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PURPOSE
In 2013, Boise State’s IDoTeach program began offering paid summer internships to its students, funded by the National Science Foundation’s Robert Noyce Scholarship Program. The main goals for the IDoTeach Noyce Summer Internships are to encourage retention and broaden student exposure to STEM education. Noyce interns are paid a stipend to work within informal educational environments.

THE ROBERT NOYCE GRANT
Robert Noyce co-founded Fairchild Semiconductor in 1957 and Intel in 1968. He is also co-inventor of the integrated circuit, which is the electronic heart of every computer, automobile, cell phone, advanced weapon and video game.

The Robert Noyce Teacher Scholarship Program is a grant funded through the National Science Foundation to encourage talented science, technology, engineering and math (STEM) majors and professionals to become and remain certified secondary (grades 7-12) science and math teachers.

The IDoTeach program, in conjunction with Boise State’s College of Education, jointly facilitates the Robert Noyce award and together are currently overseeing its Noyce Phase II grant, 2012 - 2017. There are three components to the theoretical framework of the grant. Combined, these aim to recruit and retain more qualified STEM students to explore education and ultimately go into teaching STEM disciplines.
The main goal for the Noyce Summer Internships are to encourage retention and broaden student exposure to STEM education. Selected interns are of freshmen and sophomore status. This grant allows the IDoTeach program to oversee internships in STEM-focused, K-12 summer educational programs in order to provide IDoTeach students a chance to observe and engage in informal STEM education opportunities within the community.

In addition, IDoTeach oversees the students that are selected for Noyce Scholarships and will assist its graduates through induction as they become inservice teachers.

PARTICIPATING COMMUNITY PARTNERS

Aquarium of Boise

**Timeframe:** Up to a 10 week internship; June through August

**Hours:** Monday—Friday (and possibly weekends), 10:00—6:00,

**Training:** On-site, provide during the first week by the Volunteer Coordinator

**Overview:** The IDoTeach Intern will be working primarily in the Education and Outreach programs at the Aquarium of Boise. Interns are expected to assist and support the general operations at the Aquarium, and be available to assist in the Educational Mission of the Aquarium of Boise. Our Mission is to inspire the community to enhance the quality of life for all terrestrial and aquatic animals by teaching and inspiring people of all ages to better understand, care for, and conserve all life on our planet to ensure a greater future for us all. The interns gain invaluable experience in informal STEM education as they work with biologists and office staff in this community-based environment to deliver quality educational outreach and promote marine conservation.

Bogus Basin Mountain Discovery Camp

**Timeframe:** 10 week internship; weeks (M-F) of June 5, 12, 19, 26 July 10, 17, 22, 31 and weeks of either August 7 or 14

**Hours:** Monday thru Friday, 8:30 – 4:00

**Training:** 1st week of the program, May 30 – June 2

**Miscellaneous:** Transportation is provided to and from the mountain (meet at Fort Boise or Whitney Community Center).

**Overview:** Students should be comfortable spending the majority of the day outdoors in the forest. We will be hiking on various, uneven terrain (some designated trials and some off-trail hikes). In an effort to provide the best possible quality for our participants it is important that our staff comes together as a unified and supportive team. Therefore, it is important that students placed with Mountain Discovery Camp are
comfortable stepping up and taking on key leadership tasks (such as leading various activities). Interns will be leading groups of 8-12 year olds around the Boise National Forest facilitating various outdoor activities and skill development. Through our staff training we will prepare interns for this; however, it is important she/he take initiative and are able to problem solve on her/his own. Our program runs Monday through Friday. Each day we will explore a different area of the forest and introduce different activities. Each day builds upon the previous as participants becomes more comfortable in this environment. All staff members are tasked with providing a safe learning environment where children are able to explore and play in the forest. We facilitate various activities that encourages participants to fully engage and discover the forest. We will teach them how to use a compass, how to identify edible plants, how to use flint and steel, and how to just be outside and enjoy that time and space. This position would be suitable for a motivated individual who is passionate about being out of doors and working with youth.

Boise School District – Summer School Teaching Assistant

**Time Frame:** 8 week internship; June 5 - July 28

**Hours:** Monday – Friday, 8:00 - 4:00

**Training:** On site with a mentor teacher

**Overview:** This internship would involve interns working in a variety of in traditional secondary (grades 7 - 12) science and mathematics classrooms during summer school. The opportunities for growth include teaching whole group lessons, small group lessons and individual student help. Each intern would be assigned to a certified site instructor who would mentor them in lesson design, classroom management, instructional strategies and inquiry based learning. This internship is ideal for the student who wants to gain practical classroom experience.

