Dear WISE Supporters,

The 2015-16 academic year has been an exciting one for WISE. Through our campus and community outreach programs, we’ve directly impacted over 2,000 K-12 and university students and expanded STEM educational opportunities for an additional 1,500 K-12 students through the STEM Outreach & Student Engagement Program!

Research shows that the gender gap still persists in STEM fields and careers. Less women were awarded computing degrees/certificates in 2013 than in 2001 and less than 26% of engineering degrees awarded nationally in 2013 were to women. Changing this reality requires sustained educational outreach and programming along the K-16+ pipeline to expose girls to the exciting possibilities STEM fields and careers offer and to support them along their educational journeys. This is exactly what WISE strives to provide for girls and young women in southern Arizona and at the University of Arizona.

Our work would not be possible without the generous support we receive from members of the UA and Tucson communities and funding organizations. In February and March of this year alone, volunteers donated over 600 hours of their time to support WISE events and programs! And a number of funding organizations continue to provide the financial support necessary to make our work possible. Special thanks to the Marshall Foundation, UA Institute of the Environment, the Agnese Nelms Haury Program in Environment and Social Justice, the UA Commission on the Status of Women, the UA Student Engagement Strategic Investment Fund and Freeport McMoRan for recognizing the important impact our work can have and providing the funding to make it happen.

We also recognize and appreciate the important role individual donors make in enabling our work. Thank you to all of you who have made monetary donations or donated your time, energy, or resources in the 2015-16 academic year. We appreciate the various ways in which you make our work possible!

If you’d like to make a financial contribution to support our efforts to increase interest and diversity in STEM fields, please see the back page of this newsletter for more information. Or if you’d like to volunteer your time or expertise to assist our programs in some way, please contact me at JillMWilliams@email.arizona.edu. We look forward to expanding our programming in 2016-17 with your continued support.

Sincerely,
Dr. Jill Williams
WISE Director

Community Outreach
Each year, WISE works with local school districts and community organizations to deliver programs that aim to pique K-12 student interest in STEM fields by offering hands-on workshops and demonstrations.

Student Engagement
WISE offers UA students the opportunity to build-on and enhance their academic training through directed engagement with local STEM programs. Through our for-credit internship program and new student engagement course, students can earn academic credit while contributing to STEM educational initiatives.

Campus Outreach
WISE offers programs to support and encourage students in STEM fields at the University of Arizona. Through workshops, trainings, speakers series, and scholarships we aim to increase awareness of the important contributions of women and people of color in STEM fields, while also inspiring and encouraging the next generation of STEM innovators.
Fostering Diversity in STEM through Student-Community Engagement

With generous funding from the Marshall Foundation and the UA Student Engagement Strategic Investment Fund, WISE launched the STEM Outreach and Student-Community Engagement Program this year. This program provides UA students with the opportunity to earn 3 units of academic credit and an engaged learning experience designation on their transcript for participating in a course focused on diversity and social justice in STEM fields (GWS 397S) and working with local schools and school-based programs helping implement STEM educational initiatives.

This program is a collaboration between WISE and the STEMAZing Project of the Pima County Superintendent’s Office. STEMAZing Director, DaNel Hogan provides UA student participants with trainings on informal science education and best practices for engaging K-12 youth in the sciences and engineering. During spring 2016, students also learned from local educators Trish Vogel (engineering teacher at Mansfeld Middle School) and Michelle Coe (environmental science educator with the UA Community & School Garden Program). Trish and Michelle shared their experiences and expertise with STEM lesson planning with UA students, helping them build skills that would help them be as useful and effective as they could be at their site placements.

Through program-required STEM outreach activities, this program has impacted over 250 K-12 students on a weekly basis and an additional 1,500 through large-scale public STEM events. Programs we’ve supported through this program include: the after school science club at Manzo Elementary; the 21st Century Robotics program at Borton Magnet Primary School; engineering courses at Mansfeld and Amphi Middle Schools; the iSTEM Program for Native American youth at Lawrence intermediate school; and the MESA program at Amphi Middle School. During the spring 2016 semester, UA students participating in this program have come from the Colleges of Education, Social and Behavioral Science, Science, and Engineering.

We look forward to growing this program over the coming years, as we work to increase STEM educational opportunities in the Tucson area and foster diversity along the K-16 STEM educational pipeline!

