Iowa State University
OF SCIENCE AND TECHNOLOGY

Program for Women in Science and Engineering
2011-12 Annual Report

Iowa Women in STEM Poster Series

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Corporate Sponsors
Emerson Process Management
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Services Provided
K-12 and Community College Outreach
Taking the Road Less Travelled Career Conferences
Student Role Models
Scholarships
Special Transfer Visits
Individual group visits with prospective students

Success/Retention
WiSE Learning Communities
Sophomore Success Seminar
Scholarships
Support for student organizations
Academic support
Leadership development programming

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.
A Word from the Director

Offering high quality, student-focused programs is what PWSE has built its success upon for over 25 years. This past year, PWSE continued to provide highly effective outreach and retention programs for K-14 and undergraduate students. Enthusiasm and demand for PWSE program offerings continue to grow, with outreach programs meeting (or exceeding) capacities, record levels of prospective students meeting with PWSE staff, and undergraduate students filling an increased number of WiSE learning communities. The ‘word is out’ and our program assessments show that we are making an impact! However, as the interest in STEM gains more attention within the university, state and nation, PWSE is positioned to make significant impacts beyond our student programs. It is important to note that in addition to providing nationally recognized programs, PWSE staff members are collaborating with others to create systemic changes that will increase the participation of women in STEM. Some example collaborations from this past year, which go beyond our student programs, include the following:

- Sharing the importance of gender issues in STEM across many venues – e.g. in Governor’s STEM Advisory Council committee work and in trainings provided to Project Lead the Way educators from across the state
- Working individually with STEM departments dealing with gender bias issues and developing initiatives within their departments to support female students
- Impacting the agenda of women in STEM nationally through leadership in WEPAN (Women in Engineering ProActive Network) – Carol as chair of the annual conference and Karen being elected as president-elect
- Supporting the proposals of dozens of junior and senior faculty members from across the campus on the ‘broader impact’ components within their National Science Foundation grants
- Partnering with other departments and organizations across campus to facilitate screenings and dialogues about the documentary MissRepresentation
- Leveraging the NSF SEEC grant with the College of Engineering to meet a need identified by educators through the development of an Iowa women in STEM poster series for distribution across the state
- Partnering with Study Abroad to provide an opportunity for women in STEM to gain insights into the global nature of STEM via development of a study abroad ‘short course’ in Madrid, Spain for spring 2013

In addition to the programs and collaborations, there were several ‘behind the scenes’ efforts this year that merit mentioning. After several years of operating with shared support, this past spring PWSE was able to finally hire an administrative specialist to provide dedicated organizational support to all that we do. We also spent significant time finalizing our strategic plans and developing short-term operational plans to guide our actions over the coming year. Also, PWSE updated our image with new brochures and a revised website. As always, it was an honor to work with the entire PWSE staff, volunteers and collaborators this past year. We especially want to thank our volunteers, donors, and corporate partners. PWSE’s success is because of you. While we are experiencing record numbers of women in STEM at ISU, there is still much to achieve and address!

Karen Zunkel, PhD
Director

2011–12 by the Numbers….

- 4149 undergraduate women enrolled in STEM fields at Iowa State
- 33.6% of the undergraduates enrolled in STEM fields at ISU were women
- 9309 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
- 2902 registrants for Taking the Road Less Traveled Career Conferences for 6-12 grade girls, parents, educators
- 270 first-year students lived on WiSE Learning Community floors in ISU Residence Halls
- 12,205 = total number of individuals reached by outreach programming during the year! That is an increase of 27% from last year (8,891)
- 50 students participated in the Sophomore Success Course (UST 201) with over 25 more participating in second-year activities, including job shadowing, volunteering, and networking with professionals
- $39,000 in scholarships for women in science and engineering
- Over one-third of STEM bachelor degrees awarded at ISU in past year awarded to women
- PWSE staff met with 334 prospective students (a 26% increase over the previous year) and a total of 816 visitors including family members
- 286 students were awarded funding for tutors through PWSE and the College of Engineering
- 1,030 average number of unique visitors to the PWSE website each month for the fiscal year
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 TRLT
- Iowa Project Lead the Way – statewide conference presentations for educators, administrators, and counselors
- Michigan Project Lead the Way – statewide conference presentation
- Iowa’s Peer Alliance for Gender Equity (PAGE)
- Iowa Institute for Transportation
- Iowa State University Extension & Outreach Statewide 4+H
- American Association of University Women – NW Iowa middle school workshop
- 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
- 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
- Delta Academy middle school girls – meet with PWSE role models once per month throughout the academic year to discuss STEM career opportunities and experience hands-on STEM activities.

