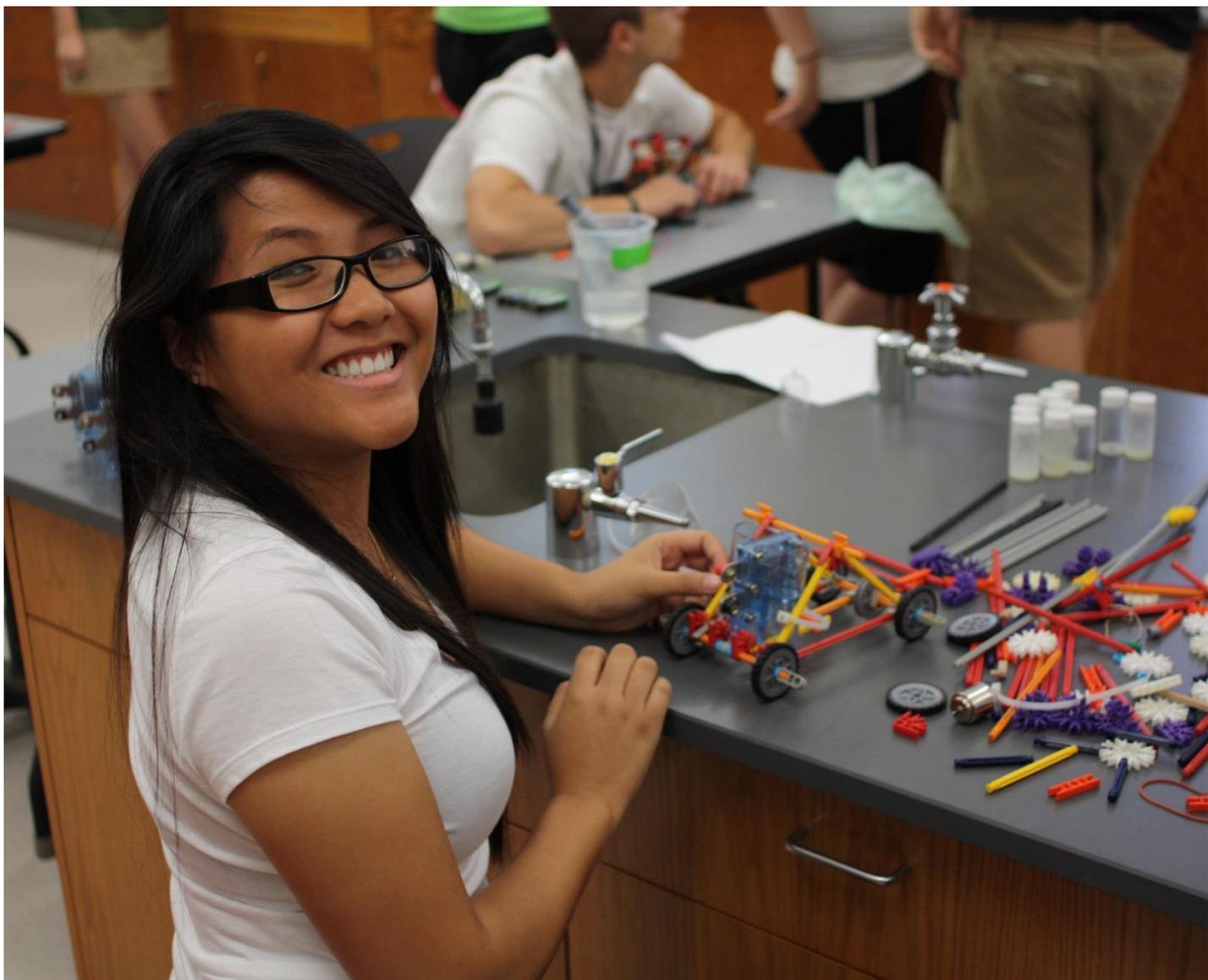


OSU Precollege Programs

Broader Impacts Opportunities for Researchers



Oregon State
UNIVERSITY

OSU PRECOLLEGE PROGRAMS (PCP)

Broader Impact Opportunities for Researchers

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Summary Statement

Early and continued exposure to science and engineering concepts are keys to getting and keeping students interested in STEM fields and careers. This guiding principle of K-12 outreach is especially true for recruiting groups traditionally underrepresented in science and engineering, such as women and minorities.