Each year, WISE hosts the Science and Engineering Excellence Banquet. This event is a celebration of work being done to increase interest and diversity in STEM fields and careers at the UA and in southern Arizona more broadly.

Special thanks go out to our Ada Lovelace and Rachel Carson level sponsors of the 2016 Science and Engineering Excellence Banquet. Without your support this event would not be possible.
The WISE Optics Outreach Program has worked with Women in Optics to reach out to over 1,000 students in just one semester! The Optics Outreach program contributes to WISE’s goal of increasing diversity in STEM fields by both training undergraduate students in how to conceptualize, build, and implement optical science demonstrations and taking these demos on the road to STEM outreach events all over the Tucson area.

The events that we participated in during spring 2016 included STEM night at Booth-Fickett STEM magnet school, GEMS club at Mansfeld Middle School, Laser Fun Day at the College of Optical Sciences, Tucson Hebrew Academy’s STEM festival, and STEAMworks at the UA. Women in Optics designed a new exhibit with several demonstrations called Optics in Nature that was featured at Laser Fun Day and STEAMworks. This exhibit was a success because people were able to make connections about everyday phenomena in nature and the science behind how they happen. This included exciting topics like rainbows, sunsets, and using sunglasses outside.

The biggest success at school events was the demonstration where students got to wear spectroscopy glasses. These funky glasses were used to observe the spectrum of colors emitted by different gasses when heated with an electrical current. This specific activity engaged the students by asking them to guess what color they thought different elements would emit when heated and also the colors they would observe through their glasses. Students were able to take home glasses and observe lights in their own home as well as share their knowledge and excitement with their family.

Another popular demonstration with students was playing with lasers and lenses. This activity allowed students to get creative and explore the different properties of light and how light gets refracted differently in different objects. Optics outreach leaders would then help explain why students observed the patterns of light that they did and encourage more exploration. Lasers are always the highlight of demonstrations and kids say are the coolest part of optics.

The field of optical science is so broad and there are so many aspects to learn about and explore. Through the different events this semester, the Optics Outreach Program succeeded in making many students aware of this exciting field and opened their eyes to the amazing topics that can be studied. Optics outreach will continue working with Women in Optics to keep fostering the engagement of students in science.
Schoolyard Biodiversity Inventories Program Gets National Attention!

This semester, WISE has continued working with the National Park Service, Arizona-Sonora Desert Museum, and UA Community & School Garden Program to get young people excited about environmental science and biodiversity conservation. Through the Schoolyard Biodiversity Inventories Program, we’ve trained UA students and local K-12 educators in how to conduct biodiversity inventories using an online application called iNaturalist. UA students then work with local schools to complete biodiversity inventories on their campuses—showing students how much life surrounds us everyday even when we don’t notice it!

The inventories being completed this semester are being carried out as part of a national initiative to document biodiversity throughout the country in conjunction with the 100th anniversary of the National Park Service. All of the observations we’ve collected at local schools contribute to a national database on iNaturalist of observations made for the NPS during 2016. As of April, there have already been 18,000 observations uploaded documenting the great biodiversity that characterizes our country and over 2,300 of those observations are from here in Tucson!

In late May, the National Park Service will be hosting a birthday celebration and biodiversity inventory on the National Mall in Washington, DC. The organizers of this event heard about our work here in Tucson and invited us to put together a video of this exciting project. The wonderful folks at TUSD media spent hours interviewing program participants, shooting footage of the inventories, and compiling it all into a 2 minute long video about this program, which will now be shown to thousands of people on a jumbotron in Washington, DC at the NPS birthday celebration. We couldn’t be more excited about this project being recognized as an important way to get young people excited about biodiversity in their everyday environments. We’ll be posting the video on our webpage and our Facebook page, so stay tuned to see the final product!

Big thanks go out to the UA Institute of the Environment and National Park Service for funding this project this year. With the support of these organizations we’ve been able to financially compensate UA students and local educators for their time and dedication to this important project!

As we move forward into 2016-17, we’re pursing funding opportunities that would allow us to add an art/science dimension to this project, including a public mural on biodiversity and environmental responsibility, and expand this project into a more comprehensive program aimed at diversifying the field of environmental science. We hope to be able to continue this program and build on the important work we’ve done so far!