Student Role Model Program

Created to encourage K-12 students' interests in science, technology, engineering, and math (STEM) fields, 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. The role models visited 140 schools during the 2011-2012 year and reached 9303 students (including 4639 female (50%). Once again this year we were very intentional about reaching out to schools with underrepresented students. Of the number of girls who participated in our Role Model activities, 1603 were minority students, which is an increase of 61% from the previous 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.

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

PWSE Poster Series

This year, PWSE is excited to complete a project that was initially recommended a couple of years ago by the K-12 and community college members on the PWSE Advisory Board. The project was to create a set of posters that could be used in classrooms across the state to visually promote Iowa women working in STEM fields. Through PWSE’s partnership with the College of Engineering funded National Science Foundation SEEC project, PWSE was able to obtain funding to create a poster series highlighting women working in STEM across the state. 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. The six posters are highlighted on the cover of this annual report.

Distribution of the posters will occur throughout the 2012-2013 school year. Since the grant funding did not cover mailing costs out to schools, PWSE is working to distribute the posters in a variety of ways. The posters are being distributed to ISU Extension and Outreach offices, to teachers attending conferences (such as the PWSE Taking the Road Less Traveled career conferences and the statewide conference for Iowa's science and math teachers), and to classrooms by PWSE student role model during the visits across the state. Posters will also be available in the PWSE office.

The posters are highlighted and downloadable on the PWSE website. The PWSE poster website also provides the opportunity to learn more about the women highlighted on the posters. The individual webpage for each poster provides a more detailed background of the highlighted female, including topics such as what drew them into their STEM career path, job responsibilities, and recommendations for women pursuing STEM careers. The website of the posters and additional information can be accessed by scanning the QR code on the poster or from the PWSE homepage.

Collaborations with Admissions

Over the years, PWSE has developed a 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 2011-2012 during the standard 3:15 p.m. visit time, PWSE staff members met with 334 prospective students (a total of 816 visitors including family members). This is a 26% increase in the number of students from the previous year. PWSE students also staff an informational
booth for students/families prior to the ‘welcome’ session on all 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.

Career Conferences

PWSE has been sponsoring Taking the Road Less Traveled career exploration conferences for girls in grades 6-12 each year since 1987. Six conferences were offered during FY11. The conference format includes career exploration workshops led by women working in science, engineering, and other technical fields; tours of ISU labs and facilities; and special sessions for parents and educators. This year 2902 participants attended the conferences. This brings the total number of participants, since program inception to 58,902.

As part of the formative assessment process, we continue to collect data in the form of surveys from conference participants. Evaluations have been updated to reflect specific conference outcomes including:

• Increase student engagement in STEM
• Increase confidence through interaction and communication with professional, female role models
• 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

Scholarships for New & Current Students

During FY12, 39 scholarships totaling 39,000 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 $511,815 since program inception. Scholarships awarded this past year included

• Endowed scholarships for Janice L. Davison, Sylvia Stoesser, Laurel Ann Crowe, and Charlie Wright, Jr.
• Non-endowed scholarships awarded by PWSE to support first year and returning students in STEM fields.

Two new scholarship programs were designated to be awarded in the upcoming year, the Mary Bell Scholarship Program and the Diane Brandt Fund.

• Mary Bell, a 1945 graduate of Iowa State University with a BS degree in Bacteriology, was a public school teacher who has provided a total of $73,000 in non-endowed scholarship funds to support women in STEM fields. A portion of this donation will be used to fund scholarships for the WiSE Study Abroad Program in Madrid, Spain.
• Diane Brandt, a native Iowan and 1961 graduate of Iowa State University, served in the Iowa Legislature designated a gift to provide approximately twenty-five $2,000 scholarships each year.