OSU has a long history of delivering quality science and engineering outreach programs (e.g., Saturday Academy/STEM Academy has offered enrichment classes since 1986). The office of **Precollege Programs (PCP)** enables faculty to broaden their education impacts by:

- Offering a **range of science and engineering outreach programs** to fit faculty needs.
- Providing program **infrastructure** (administration, marketing, registration, etc.) allowing faculty to **focus on delivering content** and connecting with students.
- **Consulting** with faculty to initiate new outreach programs, advising on outreach best practices and connecting faculty with local K-12 resources.

A fundamental concept in effective broader impact outreach is that there are both similarities to be leveraged, and differences to be recognized, in the delivery of content across the K-20 continuum. **Precollege Programs (PCP)**, the **College of Engineering (COE)** and the **College of Science (COS)** offer a **portfolio of programs** to match the broader impact needs and talents of OSU faculty.

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Precollege Programs

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I. Broader Impacts Overview

Early and continued exposure to science and engineering concepts as well as college planning are keys to getting and keeping students interested in higher education and majoring in STEM fields. This guiding principle of K-12 outreach is especially true for recruiting groups traditionally underrepresented in science and engineering, such as women and minorities.

OSU has a long history of delivering quality science, engineering, and college preparation outreach programs (e.g., Saturday Academy/STEM Academy @ OSU has offered enrichment classes since 1986). The office of **Precollege Programs (PCP)** enables faculty to broaden their education impacts by:

- Offering a **range of outreach programs** to fit faculty needs.
- Providing program **infrastructure** (administration, marketing, registration, etc.) allowing faculty to **focus on delivering content** and connecting with students.
- **Consulting** with faculty to initiate new outreach programs, advising on outreach best practices and connecting faculty with local K-12 resources.

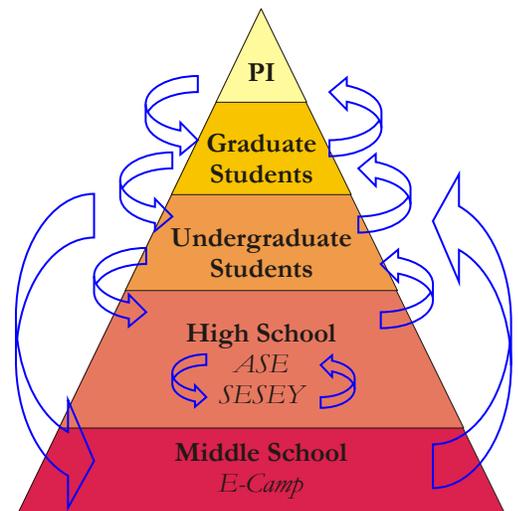
A fundamental concept that must be realized in attempting outreach is that there are both similarities to be exploited and differences to be recognized in the delivery of science content across the K-20 continuum. **Precollege Programs (PCP)**, the **College of Engineering (COE)** and the **College of Science (COS)** offer a **portfolio of programs** to match the broader impact needs of OSU faculty.

II. Portfolio of OSU Broader Impact Programs

The diversity of Precollege Programs offers faculty a choice of time and resource commitments ranging from delivering a content lecture to mentoring a student for the summer. This portfolio is by no means a complete list of programs offered to K-12 students at Oregon State University. For a comprehensive list, or more information on a program listed here, please visit our website at: <http://precollege.oregonstate.edu/>

OSU Youth Program Support

-Service Learning for OSU Students for the K-20 Continuum (Mentoring Pyramid): The COE Women and Minorities in Engineering program (Ellen Momsen, Director) in collaboration with COE and PCP has established several recruitment and retention programs targeted at women and minorities in engineering. The motivation for this is that many studies show that when women students are placed in mentorship roles, they gain increased “ownership” of the project, which leads to increased interest, motivation and retention. COE has a well-established **mentoring pyramid**, in which faculty mentor graduate students, who mentor undergraduates, who in turn mentor high school students, who in turn mentor other high school, middle school, and K-5 students. This has proven to be a powerful



model for recruitment and retention at ALL levels. All of the programs mentioned below can be serviced (that is, content developed and delivered) through this mentoring pyramid.

-Center for Outreach in Science and Engineering for Youth (COSEY): [COSEY](#) is a collaborative K-20 activity that is jointly supported by COE, COS and PCP. COSEY has been provided with a physical office space in Covell and Batcheller Halls (COE) that brings together several K-12 outreach units (PCP, STEM Academy, Talented and Gifted Programs, COS Outreach) and provides support for the daily operating expenses (copying, mailing, phones, and computer support services). Having many programs in a single location provides increased synergies in program delivery (actions and thoughts) and also serves to portray the *OSU pipeline* of academic outreach programs to the outside community of people whose children participate in these programs. PCP can facilitate interactions for a variety of programmatic opportunities currently available on the OSU campus, including the ones following.