This semester Carly Herndon, a former WISE intern an senior at the University of Arizona, has been helping coordinate the Schoolyard Biodiversity Inventories Program. Carly is studying Environmental Science with a focus in Science and Policy. As someone who finds STEM education very important, Carly is very excited to be working on the Schoolyard Biodiversity Inventories Program. She hopes to work in a field relating to natural resources when she graduates. Carly loves hiking, golfing, rock climbing, and exercising.
The STEM Pipeline Mentorship Program launched in fall 2015, continued during the spring semester with a number of social events and topical workshops aimed at motivating young women to continue pursuing STEM fields and to equip them with the skills necessary to succeed.

In February, program participants came together for a workshop focused on different strategies for financing education. Representatives from UA Scholarship Universe, the Financial Aid Office, and the Graduate College, were there to answer questions and provide students with information on different funding opportunities. A panel of faculty, students, and STEM professionals then shared how they financed their education to give program participants personal insight into potential funding approaches. We were particularly delighted to welcome Dr. Gail Burd, Senior Vice Provost for Academic Affairs and Distinguished Professor of Molecular and Cellular Biology to the panel. Dr. Burd shared her experiences as a first generation college student and a promoter of diversity in STEM fields with program participants.

In March, we welcomed Dr. Beth Mitchneck from the School of Geography & Development (and former NSF ADVANCE Program Officer) and Dr. Linda Powers from the Department of Electrical and Computer Engineering (and WISE Advisory Board Member!) for a frank discussion about discrimination in academic and professional environments. Drs. Mitchneck and Powers provided program participants with a wealth of information on effective strategies for recognizing and dealing with discrimination.

In its first year, the STEM Pipeline Mentorship Program has proven to attract a diverse group of students committed to succeeding in and diversifying STEM fields. We’ve also seen student participants take the knowledge and skills they’ve gained through the program and put them into action. For example, program participant Maddy Banerjee secured a paid summer internship at MD Anderson in Houston researching cancer prevention. In reflecting on this accomplishment, Maddy commented: “I love that this mentorship program pushes us to do things we did not feel were possible. Thanks for all the help and support.” We couldn’t be more proud of Maddy and the other Mentorship Program Participants. Watching them develop skills and confidence over this academic year has been a real honor.

We thank the UA Commission on the Status of Women for funding the inaugural year of the STEM Pipeline Mentorship Program and hope to secure funding to continue the program in 2016-17.

---

First Year Project by Nikki Mastrud

For the past few months, I have been working on my First Year Project (FYP). The FYP is an opportunity offered by the Honors College for first year students to conduct and present research. With Jill Williams, Director of WISE, as my advisor, I chose to investigate the representation of women throughout the biological sciences. While the biological sciences are often identified as the exception to a lack of gender diversity in STEM fields—with reports indicating that upwards of 60%+ of those receiving degrees in the biological sciences are women—I was curious about how gender distribution potentially varied across different fields within the biological sciences. In my project, I sought to discover if there were obscured gender disparities within the different fields of biological sciences. Although no trend was identified, the data I collected showed that there is a wide range of female representation among different fields of biology, with some fields reporting only 19% women and others having upwards of 95%. While more research is needed, it is clear that it can be misleading to lump all the biological sciences together when reporting on diversity in STEM fields.

STEM Pipeline Mentorship Program

The STEM Pipeline Mentorship Program launched in fall 2015, continued during the spring semester with a number of social events and topical workshops aimed at motivating young women to continue pursuing STEM fields and to equip them with the skills necessary to succeed.

In February, program participants came together for a workshop focused on different strategies for financing education. Representatives from UA Scholarship Universe, the Financial Aid Office, and the Graduate College, were there to answer questions and provide students with information on different funding opportunities. A panel of faculty, students, and STEM professionals then shared how they financed their education to give program participants personal insight into potential funding approaches. We were particularly delighted to welcome Dr. Gail Burd, Senior Vice Provost for Academic Affairs and Distinguished Professor of Molecular and Cellular Biology to the panel. Dr. Burd shared her experiences as a first generation college student and a promoter of diversity in STEM fields with program participants.