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 to the students as a follow-up. This year we had 10 very active Ambassadors. The program is still in its infancy, so there are no formal assessment results. However, PWSE staff members note that during the prospective student visit it is helpful to have students be able to answer questions from the student perspective.
**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 269 first-year students, with 50 students participating in the Sophomore Success Seminar and many other second-year students returning to their floors and/or participating in the Sophomore Success Learning Community, as well as 7 transfer students 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 2011-12, 270 women lived on 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 peer 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 2011-2012 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 75 students participated in the course (UST 201) and learning community. 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 Interview Preparation Sessions
- 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. This year 7 students participated in this option; and another group of 4 who choose to connect through the University Studies 201 course, attend WiSE events and participated in the Job Shadow Program. Despite the small number, these programs serve a very diverse group of students with unique needs. In an effort to better meet the needs of transfer students, PWSE, in partnership with the Research Institute for Studies in Education (RISE) received a Women’s Enrichment Grant through the Office of the Provost to gain an understanding of how to fully engage female STEM students who transfer from Iowa community colleges to Iowa State University. The Engaging Female Community College STEM Transfer Students project gave PWSE an opportunity to understand the needs of this segment of the female STEM student population which has the potential to grow significantly based on current trends in community college enrollments. By understanding ‘how’ and ‘when’ these students desire to engage with Iowa State University and what barriers/factors affect their engagement, PWSE will continue to develop programs and implement practices that will facilitate enhanced student engagement and success for this population of students.

**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 286 women participating in the WiSE Learning Communities in 2011-12.
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

A WiSE Leadership Conference was held in January 2012 for 44 first-year, sophomore, and transfer women in the learning communities. The 2012 Conference specifically focused on the effect of women's portrayal in media on their self-efficacy through the use of a documentary called MissRepresentation. Other sessions at the Leadership Conference included:

- Keynote speaker Dr. Wanda Everage of Drake University
- 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
- Discussion about inclusive language and active listening skills and how to share the message of MissRepresentation with others in a meaningful and productive way.

MissRepresentation

In partnership with the Margaret Sloss Women's Center, the Carrie Chapman Catt Center for Women in Politics and Women's and Gender Studies, PWSE purchased the documentary MissRepresentation and educational tools. PWSE has made programmatic efforts to have discussions with students about media literacy, self-efficacy, and their role as women in STEM. The documentary focuses on the fact that "the collective message that our young women and men overwhelming 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:

- 2012 WiSE Leadership Conference - quantitative and qualitative assessments completed
- Campus-wide showing of Miss Representation
- Professional development with peer mentors and student staff
- Body image awareness week in spring 2012

Study Abroad with WiSE: Madrid, Spain

In the fall of 2011, the Study Abroad Center offered grants for programs interested in “internationalizing the freshmen experience” by creating short study abroad opportunities for students in an effort to have students to consider longer study abroad programs later in their curriculum. The WiSE Learning Community participants fit well with the program goals and PWSE received a grant to investigate two potential study abroad locations. PWSE staff members, Karen Zunkel and Lora Leigh Chrystal, traveled to Antibes, France and Madrid, Spain to explore the sites and meet with potential partners. Spain was ultimately selected due to the high percentage of women in the STEM workforce (42% in Spain, compared to 23% in the U.S).

The focus of the program will be a comparative analysis of issues facing women in science and engineering here in the United States and how those issues are different/similar for women internationally. A 2-credit academic experience will provide students the opportunity to explore the broader social, economic, political, and historical contexts of these two countries. In March 2013, up to 12 students will participate in the new program.

WiSE Learning Community

2011-12 First-year Participants

College of Agriculture & Life Science

- Agriculture & Life Science Explorations: 2
- Animal Science: 25
- Animal Ecology: 8
- Biology: 8
- Environmental Science: 2
- Food Science: 1
- Forestry: 1
- General Preveterinary Medicine: 17
- Genetics: 6
- Horticulture: 1
- Microbiology: 2
- **Total**: 73

College of Engineering

- Engineering - Undeclared: 36
- Aerospace Engineering: 7
- Agricultural Engineering: 1
- Biological Systems Engineering: 6
- Chemical Engineering: 23
- Civil Engineering: 13
- Computer Engineering: 3
- Construction Engineering: 1
- Electrical Engineering: 1
- Industrial Engineering: 5
- Materials Engineering: 1
- Mechanical Engineering: 17
- Software Engineering: 4
- **Total**: 118

College of Human Sciences

- Diet and Exercise Science: 2
- Food Science: 3
- Kinesiology: 3
- **Total**: 8

College of Liberal Arts & Sciences

- Open Option - LAS: 9
- Biochemistry: 3
- Biology: 15
- Chemistry: 4
- Economics: 3
- Environmental Sciences: 3
- Genetics: 6
- Geology: 1
- Mathematics: 1
- Meteorology: 4
- Physics: 4
- Pre-Biological/Pre-Medical Illustration: 2
- Pre-Computer Science: 2
- Prep. for Human Medicine: 9
- Preprofess. Health Programs: 5
- **Total**: 71