Boise State University - Upward Bound

**Timeframe:** 5 week internship; June 12–July 21, off the week of July 3rd

**Hours:** Monday thru Friday, 8:00 – 5:00

**Training:** 6/9, to review policy and meet faculty

**Miscellaneous:** Must be 20 years of age and need a cell phone w/text to communicate with staff

**Overview:** This program is a federally funded program that prepares and motivates high school students that are low income, first generation, and college bound, for success in education beyond high school. Students from various treasure valley high schools take
Upward Bound classes at their schools during the academic year and come together to participate in a six-week summer residential program on the campus of Boise State University. The program includes college preparation courses, workshops, enrichment classes, and extracurricular activities. Students model the college-going experience by living in the dorms and taking classes in college classrooms. Interns for this position are called “academic mentors.” General duties include tutoring and supervising upward bound students in math and science classrooms. In addition, academic mentors assist upward bound teachers in classroom preparation. This classroom experience is invaluable for the aspiring teacher, especially one that hopes to teach in a diverse setting.

**Discovery Center of Idaho**

**Timeframe:** Up to 10 week internship; June-August

**Hours:** Monday – Friday, 8:30-4:00

**Training:** May 30 – June 9, with staff

**Overview:** Our mission is to inspire lifelong interest and learning in science, technology, engineering and math. We believe learning is fun and expands minds and lives. Because of the opportunities we provide, our community is more scientifically literate, curious and empowered to explore. Interns will present interactive, hands-on Summer Camps on a variety of STEM topics, including a strong emphasis on robotics and Computer Science. They will manage a classroom of up to 25 elementary-aged students, including lunch hours with outdoor activities. They will interact with parents at the start and end of each day to ensure they know what their child learned and organize and lead an open house – with help from the Education Department – where the students can show off their accomplishments to family and friends at the end of each week. Additionally the intern will suggest supplemental hands-on STEM activities to extend the curriculum developed by the Education Department.

**Idaho Science and Aerospace Scholars (ISAS)**

**Timeframe:** 6 weeks (2 academies); July 9-15 & July 23-29

**Hours:** 104 per academy and 76 additional hours

**Training:** Orientation on May 3rd

**Miscellaneous:** Requires online participation for student PLC prior to summer academy

**Overview:** Idaho Science and Aerospace Scholars (ISAS) is an exciting program administered by the State Department of Education. ISAS is a partner program with NASA Aerospace Scholars and is designed to inspire 11th graders to pursue careers in
science, technology, engineering, and mathematics (STEM). Students engage in a 16 week interactive online course working with NASA-based curriculum and master educators in Idaho STEM topics. At the end of the online course, one day regional capstone events will be held to provide a forum for ISAS students to meet face to face and gain a deeper appreciation of Idaho STEM opportunities in higher education, industry, and government. Eastern Idaho Regional: June 6 at the Center for Advanced Energy Studies in Idaho Falls; Northern Idaho Regional: June 20 at the University of Idaho in Moscow; Southwestern Idaho Regional: June 20 at Gowen Field in Boise. At the completion of the course, students will have the opportunity to participate in an ISAS Capstone Event, a regional gathering that will provide ISAS students with a deeper appreciation of Idaho STEM opportunities in higher education, industry, and government. The 88 top performing students from the online course will be invited to participate in a week-long residential summer academy at Boise State University to be held July 9-15, 2017 (Academy 1) and July 23-29, 2017 (Academy Two). Interns will work with Teacher Mentors to guide and empower students in completing research project of a simulated human mission to Mars; assist students in researching information, creating presentations, working with ISAS staff to present programming activities and assist with evaluations and data collection. Interns exemplify good and professional behavior; participate in online professional learning community with students prior to summer academy.

**MK Nature Center**

**Timeframe:** 5-10 week internship (May 15th – August)

**Hours:** Monday thru Friday and possible weekends if available, 9:00 – 3:00

**Training:** Initial 1 hour staff meeting and ongoing job shadowing with MK Staff to learn various programs

**Overview:** The Idaho Department of Fish and Game MK Nature Center is located close to BSU along the Boise River, adjacent to the Idaho Department of Fish and Game Headquarters on Walnut Street. Throughout the summer, students (pre-K thru 6th) from local schools visit the nature center on a daily basis to participate in outdoor education programs that focus on key concepts of ecology. Visiting students are guided through the nature center grounds and along the Boise River. The interns gain valuable experience as they help the education coordinators lead lessons in these respective environments. There are large variety of programs delivered to visitors throughout the summer. Other duties might include staffing informal education booths for the general public to walk up and interact with, helping design informational signs, feeding captive
animals, cleaning animal cages, sweeping the path, weeding, staffing the front desk. We expect interns to put forth their best efforts to practice teaching and become an interactive member of our fun and dynamic team.