In March, we welcomed Dr. Beth Mitchneck from the School of Geography & Development (and former NSF ADVANCE Program Officer) and Dr. Linda Powers from the Department of Electrical and Computer Engineering (and WISE Advisory Board Member!) for a frank discussion about discrimination in academic and professional environments. Drs. Mitchneck and Powers provided program participants with a wealth of information on effective strategies for recognizing and dealing with discrimination.

In its first year, the STEM Pipeline Mentorship Program has proven to attract a diverse group of students committed to succeeding in and diversifying STEM fields. We’ve also seen student participants take the knowledge and skills they’ve gained through the program and put them into action. For example, program participant Maddy Banerjee secured a paid summer internship at MD Anderson in Houston researching cancer prevention. In reflecting on this accomplishment, Maddy commented: “I love that this mentorship program pushes us to do things we did not feel were possible. Thanks for all the help and support.” We couldn’t be more proud of Maddy and the other Mentorship Program Participants. Watching them develop skills and confidence over this academic year has been a real honor.

We thank the UA Commission on the Status of Women for funding the inaugural year of the STEM Pipeline Mentorship Program and hope to secure funding to continue the program in 2016-17.

---

Big thanks to the following women who served as panelists during spring 2016!

Ms. Juliana Gil-Loaiza, Dr. Gail Burd, Dr. Beth Mitchneck, Ms. Cat Merrill, Dr. Linda Powers, Ms. Daniella Della Giustina, Lily House-Peters
Next Generation Scientists at Manzo Elementary

By Christina Loera, Public Relations Intern

Every Tuesday for the past several weeks, the WISE interns, students participating in the STEM Outreach and Student Engagement Program (GWS 397S), and students from the UA Community & School Garden Program have spent their afternoons working with 3rd-5th grade students in Mr. Wes Oswald’s afterschool science club. Throughout the spring semester, Manzo students are mentored by the UA students as they design and carry out their own scientific experiments. As one of the WISE interns helping with Science Club this semester, it’s been amazing to see students gain invaluable experience in the scientific method and hands-on scientific research.

The student’s’ experiments were diverse in nature and included: sweetness vs. size of kumquats, pollen content of wildflowers, egg-laying preferences of chickens, pH content of household fluids, and the types of birds found in the Manzo courtyard. As part of these experiments, students learned to use a diverse array of scientific tools, including refractometers, wildlife cameras, pH strip and much more. As a reward for their hard work, the Manzo Science Club will be presenting their research posters at the ENR2 Building at the University of Arizona on Tuesday, May 3rd.

On behalf of all the volunteers, we would like to thank Wes Oswald, Blue Baldwin, Manzo Elementary and all the students who participated in Science Club this year. We hope they had as much fun these past few weeks as we did!

Campus Outreach by Emily Luu, Campus and Community Outreach Intern

This semester, WISE has hosted a number of campus outreach events to increase awareness around issues of diversity and gender stereotypes and help students build the skills necessary to be successful in STEM fields and careers.

On February 29th, we organized an interview workshop that included an interview basics presentation by Career Services followed by the chance to do mock interviews with local STEM professionals and members of the UA community. Beyond just learning from a presentation, interviewees were able to get practical experience with interviews as well as get feedback about their interviewing skills and answers.

WISE and the group Women in Natural Sciences (WINS) collaborated to host a free screening of The Mask You Live In on the 30th of March. The Mask You Live In focuses on the socialization of men in America, and how early social pressures affect boys later in life. This screening was free and open to the public in order to promote discussion about gender expectations in America.

In response to a number of recent stories in the media about sexual harassment in STEM fields and careers, we hosted a workshop on Sexual Harassment on April 5th. During this workshop, WISE presenters discussed with attendees the different types of sexual harassment (quid pro quo and hostile work environment), how to identify harassment, and what one should do if they are experiencing sexual harassment. It was an informative event but also a chance to network with people who were interested in promoting diversity in STEM. We were excited to have members of oSTEM, Catalyst, and Women in Medicine and Science join us for this conversation.

We finished off the semester, with a Leadership Panel Discussion with members of the Raytheon Women’s Network on April 22nd. The panelists for this event talked about their career paths and personal experiences in the industry. They also answered questions previously submitted by attendees, gave professional advice, and shared what they wish they knew when they were high school/undergraduate/graduate students.