Elementary level programs (grades K-5): Goal is **exposure** to science content and vocabulary and introduction to a college campus.

-Adventures in Learning (Talented and Gifted Programs, TAG): This 10-day summer program enables 5th and 6th grade learners with unique learning needs to participate in academic pursuits by interacting with adults who are enthusiastic about their field, and be introduced to possible career options.

-Expeditions (TAG): provides gifted, talented, and high-ability youth currently in grades 3 and 4 a 10-day educational experience with courses taught in a variety of topics.

-Winter Wonderings (TAG): offers challenging, fast-paced Saturday classes designed specifically for gifted, talented, and high-ability 3rd, 4th, 5th, & 6th graders.

-Advocates for Women in Science, Engineering and Mathematics (AWSEM): Undergraduate women studying science and engineering fields will lead AWSEM clubs for elementary school girls which meet at least four times throughout the spring term.

Middle School level programs (grades 6-8): Goals are continued **exposure** to science/engineering content and **reinforcement** of vocabulary and concepts, as well as creating familiarity with college resources and the importance of higher education.

-Discovering the Scientist Within-

A free Saturday workshop designed to introduce middle school girls to careers in science, technology and engineering. The workshop includes hands-on activities and the opportunity to meet successful women engineers, doctors, veterinarians, research scientists, and university professors. This year, the hands-on activities are designed for students only. Parents are invited to attend our welcome session.

-Campus Field Trips - Over 5,000 students, generally in grades 5-8, plus teachers and parents spend a day at Oregon State University intended to encourage underrepresented and minority groups to go to college. Groups generally spend between 2-4 hours at OSU: they tour campus, eat lunch in a dining hall, and have a **presentation and participatory or hands-on activity presented by a faculty member, staff, or students** meant to enhance school curriculum as well as expose students to potential majors or careers.

-SMILE – *Science and Math Investigative Learning Experiences*

The SMILE Program is a partnership between Oregon State University and 14 Oregon school districts -- mostly rural -- to provide science and math enrichment for underrepresented and other educationally underserved students. The program functions as a "pipeline", taking students from 4th to 12th grade and ultimately into post-secondary education. The SMILE Program conducts a year-round schedule of activities designed to provide hands-on science experience, strengthen students' knowledge, and raise students' academic and career aspirations. OSU resource faculty and The SMILE Program professional staff provide scientific and pedagogic expertise, access to equipment, mentoring, computer networking, teacher training, and administrative support; the schools provide energetic students and dedicated teachers.

-STEM Academy Middle School Engineering Camp (E-Camp): This week-long, non-residential summer program typically engages 24 middle school students in activities that relate to the entire range of engineering majors and careers. The activities are provided by faculty and are usually delivered by undergraduate and graduate students in collaboration with faculty.

-Advocates for Women in Science, Engineering and Mathematics (AWSEM): Undergraduate women studying science and engineering fields will lead AWSEM clubs for middle and high school girls which meet at least four times throughout the winter and spring term.

-Outside the Box (TAG): Enables gifted, talented, and high-ability youth who have completed grades 7 or 8 to pursue topics of interest through a unique combination of in-depth, challenging academic explorations and social interaction with intellectual peers.

High School level programs (grades 9-12): Goals are **exposure** and **reinforcement** of science/engineering concepts, **applicability** to daily life, and influence on college major and career options.

-Summer Experience in Science and Engineering for Youth (SESEY): SESEY is primarily for high school girls and ethnic minorities traditionally under-represented in science and engineering, and for science, math, or physics **teachers** who are interested in developing curricular materials to promote engineering activities in their classrooms. Students come to the OSU campus for a one-week residential summer camp and are paired with a faculty mentor in engineering for a mini-research project.

-Saturday Academy Apprenticeships in Science and Engineering (ASE):

Eight week summer research program offers high school students the opportunity to work with an engineer or scientist for eight weeks during the summer. Students also attend workshops, seminars, lectures, and leadership classes at the Midsummer Conference in July, typically held on the OSU campus. There is a Year-End Symposium in August, where students present their work in a professional research meeting format which includes poster sessions and oral presentations.