**Overall Participation**: 268
‘New’ is not a word that we might associate with PWSE as the program begins its 27th year. However, PWSE begins the 2012-2013 year with a new strategic plan, some new program elements, a new staff member, and new university leadership (President, Provost, and interim President of the ISU Foundation). With all these ‘new’ items, we are entering this year with a little more optimism. The program review and strategic planning processes of the past two years have helped us refocus our energies and to be realistic about what we can and cannot impact in the coming year. Even seemingly small things, such as clarifying our ‘retention programs’ will focus on the first two years at ISU helps to set the scope of expectations and allows us to hone in on what PWSE is ‘really good at’ doing. PWSE staff and students have completed StrengthsFinder analysis, so building a team that utilizes the strengths of the individual will also be a focus this year.

One new initiative, if funded, that could have significant impact on PWSE, involves a proposal currently under development. PWSE has been leading a collaborative effort to submit Iowa State's proposal to the National Science Foundation's STEP (STEM Talent Expansion Program). This institutional proposal will incorporate strategies targeted to increase the recruitment and retention of women (and others) in STEM fields. If funded, the grant would develop service learning opportunities, and increased programming and collaborations with community colleges, Project Lead the Way, and our corporate partners. Although these programs are highly competitive, even if we are not funded, the discussions and development of strategies to pursue to increase the enrollment and success of women in STEM have been very enlightening. Submission is due in December and programming would begin in 2013-2014, if funded.

PWSE is increasing its emphasis on more closely aligning program assessment with desired outcomes across all of our programs, to ensure that we can improve programs and also demonstrate that the programs offered are achieving those desired outcomes. For example, each week the peer mentors for learning communities are reflecting upon and documenting their week's activities as they relate to specific developmental outcomes the program is striving to achieve with all learning community students. Also, we are dedicating one staff meeting each month to review program assessment tools and outcomes. In this era of accountability, enhancing our already strong assessment programs will allow us to be more effective and assist us in obtaining funding support.

PWSE staff and the advisory board will be focusing on envisioning how PWSE needs to change to handle the growing demand for programs and the increasing enrollment of women in STEM. It is great that Iowa State is reaching all time student records for enrollments, but it creates challenges for PWSE. We need to determine how we maintain the personal connections and quality programs, ideals that are core for PWSE, during these times of growth.

And last, but not least, PWSE will go global for the first time. In spring 2013, PWSE will lead a group of up to 12 students on a 2-credit spring break trip to Madrid, Spain. They will explore the cultural differences and similarities between women in STEM in both educational and corporate settings, between the U.S. and Spain.
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. When comparing the previous five year plan with the new 2012-2016 plan, a few notable items emerged:

- PWSE must do a better job of ‘getting the word out’ and engaging others in our efforts.
- PWSE must ensure that we continue to offer high quality, effective signature programs (Taking the Road Less Traveled Career Conferences, PWSE Student Role Model program, and WiSE Learning Communities). We can’t afford to have increasing student demands and/or budget restrictions negatively impact these programs.
- In addition to providing outstanding student programs, PWSE staff needs to use its expertise to influence and to provide leadership in changing institutional culture and operations to be more inclusive of women.
- Since the near term horizon for funding looks relatively flat for PWSE, PWSE must carefully align staffing and programs to create the greatest impact; aligning program outcomes, target audiences, etc. will be critical during this strategic plan.
- Action plans for the coming year have been developed, based on the priorities laid out in the strategic plan. An annual review of actions and progress is incorporated into the advisory board meetings and staff retreats.

Key points from the PWSE Strategic Plan 2012-2016

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.

PRIORITIES
- Maintain the high quality and effectiveness of PWSE programs.
- Increase student success by focusing on the needs of undergraduate women pursuing STEM degrees during their first two years at Iowa State.
- Engage and address the needs of an increasingly diverse population of students in PWSE outreach programs.
- Raise awareness, disseminate knowledge, and engage others in support of women in STEM.
- Provide leadership to transform cultures and support the success 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 fifth straight year, PWSE has seen record enrollment of undergraduate women in STEM, with 4149 female STEM students. The percentage of undergraduate STEM students who were female was also a record at 33.6%. The charts on the following page show the history of enrollment and percentage of women in STEM over PWSE’s lifetime. In addition, attracting a more diverse population of women is part of PWSE’s mission, charts that highlight the growth in the number and percentage of women of color since 2000 are included below. 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
- 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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