These events helped to increase awareness on campus about diversity and helped participants develop important skills necessary for professional success, while also helping us build a community of individuals committed to creating more welcoming and diverse scientific and engineering communities!
On March 26th, WISE continued its Expanding Your Horizons (EYH) tradition by bringing the conference to Walden Grove High School in Sahuarita. This event seeks to promote interest and diversity in the STEMM (Science, Technology, Engineering, Math, and Medicine) fields by supplying a host of interactive workshops for students to engage in. Expanding Your Horizons is specifically targeted at girls and underrepresented minorities, as the challenges and dissuasion they face in their pursuit of STEMM fields are particularly poignant, causing them to frequently disengage from STEMM fields at young ages.

Thanks to a generous grant from Freeport-McMoRan, we were able to provide a wide range of workshops for the students to participate in at no cost. Highlights of the day included discovering water filtration with the Society of Hispanic Professional Engineers, uncovering tree ring stories with the Arizona Tree-Ring Laboratory, developing missions to Mars with the UA Lunar and Planetary Laboratory, and learning about the role of modern technology in helping endangered species with Omar the Hedgehog from Reid Park Zoo.

We concluded the afternoon with a moving keynote speech from Dr. Tori Hidalgo of the University of Arizona. At the U of A, Dr. Hidalgo is a lecturer of General and Advanced Inorganic Chemistry, as well as the TA Coordinator for all General Chemistry Labs. In her work, she continually seeks to promote greener chemical practices - she focused her PhD studies on developing a synthetic fuel that could be used as a cleaner alternative to fossil fuels, and she has pushed the General Chemistry Labs on campus to adopt both the Twelve Principles of Green Chemistry and more environmentally friendly practices in their experiments. At the EYH Conference, Dr. Hidalgo talked openly with the students about the numerous challenges she encountered, endured, and surmounted on her way to attaining a PhD in Chemistry, and she encouraged them to never stop fighting for their passions - perseverance in the pursuit of your goals is an amazing accomplishment in itself.

WISE was incredibly grateful to have the opportunity to bring EYH back to Sahuarita, as all of the students claimed to have a fantastic time. There’s nothing more rewarding than exciting students about the world and their futures in it, and we can’t wait to organize this event again in the fall!

---

Why do you think diversity in STEM fields is important?

“More diversity in STEM fields can generate even more ideas, more innovations, and new discoveries quicker and more efficiently than ever before.” -High School Senior
This March, WISE expanded its reach by collaborating with MESA (Math, Engineering, and Science Achievement) to develop the first-ever Environmental Science and Social Justice Science Academy. MESA is an organization housed in the Office of Early Academic Outreach with a purpose complementary to that of the WISE Program: they seek to promote college-readiness and exposure in low-income, first-generation, college-bound students.

The goal of the Science Academy was to merge the interests of WISE and MESA and reach more students with innovative STEM programming. Based on research that indicates that students from underrepresented groups are more interested in STEM fields and careers if they are tied to issues of social justice, we decided to highlight the important work being done at the UA at the interface of environmental science and social justice at this event. By bringing a variety of interactive, environmentally themed workshops to the beautiful new ENR2 building on the U of A campus, we were able to engage high school students in the social relevance of environmental science while also exposing them to what life can be like at a university!

We’re happy to say that the event was a success. Students from eight of MESA’s partner high schools attended, and they participated in a half-day full of interactive STEM activities, all free of charge. The morning kicked off with speeches from two special guests: Tucson Mayor Jonathan Rothschild and Dr. Nolan Cabrera. Mayor Rothschild is actively engaged in promoting education completion in Tucson youth; Dr. Nolan Cabrera is a Professor of Higher Education interested in the college experiences of minority students. Together, they encouraged Science Academy attendees to continue nurturing their interest in environmental science, as they may one day apply their knowledge to the solution of pressing environmental and social problems.

The event included five workshops hosted by different U of A student organizations, faculty, and Tucson community members. In these workshops, students developed water transport systems with Project Wet, learned about the “green” side of chemical engineering and soda production with Omega Chi Epsilon, explored microbe-soil interactions while building take-home ecosystems with graduate students from the Soil, Water, and Environmental Science Department, and investigated how mapping technology can be used to support activism around fossil fuel extraction in indigenous Amazonian land with someone from the Climate Alliance Mapping Project. Students also had time to explore ENR2 and the numerous environmentally friendly features that make it such a unique building by participating in a scavenger hunt facilitated by WISE interns and volunteers!