Community College or University (grades 13-14): Goals are **reinforcement** of science and engineering concepts, **applicability** to daily life, and **career path**.

Example program: College of Engineering Ambassadors (<http://wme.engr.oregonstate.edu/>)

Teachers (K-12): Goals are **lifelong learning** (increased content knowledge and career information) and curriculum content development.

Example: Teacher summer workshops and participation in SESEY

Parents/Community Members: Goals are **lifelong learning** through increased content knowledge and career information to pass along to their children so that the parents become true partners in the decision making process.

III. Program Boilerplate Information for Grant Proposals

The following sections provide a basic description of each program. Faculty should edit the section based on the specific activities they will be doing with the program.

Science & Engineering • Middle & High School

Oregon Sea Grant Programs

Located at the Hatfield Marine Science Center (HMSC) in Newport, OR

Tracy Crews, Coordinator for Marine Education Program, tracy.crews@oregonstate.edu
<http://hmsc.oregonstate.edu/visitor/education-programs/day-camp>

For more than 40 years, Oregon Sea Grant has developed and supported research, education, and public outreach to help people understand, responsibly use, and conserve ocean and coastal resources. Sea Grant's Education program is dedicated to increasing marine science literacy across the full spectrum of education, both in the classroom and in daily life, for people of all ages and backgrounds.

As part of that effort, Oregon Sea Grant provides formal classes and labs for students of all ages, professional development support for science teachers, and a broad range of formal and informal learning opportunities for more than 150,000 visitors and 10,000 school children who come to the Hatfield Marine Science Center each year.

Support Opportunities for Faculty and other grant writers

1. Oregon Coast Renewable Energy Challenge

Sponsored by the Oregon Coast Regional STEM Hub, the challenge provides students with an opportunity to bring student designed and built wind energy, wave energy, and solar devices to HMSC to be tested and evaluated by a panel of engineering judges. Researchers involved in offshore wind energy and wave energy research also share current research through presentations. **Judges and new presenters are always welcome.**

2. Summer Day Camps

Multiple-day camp programs are hosted each year at HMSC for campers aged 8-18. Each week, the camp targets a particular age group and focuses on a different topic. Participants interact with researchers, collect data, and take field trips to surrounding natural areas to study local flora under the direction of Oregon Sea Grant educators. **Run a hands-on activity in the wet labs or in the field; give a tour or presentation**

3. Careers in Science Investigation (CSI)

Oregon Sea Grant runs 4-6 career days each year for middle and high school students at HMSC. These day-long events provide students opportunities to interact and work with NOAA, OSU, and state agency researchers and explore the diversity of career options in the field of marine science, through data collection, tours of NOAA

and OSU research vessels and facilities, and dialogues with scientists. **Run an activity in the lab or in the field; give a presentation on your research in the HMSC auditorium.**

Science & Engineering • High School

SESEY

Summer Experience in Science and Engineering for Youth

Skip Rochefort, Founder and Director, skip.rochefort@oregonstate.edu
<http://cbee.oregonstate.edu/sesey/>

The primary focus of the SESEY program is the exposure and recruitment of traditionally underrepresented students (high school girls and ethnic minorities) who have completed their freshman, sophomore or junior years in high school, to careers in science and engineering. ***These target groups represent over 90% of the more than 650 SESEY participants in the last seventeen years.*** The students are brought to the Oregon State University campus for a one-week residential summer camp where they are paired with faculty and student mentors in engineering for a mini-research project. There are also group learning activities (computer training; field trips, college and career planning); career presentations (women/minority college students and professionals, most of which are SESEY alumni; and, of course, evening social activities to promote student bonding (music performances, game room, recreation center). ***The emphasis is on exposure to science and engineering as a viable and interesting career path.*** Career counseling is provided by faculty mentors, and the undergraduate and graduate students who work with the students throughout the week as research project advisors and friends. The culmination of the weeks' research projects is a poster presentation by the students to a gathering of parents, friends, mentors, and OSU administrators.

The SESEY program participant numbers have grown from approximately 20-25 students in the early years, to a current level of approximately 60 students (capacity limit). The students come primarily from the Pacific Northwest region (OR and WA), but there is also a national (CA and East Coast) and international flavor (China, American Samoa, Puerto Rico). The number of "positive outcomes" from the SESEY program are impressive, with a significant portion (> 95%) of the college eligible students attending either Community College or University, and many of the early alumni already graduated and either entering the workforce or going on to graduate studies.

