education and careers.

While in Spain, participants experienced
- Retiro Park, Plaza de la Puerta del Sol, Royal Palace (including the Royal Pharmacy), and the Prado
- toured John Deere, Iberica and met with female engineers
- Flamenco Dancing
- Agricultural tour of a 500 year old olive farm and olive oil production facility
- Day trips to Segovia and Toledo (Aqueducts, Military museum, and Cathedral)
- Real Madrid (Soccer stadium)
- Bullfight tour
- Toured a University and met with students, faculty, administrators and staff from Electrical Engineering and Biochemistry
Developing Leaders

Because leadership development is an important component of the WiSE learning community experience, the WiSE Learning Community continued its fifth year of leadership development by integrating leadership principles into the daily activities of the learning community students. The WiSE Leadership Initiative enhanced current programming by:

- offering a variety of programs and workshop experiences focused on professional, academic, and collegiate leadership
- giving students the opportunity to develop and reflect upon their leadership skills through a service learning project
- Gallup StrengthsQuest talent indicator, a tool that identifies one’s top five strengths among a variety of 35 core strengths. The students then discussed the ways that they use their individual strengths in the classroom and how they could become a leader through emphasizing these strengths. In FY13, 226 students took the StrengthsQuest assessment and attended a training on how to utilize their strengths in both academic and professional settings.

PWSE has made programmatic efforts to have discussions with students about media literacy, self-efficacy, and their role as women in STEM. PWSE purchased the documentary MissRepresentation and educational tools in a partnership with the Margaret Sloss Women’s Center, the Carrie Chapman Catt Center for Women in Politics and Women’s and Gender Studies in FY11. The documentary focuses on the fact that “the collective message that our young women and men overwhelmingly receive is that a woman's value and power lie in her youth, beauty, and sexuality, and not in her capacity as a leader.” Programmatic efforts surrounding Miss Representation included:

- Campus-wide showing of Miss Representation
- Professional development with peer mentors and student staff
- Body image awareness week in spring 2013

Finally, PWSE invested some time creating Outcomes for Women in Leadership in STEM (OWLS) and utilizing those to guide programming for the WiSE Learning Community Programs. Outcomes were used by peer mentors to guide programming and provide accountability to the staff. Please see the last page of the annual report for more information related to the outcomes assessment we have done in the past year.

## WiSE Learning Community

### 2012-13 First-year Participants

#### College of Agriculture & Life Science

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<thead>
<tr>
<th>Field</th>
<th>Participants</th>
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<tbody>
<tr>
<td>Agriculture &amp; Life Science Explorations</td>
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<tr>
<td>Agricultural Biochemistry</td>
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<tr>
<td>Animal Science</td>
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<tr>
<td>Animal Ecology</td>
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<td>Biology</td>
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<td>Dairy Science</td>
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<td>Environmental Science</td>
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<tr>
<td>Food Science</td>
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<td>General Prevetinary Medicine</td>
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<td>Horticulture</td>
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<td>Microbiology</td>
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#### College of Engineering

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<td>Civil Engineering</td>
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<td>Computer Engineering</td>
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<td>Construction Engineering</td>
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<td>Materials Engineering</td>
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<tr>
<td>Mechanical Engineering</td>
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<td>Food Science</td>
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<td>Kinesiology</td>
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#### College of Liberal Arts & Sciences

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<td>Biology</td>
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<td>Chemistry</td>
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<td>Environmental Sciences</td>
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<td>Genetics</td>
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<td>Statistics</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>62</strong></td>
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Overall Participation: **263**
It has been a year of transition for PWSE as we said good-bye to Dr. Karen Zunkel who left us for a full-time position in the Office of the Senior Vice President and Provost and in June, after thirteen years with PWSE, I began a new adventure as PWSE’s third director. The stability in leadership has allowed PWSE to mature as the demands on our ‘signature programs’ are at an all-time high. As we look to the future, PWSE will continue to work towards our strategic plan, with the following goals for 2013-14:

1. Enhance our student centered programs: PWSE has a long tradition of ‘flagship’ programs that serve our K-16 students, but in 2013-14 we will focus on making those programs more student-centered. Examples include:
   - Taking the Road Less Traveled will reduce the capacity of the conference in an effort to provide a more experiential experience for participants.
   - Learning Community students will have the opportunity to participate in fall retreats to learn more about their own strengths through the StrengthsQuest™ assessment through a grant provided by Halliburton.
   - Girl Scouts and after-school programs will receive multiple visits through the Student Role Model Program.
   - Introducing training for PWSE volunteers to enhance the safety of our participants while increasing their visibility through t-shirts identifying them as a part of PWSE on event days.