Overall, students reported having a fantastic time - they loved being able to challenge their brains and explore different aspects of the environment hands-on, even if it was early on a Saturday morning. WISE had a great time organizing this event, and we look forward to similar collaborations in the future!
We the Explorers Art and Space Science Event Was a Success

March 9th, WISE engaged University of Arizona college students and Sky Islands high school students in this fun and creative outer space themed art event.

Students made collages from images of astronauts, constellations, and drawings of imagined environments and inhabitants. These images were then submitted to be taken into space as part of the OSIRIS-REx Asteroid Sample Return Mission. Our group of students and staff made over 13 works of art that will ride aboard the spacecraft on its journey to the asteroid Bennu.

Celebrating Art, Science, and the First Female Photographer at the 2016 Festival of Books

WISE was excited to host a table in the College of Social and Behavioral Sciences tent at the 2016 Festival of Books. We took this opportunity to draw attention to the important links between art and science through the lens of cyanotypes.

Cyanotype is a photographic printing process that uses two chemicals—ammonium iron (III) citrate and potassium ferricyanide—that are UV sensitive. When cyanotype paper is exposed to sunlight, the product is a beautiful cyan-blue print.

This printing method was first created in the 1800s and was used well into the 20th century as a low-cost way to make architectural and engineering blue prints. It was also the printing technique used by British botanist and scientist Anna Atkins who was the first person to include photographic images of plants in her book, *Photographs of British Algae: Cyanotype Impressions*. For this accomplishment, Atkins is also considered to be the world’s first female photographer!

Activities that link science to artistic activities have been shown to reach a wider variety of students, including those who may not readily identify as interested in STEM fields. With this in mind, WISE hosted two events this semester that aimed to draw links between art and science and spur interest in STEM fields through the lens of art!
Elisa Tomat: Excellence in Campus Outreach for STEM Diversity

Dr. Tomat developed and launched a class, Chemistry Discovery, in Fall 2012 at the University of Arizona that doubles as an undergraduate chemistry course and a chemistry outreach program. In this program, UA students design and execute interactive workshops for visiting middle school students from local schools in the Southern Arizona community. The K-12 students who benefit from this program are from groups underrepresented in STEM fields and careers. With this program, UA students are not only teaching and promoting interest in chemistry, but are also acting as positive science role models.

Wolfgang Fink: University Excellence in STEM Diversity

Dr. Fink is the Faculty Advisor for the National Society of Black Engineers (NSBE) Chapter at the University of Arizona. In 2014, he led them to victory in a national robotic pipeline inspection competition. He further encouraged the NSBE team to research their initial findings and publish a scientific paper. He engages with underrepresented minorities and women in STEM and encourages them to continue to succeed. He stimulates further interest in STEM at the university but also promotes interest in STEM with his high school outreach as a mentor.

Brooke Meyer: Excellence in K-12 STEM Education & Diversity

Brooke is the director of Educational and Community Outreach for the Southern Arizona Research Science and Engineering Foundation (SARSEF). She personally works with students to engage in STEM and works with teachers on how best to support these students. She also motivates parents to encourage and support their child’s interest in STEM. Before Brooke’s involvement, SARSEF participants and winners were primarily white males from affluent areas of town. Now, 52% are from Title I schools, 54% were female, and 60% were non-white. Her passion promotes interest and diversity in STEM from a young age, and teaches them skills that will last them a lifetime.

WiO: Excellence in Community Outreach for STEM Diversity

Women in Optics (WiO) is a women-led campus group from the University of Arizona that engages in many outreach events to promote interest in STEM fields. WiO focuses on empowering and inspiring women and minority students to enter STEM degree programs. They do many presentations at events such as Tucson Festival of Books, Introduce a Girl to Photonic Day, Laser Fun Day, Arizona SciTech Sahuara STEMtacular, and Future Innovator’s Night with SARSEF. WiO has made a huge impact in the community in promoting STEM and diversity this past year and hopes to continue to grow.