Support Opportunities for Faculty and other grant writers

1. Support cost of a SESEY student. Direct funding for one student for one week - **\$500**
2. Mentor a student group (2 students) in research laboratory for SESEY week. Faculty would provide an undergraduate or graduate student mentor to supervise the students for the week (approx. **\$400-\$500** cost in student salary to faculty) and pay for all lab materials and supplies.
3. COMBO Package – support two students and host in your lab! **\$1000 - \$2000.**

Science & Engineering • Elementary, Middle & High School

STEM Academy @ OSU (formerly Saturday Academy @ OSU)

Cathy Law, Director, Catherine.law@oregonstate.edu
<http://stemacademy.oregonstate.edu/>

Hosted by the College of Engineering and the College of Science, *STEM Academy@ OSU* impacts approximately 1,000 students per year through summer camps, after-school clubs, apprenticeships and classes at Oregon State University and surrounding businesses and governmental organizations. Programs place special emphasis on math, science, engineering and technology and are a unique opportunity for K – 12th grade students to be engaged in hands-on science at the forefront and understand research first hand. Each year, STEM Academy at OSU involves approximately 50 research faculty and graduate students in teaching classes and workshops. The director provides one-on-one support to each instructor to ensure that each activity is engaging, interesting, and appropriate for the target audience.

Support Opportunities for Faculty and other grant writers

1. *STEM Academy Camps & Classes*

STEM Academy offers week-long summer camps and select classes throughout the year in a wide variety of subjects. Students in grades K through 12 can study topics such as engineering, robotics, marine biology, web design, or veterinary medicine. Camps and classes are taught by university faculty, graduate students and local professionals. **Cost: \$250 per student for a 15-hour camp or class.**

2. *Apprenticeships in Science and Engineering (ASE)*

Connects scientists and engineers serving as mentors and student apprentices for an eight-week summer internship to perform research and work on projects related to engineering, computer science, physics, chemistry, math, medicine, ecology, biology, and other scientific fields. A mid-summer conference brings almost 40 scientific professionals to talk with students about their career and introduces students to a college campus setting. An end of summer symposium gives students the opportunity to present their work in poster and oral presentations to a wide and diverse audience.

Cost: \$3200 per summer apprentice.

3. *AWSEM (Advocates for Women in Science, Engineering and Math) Club*

AWSEM provides an after-school club for elementary, middle and high school girls in Corvallis. Girls are invited to participate in hands-on engineering and science activities at OSU led by a dynamic group of OSU undergraduate women. AWSEM's mission is to create and support a network of science and technology practitioners, educators, parents and community organizations committed to enriching opportunities in science and mathematics for young women. **Cost: \$150 to sponsor one student.**

4. *In-School Outreach*

STEM Academy delivers WeDo LEGO Robotics programming to K-2 youth and trains teachers to use the platform as well. College, industry, and community mentors are trained to work with the K-2 students. Target schools are low-income and have high numbers of underrepresented students. Student instruction happens during school hours so it includes 100% of all students in each classroom. To follow up with this program, STEM Academy plans to deliver Computer Science programming and training to students and teachers in grades 3 and above. **Cost: FREE to schools; Real cost to deliver to each classroom is approximately \$1,500; Materials needed: small laptops, such as Intel Classmates**

The SMILE Program

The Science and Math Investigative Learning Experiences Program

SueAnn Bottoms, Director (sueann.bottoms@oregonstate.edu)

Website: <http://smile.oregonstate.edu/>

The goal of The SMILE Program is to increase the number of underrepresented youth who graduate from high school and pursue STEM college degrees and careers. SMILE offers afterschool clubs in rural communities across Oregon and has served over 8000 students (65% female, 50% Latino, 25% Native American) since 1986. Typically we annually **impact 700 students in grades 4-12**, in over **34 rural schools**, providing professional development for **65 teachers**. We are supported by a wide range of partners including NOAA, USDA, NSF, ODE and the Oregon Community Foundation.