2. Introduce professional development for all PWSE student leaders: PWSE will work to develop our student leaders based on the 2012-13 outcomes developed over the past year. Students will have opportunities to learn more about leading groups, dealing with conflict, managing their own career and improving on their communication skills through monthly professional development opportunities, or through our spring leadership conference.

3. Streamline processes: In an effort to meet the growing demands on programs, utilizing technology to increase the efficiency of our office will be a priority this year. In addition to launching a new pre-application system for Taking the Road Less Traveled Career Conference, we will also investigate a new process for requesting and managing the Student Role Model Program.

4. Engage others in our work: In an effort to achieve our program goals, PWSE will work to leverage existing partners as well as engage new partners in both our outreach and on-campus programs. We will work to increase the representation of our constituents on the PWSE Advisory Board as well increasing the visibility of PWSE with our corporate sponsors.

Finally, I would like to welcome Allie Rowe to the PWSE staff. Allie’s background in career development is an ideal fit with the strengths of our current staff as she works to enhance our existing programs and work to engage others in our mission.

Lora Leigh Chrystal, Director
VISION

The Program for Women in Science and Engineering (PWSE) will enrich science, technology, engineering and math (STEM) fields by engaging more women, creating the opportunity for a more competitive and diverse state, national, and global workforce.

MISSION

Create awareness, provide opportunities, serve as a resource, and engage people at Iowa State University, across Iowa and beyond to enhance the STEM educational experience for women.

- Create awareness about the opportunities for women in STEM.
- Provide innovative outreach and undergraduate opportunities for a diverse audience of women and girls to explore and succeed in STEM education.
- Serve as a resource on innovative strategies, best practices, and research on the success of women in STEM.
- Engage and lead a broad range of individuals and organizations in transforming the STEM educational experience for women.

In 2011-2012, PWSE 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 PWSE programs.
   - Developed Outcomes for Women Leaders in STEM for all undergraduate programs
   - Initiated monthly assessment review meetings for all PWSE programs
   - Implemented new criteria for the PWSE Scholarship Program which now offers over 90 scholarships annually
   - Implemented new Taking the Road Less Traveled Conference format with increased experiential activities

2. Increase student success by focusing on the needs of undergraduate women pursuing STEM degrees during their first two years at Iowa State.
   - Maintained the high quality WiSE Learning Communities that focus on the retention of first-year, second-year and transfer students.
   - Developed a Study Abroad Short experience for women in the first two years internationalizing the learning community experience
   - Expanded StrengthsQuest programming to over 200 female WiSE students in their first two years
   - Provided more focused programming for transfer students and created affinity groups for students with shared interests (e.g. non-traditional students)

3. Engage and address the needs of an increasingly diverse population of students in PWSE outreach programs.
   - Enhanced diversity focused professional development for undergraduates working with outreach programs
   - Conducted focus groups with minority women in STEM to identify unique needs of students
   - Added profiles and highlighted women of diverse backgrounds on the PWSE website as well in all of the publications PWSE develops

4. Raise awareness, disseminate knowledge, and engage others in support of women in STEM.
   - PWSE coordinated two Lunch & Learn with John Deere and Pioneer DuPont employees. Both events were well attended and resulted in a number of new connections for both outreach and on-campus events.
   - Distributed over 750 Women in STEM Posters to classrooms across the state of Iowa
   - Major website revision completed in 2012
   - Developed a Corporate Engagement plan

5. Provide leadership to transform cultures and support the success of women in STEM.
   - Karen Zunkel was elected to serve as President of the Women in Engineering ProActive Network (WEPAN) a national organization focused on the recruitment and retention of women
   - Served as conference consultant for the Kirkwood STEM Equity Conference
   - Worked with the SW Extension Region on the development of an inclusive STEM after school program for schools within their district
   - Served as conference consultant for North Iowa Area Community College STEM Girls Conference
   - Submitted an NSF STEP Grant
   - As a part of the Women’s Leadership Consortium, Karen Zunkel submitted a list of priorities related to diversity at Iowa State University to the President of Iowa State University
Outcomes Assessment

A new initiative undertaken in this past year was the review of assessment practices by PWSE and how our tools were meeting the outcomes set forth by our signature programs. One staff meeting a month was set aside to discuss the current outcomes and the related data we had collected. Below are some highlights from the results of those assessment discussions:

**Peer Mentor Assessment**
First-year students reported the highest levels of satisfaction with their peer mentor since the assessment tool was first implemented in the fall of 2006. This is an important finding as peer mentors served more students in 2012 than at any other time in PWSE history. In addition, second-year students also reported higher levels of satisfaction with their peer mentor in 2012 than in 2011 despite the growth of 44 students in this program.