Emily Giron: Excellence in STEM Diversity

Emily played a critical role in establishing a program between the Neuroscience of Reinforcement Learning Lab at the University of Arizona and City High School in downtown Tucson. In this program, UA students teach and help high school seniors run their own Cognitive Science experiments. Emily organized these UA students by designing engaging lesson plans and making sure that each class was covered by at least two people. She took wonderful initiative with the program, and her work was crucial to making sure that it continues in the future.
Meet the interns at WISE

**Sarah Bosch** is a Neuroscience and Cognitive Science major and Music minor in her junior year at the University of Arizona. The spring of 2016 is her first semester working with the WISE program, and she couldn’t be more excited! During her time as a Community Outreach intern, Sarah plans to focus her efforts on organizing exciting events for Tucson youth with the goal of increasing STEMM engagement and excitement in those that participate.

**Rachel Bear** is a freshman in the Honors College at the University of Arizona studying Neuroscience and Cognitive Science and Molecular and Cellular Biology. Rachel is very excited to get more involved on campus and in the community with WISE. On campus Rachel is a member of Kindness which does community service projects with Ben’s Bells, and she participates in the Blue Chip Program. Rachel is working this semester with the Women in Optics to help plan optics outreach events and trainings for students.

**Emily Luu** is a sophomore at the University of Arizona majoring in Computer Science and minoring in Mathematics. She wants to encourage young kids’ enthusiasm for STEM subjects. Along with her interests in computational sciences, Emily enjoys soccer, cooking, and working with animals. During the spring 2016, she will be working with Manzo Elementary’s Science Club and Mansfield Middle School’s Robotics Club, as well as helping coordinate on-campus events for UA students.

**Christina Loera** is a sophomore at the University of Arizona, majoring in Chemical and Environmental Engineering, and minoring in Mathematics. She is a math tutor at Mansfield Middle School and a member of the Society of Women Engineers and ASCEND! She loves working with middle school students and hopes to encourage young women to pursue their STEM dreams. She is serving as the Public Relations Intern for WISE, with an emphasis in corporate and community partnership.

2016-17 Scholarship Recipients

Each year, WISE has the honor of awarding three endowed scholarships to young women pursuing degrees in STEM fields or education to teach in STEM. This year we received a record number of applicants and are excited to announce this year’s recipients.

**Harriet Silverman Scholarship**

**Alyssa Baller.** Ms. Baller will begin studying at the University of Arizona in Fall 2016 with the goal of achieving a degree in biomedical engineering.

**Helen S. Schaefer Scholarship**

**Anvi Bhakta.** Ms. Bhakta is working towards a degree in Molecular and Cellular Biology with the goal of contributing to the field of oncological therapeutics.

**Jo Ann Troutman Scholarship**

**Danielle Mathieson.** Ms. Mathieson is a Neuroscience and Cognitive Science major and hopes to obtain a career that allows her to both do research and to share her findings with the public.
**WISE Wish List**

Here are some ideas of what gifts of various sizes would do for WISE:

- **$50** Funds printing one color poster that highlights the important work done by our interns.
- **$100** Supplies pizza for a professional development workshop for students.
- **$250** Allows us to host a fieldtrip to Biosphere 2 for WISE interns and WISE living-learning community residents.
- **$500** Funds a travel grant to support student participation at academic and professional conferences.
- **$1000** Buys lunch for 150 Expanding Your Horizons Conference participants.
- **$1500** Funds a year-long mentorship program for high school, undergraduate, and graduate students.
- **$2500** Enables us to bring in 4 guest speakers for a series on science, engineering, and social justice.

---

**Support Us**

The Women in Science and Engineering Program relies on the dedication and support of community members to do the work we do to increase interest and diversity in STEM fields. If you are interested in making a financial contribution to support our work, we are able to accept donations through the University of Arizona Foundation. Gifts can be made on a one-time or recurring basis, anonymously, publicly, or on behalf of a third party. To make a donation electronically, please visit www.uafoundation.org/give/sbs/sirow-wise to make a general donation or www.uafoundation.org/give/sbs/wisestudent to donate specifically to support student awards. Donations can also be mailed directly to the address below. Please make checks out to UA Foundation-WISE and mail them to the following address.

**Women in Science and Engineering Program**

University of Arizona  
925 N. Tyndall Ave.  
Tucson, AZ 85721

---

**Women in Science and Engineering Program**

Southwest Institute for Research on Women  
University of Arizona  
925 N. Tyndall Ave.  
Tucson, AZ 85721

---

**COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES**

Women in Science & Engineering