The SMILE program includes the following components:

- *Teacher's Professional Development*: OSU faculty can work with K-12 teachers at three annual Teacher's Workshops that focus on: professional practice, increasing STEM content knowledge, and providing teaching materials for use in their classroom and in SMILE clubs.
- *Designing Teaching Materials*: The SMILE program creates and delivers teaching materials on a variety of themes. Each module is part of a funded partnership and links to broader STEM content such as engineering. Teaching materials are designed to engage students, provide an enriching learning experience, and increase student's STEM career knowledge and aspirations.
- *College Connection (CC) Events*: At each level there is an annual College Connection event that supports the student's interest, aspirations and "College Readiness". Students meet and work with college students, faculty and staff to develop their own vision for an academic future.
- *College Student Involvement*: Over 200 undergraduate and graduate students work with The SMILE Program each year and go through mentor training. OSU students serve as mentors, provide expertise, support teachers' learning, and in this process, gain valuable skills.
- *Program Evaluation*: Each program includes evaluation services. Depending on the complexity of the project, these services may be provided in-house or in conjunction with external evaluators.
- *Club Support*: SMILE has a contract with each school/district that structures the funding for each club (OSU and the district role). This funding includes a teacher stipend, a club materials budget, funding for field trips funds, College Connection events and professional development.

Support Opportunities for Faculty

1. Support teacher professional development by delivering presentations at workshops and developing hands-on STEM activities for afterschool clubs. (\$10k-\$20k annually depending on engagement)
2. Support College Connection events through presentations and travel and stipend costs (\$5-\$15k)
3. Create a long-term partnership supporting the overall program--including teacher's professional development, program administration, and graduate students. (\$25k-\$50k annually)

College Awareness & Preparation • Elementary, Middle & High School

Campus Field Trips

Emily Nicholson, Coordinator, emily.nicholson@oregonstate.edu
<http://precollege.oregonstate.edu/campus-field-trips-0>

OSU Campus Field Trips are designed for students to **enhance** curriculum, **experience** campus life, and **encourage** college as a plan. The Office of Precollege Programs annually hosts over 6,000 students (generally in grades 5-8), teachers and parents for a day on campus intended to **encourage underrepresented and minority groups to go to college**. For many students, this is their first time on a college campus and presents a pivotal engagement opportunity. Groups spend between 2-4 hours at OSU: touring campus, eating lunch in a dining hall, visiting a cultural center and/or an athletic facility, and participating in an activity presented by a faculty member, staff, or student. These presentations are designed to enhance school curriculum as well as expose students to potential majors or careers, often in STEM fields.

The Campus Field Trips program grew by 24% in 2014-15 with over 8200 students and teachers from 119 schools visiting campus for group-customized tours. In 2013-14, over 6600 total visitors as part of 85 groups were hosted by Precollege Programs. Those impacted include rural students, ethnic minorities, females, potential first-generation college students, and students on free/reduced lunch. The program works closely with programs such as GEAR UP, TRIO, AVID, and MESA that target underserved populations and accordingly, approximately 47% of the participants in the 2014-15 guided tours were ethnic minorities.

Support Opportunities for Faculty and other grant writers

1. Provide engaging 45 minute presentations and activities for school groups (10-30 students), approximately twice a term. **Cost varies depending on materials used.**
2. Support OSU student tour guides and presenters. **\$10/hour.**
3. Support school groups with meals and transportation costs. **\$20/student.**

Beaver Hangouts online mentoring program

Contact: SueAnn Bottoms, PCP Director, sueann.bottoms@oregonstate.edu
<http://beaverhangouts.oregonstate.edu/>

Oregon, especially rural Oregon, is facing a crisis in college access and success. Research has shown that college student mentors have a strong impact on younger students' aspirational goal of attaining post-secondary education. However, transportation time and costs are barriers to getting college students to rural settings. In 2012, Oregon State University Precollege Programs came up with the idea to connect OSU college student mentors to economically disadvantaged and underserved K-12 classrooms, using the videoconferencing software Skype. The college students would meet with their classrooms twice a month for one hour, and provide college-themed programming. It proved to be highly effective for both the students and the college mentors. In 2014, Precollege Programs received a grant that provided the office with an AmeriCorps member to expand the program. During the 2014-2015 school year Beaver Hangouts had 20 mentors (known as College Access Coaches) who served over 400 students in 10 Oregon public schools. Our goal for 2015-2016 is to have 30 coaches serving 600+ K-12 students.

Support Opportunities for Faculty and other grant writers

1. Develop engaging 45 minute presentations and activities for STEM-focused partners such as afterschool clubs, robotics clubs, etc. **Cost varies depending on PCP staff involvement (~\$1,000).**
2. Support OSU college student mentors: **\$11/hour (\$300-\$500 per year)**

4-H International Summer Camp

Mario A. Magaña, Director, Mario.Magana@oregonstate.edu
http://extension.oregonstate.edu/latinoprogram/summer_camp

Each year, approximately 300 youth are served by the three 4-H International Summer Camps (elementary, middle and high school). 95% of these youth are Latino. The other 5% are Caucasians, Asians and, African Americans, and Native Americans. The main goal of the 6-day camp for middle school Students and the 4-day camp for elementary school students is the same: to help youth understand the importance of education and to encourage them to finish high school and plan for post secondary education. Professionals from universities, private businesses, and community organizations provide a varied menu of camp workshops and speakers.