**Assessment for First-year Participants**
Outcomes for the WiSE First-year learning communities were implemented and peer mentors were used to collect data on 4 primary areas of development: Academic/Professional Skills (AS), Understanding and Appreciating Human Differences (UAHD), Leadership Skills (LS), and Personal Skills (PS). Peer Mentors were asked to report weekly on two outcomes addressed with their learning team or an individual student. For example:

AS3 - WiSE participants will demonstrate the ability to self-manage their study habits and time. The peer mentor reported: In our meeting this week we talked about the different methods of time management. We also discussed the 8-hour a day “college work week.” We went through the pros and cons of this idea and discussed some other methods of time management.

**Outcomes Assessment for Second-year Participants**
Second-year students participating in our Sophomore Success Seminar completed course evaluations as well as final reflections. Highlights include:

- 62% of participants reported taking on a position of leadership on-campus
- 84% reported that they felt prepared to lead their peers in a student organization or event
- 77% engaged in a discussion about the issues facing women in STEM
- 79% reported that they felt confident that they would be able to find an internship or co-op experience in the academic year

**Outcomes Assessment for Transfer Participants**
Assessment for the WiSE transfer learning community reported that the learning community spent 35% of its time engaging with other STEM women and another 17% learning about Iowa State University Resources. Finally, transfer students reported that they spent 26% of their time as a learning community getting prepared for career opportunities, learning about career options and how to be successful academically.

**Taking the Road Less Traveled**
- 68% of participants reported an increased interest in STEM
- 73% of participants reported an increase in student engagement in STEM
- 77% of participants reported increased confidence through interaction and communication with professional, female role models
- 78% of participants reported an increased awareness of STEM career opportunities
- 69% reported that TRLT reinforced the importance and relevance of science and math courses in middle school and high school
- 77% of participants reported an increased capacity for understanding the connection between curriculum and real world experience

To learn more about programmatic outcomes visit our PWSE website where you can find more information about individual outcomes for signature programs.

Progress on Enrollment and Graduation of Women in STEM

PWSE 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, PWSE has seen record enrollment of undergraduate women in STEM, with 4,426 female STEM students. The percentage of undergraduate STEM students who were female maintained at just over 33%. The charts on the following page show the history of enrollment and percentage of women in STEM over PWSE's lifetime. Additional charts with college specific data and information about degrees awarded in STEM are available at www.pwse.iastate.edu/data.html.
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.

Science, Technology, Engineering and Math (STEM) Majors at Iowa State University

- Aerospace Engineering
- Agricultural Biochemistry
- Agricultural Engineering
- Agricultural Systems Technology
- Agriculture Education
- Agriculture—undeclared
- Agronomy
- Animal Ecology
- Animal Science
- Athletic Training
- Biochemistry
- Bioinformatics and Computational Biology
- Biological Systems Engineering
- Biological/Pre-Medical Illustration
- Biology
- Biophysics
- Chemical and Biological Engineering
- Chemistry
- Civil/Environmental Engineering
- Computer Engineering
- Computer Science
- Construction Engineering
- Culinary Science
- Dairy Science
- Dietetics
- Earth Science
- Electrical Engineering
- Engineering—undeclared
- Environmental Science
- Forestry Food Science
- General Pre-Veterinary Medicine
- Genetics
- Geology
- Global Resource Systems
- Horticulture
- Industrial Engineering
- Industrial Technology
- Insect Science
- Kinesiology and Health
- Materials Engineering
- Mathematics
- Mechanical Engineering
- Meteorology
- Microbiology
- Nutritional Science
- Physics
- Plant Health and Protection
- Pre-Biological/Pre-Medical Illustration
- Pre-Computer Science
- Preparation for Human Medicine
- Pre-Professional Health Programs
- Software Engineering
- Statistics

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