All workshops focus in science, engineering, technology, natural resources, agriculture, forestry, and the arts and introduce related career opportunities. Additionally, all youth have an opportunity to interact with Latino college students who serve as camp counselors and staff. Sports activities and traditional camp events round out the programs. The camps are designed to provide a supportive environment that reflects Latino culture while youth continue to develop understanding, skills, and confidence that will allow them to successfully relate to the larger mainstream culture.

Support Opportunities for Faculty and other grant writers

1. The 4-H program provides full tuition scholarships for any youth regardless of their race, gender, place of origin, etc. and no students are ever turned away because they cannot pay our camp fees. The real cost per student to attend our camps is **\$300 for the elementary school and \$400 for the middle school camp.**
2. Every student supervising or mentoring youth attending our summer camps, participate free of charge; our cost per student mentor is about **\$150**. We encourage colleges and departments to provide 2-3 faculty or/and students to stay overnight and fully participate from the beginning to the end of the program. The \$150 includes board and room, materials, and accidental insurance during camp.

Intercultural Student Services

Dr. Allison Davis-White Eyes, Director, Allison.Davis-WhiteEyes@oregonstate.edu
<http://oregonstate.edu/dept/iss/about>

Intercultural Student Services (ISS) at OSU is a cornerstone of OSU's student diversity efforts, and is committed to the overall development of under-served students. We create and advocate for inclusive and educationally purposeful initiatives that enhance deep learning, academic success, cross-cultural fluency, and self-efficacy by fostering a climate that supports social equality, community engagement, and global membership.

Since 1996, our offices have performed culturally sensitive and specific outreach and recruitment to underrepresented precollege students who represent 100% of our target ethnic communities. These outreach events include presentations by OSU representatives on education after high school, funding college, admissions procedures, housing opportunities, support services, college majors as pathways to a career. Academic departments share expertise by presenting learning activities. We also collaborate with underrepresented OSU students and student organization/who volunteer to serve their communities as role models, sharing their experiences as college students in the academic, personal, social, cultural areas of their lives, advice on how to prepare for college, tour guides, etc. The focus is on helping precollege students to see higher education as a possibility, and/or learn about OSU.

Support Opportunities for faculty and other grant writers

- 1. Multicultural School Visits:** The programs will consist of a tour of campus, a student panel, several interactive activities and a presentation on the importance of higher education. These will focus on lower-income or minority students that would otherwise not have an opportunity to visit OSU **Meal and Transportation Costs: \$20/student.**

4-H Summer Conference

Roberta Lundeberg, Roberta.lundeberg@oregonstate.edu
<http://oregon.4h.oregonstate.edu/4h-summer-conference>

Each year the 4-H youth development program brings 300-350, 7-12 grade youth to campus for a three night, four days conference. In 2014, the conference hosted 410 students, 69 adults, and a total of eight different class sessions each containing a variety of classes. The program has multiple foci including:

- Exposing youth to new ideas and experiences
- Promoting social interaction between rural and urban youth
- Introducing youth to college life and possibilities after high school
- Providing safe opportunities for youth to grow without their parents
- Publicize OSU as a potential college choice

A major portion of the conference consists of class sessions (six sessions over one full day and one half day). The focus of these sessions is varied. Some classes are purely recreational, like dance or yoga. Others teach life skills such as public speaking or budgeting. The majority of the classes, however, are centered on exposing students to opportunities found campus and in higher education. These include workshops at the Hatfield marine science center, campus tours and sessions taught by faculty from numerous departments. Participants also spend time at campus facilities like Dixon Recreation Center and are treated to a national caliber speaker. In addition an afternoon is devoted to a community service project in the greater Corvallis area.

Support Opportunities for Faculty and other grant writers

1. **Class Instruction:** Faculty or OSU students can teach one or more 90 minute, half day or full day classes in a classroom or at their lab. Each class has between 10-45 students depending on the request of the instructor. **Cost may vary.**
2. **Support a Student:** Direct funding for scholarships. **\$200.** Transportation costs. **Varies.**

Talented and Gifted (TAG) Programs

Dennis Hickey, Precollege Programs TAG Coordinator, Dennis.Hickey@oregonstate.edu

<http://winter.oregonstate.edu/>

<http://expeditions.oregonstate.edu/>

<http://ail.oregonstate.edu/>

<http://otb.oregonstate.edu/>

The TAG programs include a variety of school-year and summer programs that provide a unique combination of in-depth academic explorations and social interaction for talented, gifted, and high-ability youth. Participants experience discovery, challenge, and excitement with offerings designed to address their accelerated interests and abilities.

Expeditions (3rd and 4th grades), Adventures in Learning (5th and 6th grades), and Outside the Box (7th and 8th grades) are 10-day summer programs that enable students with unique learning needs to participate in academic pursuits by interacting with adults who are enthusiastic about their field, and to be introduced to possible career options. Winter Wonderings (3rd-6th grades) is offered on six consecutive Saturdays with a variety of exciting and interactive topics. Popular classes have included LEGO® Robotics, Chemistry Investigations, 3-D Art, Veterinary Medicine Explorations and many more.

Support Opportunities for Faculty and other grant writers

- 1. Winter Wonderings:** Individuals are invited to propose and teach a six-Saturday 80-minute course on a topic of interest to inquisitive youth. Class size ranges from 10-16 students. Structure of the class should allow for hands-on, interactive experiences. **Cost is \$360-\$425 plus any class supplies for one section of one course.**
- 2. Expeditions and Adventures in Learning:** Individuals are invited to propose and teach a one-hour ten-day course on a topic of interest to inquisitive youth. Class size ranges from 10-20 students. Structure of the class should allow for hands-on, interactive experiences. Individual and/or group work/projects can be offered. **Cost is \$450 plus any class supplies for one section of one course.**
- 3. Outside the Box:** Individuals are invited to propose and teach a 90-minute or 120-minute ten-day course on a topic of interest to inquisitive youth. Class size ranges from 10-20 students. Structure of the class should allow for hands-on, interactive experiences. **Cost is \$645 plus any class supplies a 90-minute course; \$860 for a 120-minute course.**

School of Arts and Communication (SAC) Academy

Sean Mills, sean.mills@oregonstate.edu

<http://liberalarts.oregonstate.edu/school-arts-and-communication/sac-academy>

JumpstART is a summer Precollege Visual and Performing Arts Workshop sponsored by the School of Arts and Communication. The program is designed for young artists, ages 15 to 18, who have demonstrated a heightened interest in the visual and performing arts and seek an opportunity to increase their skills. Jumpstart provides participants with a week of accelerated instruction in a university environment. In addition to the in-class learning experience, student education is supplemented with visiting artist lectures, workshops and excursions. A fundamental goal of Jumpstart is to assist students in the development of a portfolio that can be used to apply to a university or art institute of their choosing. The program concludes with a portfolio and performance review, a final exhibition and an award ceremony.

A Summer Chamber Music Camp Experience for Youth and Young Adult String Musicians

The Oregon State University Chamber Music Workshop is a summer program for advanced and intermediate string musicians, ages 10 through 23. The workshop takes place in the heart of the Willamette Valley, on the beautiful campuses of Oregon State University and Ashbrook Independent School in Corvallis. Participants benefit from expert coaching, sight reading clinics, supervised practice sessions, master classes, the opportunity to perform with small ensembles in formal and informal concerts and more. There is also ample time to explore Corvallis and the OSU campus through a wide range of free time activities.

High School Journalism Institute

Steven Sandberg, Director, steven.sandberg@oregonstate.edu
<http://www.oregonlive.com/teens/>

The High School Journalism Institute brings interested high school students underrepresented in media fields to OSU for an intensive journalism boot camp led by journalists from The Oregonian and experienced high school journalism educators who mentor and coach participants in teams of two.

Every student writes articles, blogs, and takes photographs. Several create videos or write opinion pieces for the newspaper. The students conduct multiple interviews for every story. Some travel as much as an hour out of town to gather information for their stories. They write, rewrite and reexamine their own work until it is better than anything any of them has imagined being capable of writing. The experience of hard work on a college campus gives all participants a new energy to face challenges and believe in themselves.

Support Opportunities for Faculty and other grant writers

1. **\$920/student.** Students attend the Institute free. All lodging, meals, instruction, evening activities and materials are covered. Mentor a student during the journalistic process!



Precollege Programs

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