**Zero Robotics**

**Timeframe:** 5 week internship session (TBD), either 6/12-7/21 or 6/26-8/4

**Hours:** Varied Monday – Friday, No more than 8 hours a day.

**Training:** TBD

**Overview:** The Zero Robotics Middle School Summer Program is an innovative and inspiring program for middle school students that is truly out of this world. The five-week STEM curriculum introduces students to computer programming, robotics, and space engineering, and provides hands-on experience programming SPHERES (Synchronized, Position, Hold, Engage, Reorient, Experimental Satellites). The program culminates in a tournament where winning teams’ SPHERES compete aboard the International Space Station (ISS). Middle school participants will get to see the SPHERES operate in space via a live feed from the ISS while NASA astronauts provide real-time commentary. The state of Idaho will have 5 – 15 teams and compete against teams from other states. A team typically has 10-20 students. Each team will have their own mentors to lead students through the curriculum and guide them in writing and compiling code. The intern will be the lead mentor for the state. They will receive special training on Zero Robotics in Boston at MIT so that they can become an expert mentor for all of the Idaho teams. The intern will be responsible for ensuring that all Idaho teams, especially the mentors, have all the information and knowledge needed to compete and have a successful program. More information can be found at [http://zerorobotics.mit.edu/tournaments/26](http://zerorobotics.mit.edu/tournaments/26)

**ZooBoise**

**Timeframe:** 6 to 10 week internship (May 30-August 18)

**Hours:** Monday thru Friday, 8:00 – 5:00 during camp weeks, Tuesday-Saturday or Sunday-Thursday during visitor education weeks

**Training:** Spend 4 days with staff reviewing history, policy, customer service, and interpretation techniques.

**Overview:** Zoo Boise connects our visitors with animals to inspire and involve our community in the conservation of wildlife worldwide. Interns will work with Education & Volunteer Services Department staff and volunteer (adult and teen docents) team in providing approximately 145,000 zoo visitors (June-August) with engaging and meaningful educational experiences regarding animals, habitats, ecology and wildlife
conservation. Interns will have opportunities to assist with summer camp programs for children, family Snooze at the Zoo overnights, and on-site visitor experience exhibits and informal programs (Butterflies in Bloom, Wallaby Walkabout, Conservation Cruise, animal encounters, Giraffe Encounter, Bear Encounter, biology & ecology themed demonstrations) as well as learning volunteer management particularly as it applies to teens. Interns will develop and implement at least 2 lessons for summer youth camp program, teach 2 biology lessons to volunteers, and create a portfolio of their intern experience due one week before last day of internship. For more information regarding Zoo Boise and its commitment to wildlife conservation, education programs and ZooTeen program, please visit www.zooboise.org

NOYCE INTERN SELECTION CRITERIA
A combination of factors are considered:

- Minimum requirements met: US citizen or permanent resident,
- Boise State University IDoTeach Student
- Freshmen and sophomores qualify by having (57 credits or less) in their degree plan (see catalog)
- Completeness and timeliness (during open window) of application submission
- Scheduling and attending a personal interview with the program manager
- Competency in STEM subjects emphasized in the community partnerships of interest: review of school transcripts for key subjects, levels of difficulty, course completion rate and grades
- Reference recommendation from a STEM or Education instructor or an employer
- Experience working with youth and the instruction of others
- Completion of Step 1—Inquiry approaches to Teaching (STEM-ED 101)
- Completed adjudication form
- Coordination of applicants’ site preferences

ROLES AND RESPONSIBILITIES

NOYCE INTERNS

- Attend as expected and be on time.
- Follow the dress code for the site, including expectations for personal hygiene.
- Utilize standard site precautions for health and safety.
- Display a professional disposition (reflect on teaching, be receptive, accept constructive criticism, have a positive attitude, be flexible, communicate with parents, leave cell phone off, etc.).
• Build a positive rapport with the site coordinator and instructors.
• Build a positive rapport with the students.
• Show confidence in interactions with youth.
• Be actively engaged in the facilitation of the program (take initiative where appropriate, engage with the students, etc.).
• Act as a positive role model/mentor.
• Display an understanding of STEM concepts.
• Encourage the students to think critically.
• Show interest in and be enthusiastic about teaching and student learning.

Note: An additional responsibility is to attend each of the 2 internship seminar sessions on 5/30 & 8/1. This seminar, STEM-ED 498, is a 1-credit course that IDoTeach pays for.

SITE INSTRUCTORS
• Meet with and/or contact interns before their term begins to inform them where to park, the site dress code, safety standards, etc. and to provide training for the activities interns will help facilitate.
• Encourage interns to engage in activities, but do not leave them alone with students.
• Appropriate activities for interns include demonstrations, outdoor education, field or lab investigations, designing instruction, small group instruction, one-on-one instruction, tutoring, and assisting with set up/clean up.
• Take a few minutes daily to provide interns with teaching tips and to evaluate the effectiveness of activities and approaches.
• Be positive about the teaching profession, and demonstrate best practices.
• Provide ideas and encouragement for summer seminar activities/portfolios
• Complete end-of-internship evaluations on the interns and the program.

SITE COORDINATORS
• Provide quality youth STEM programs and effective site instructors.
• Meet with and/or contact interns before begins their term begins to inform them where to park, the site dress code, safety standards, etc. and to provide training for the activities interns will help facilitate.
• Share information from the Noyce Intern Program staff to the site instructors.
• Complete end-of-internship evaluations on the interns and the program.

INTERN PROGRAM MANAGERS
• Help secure internship partnerships and placements.
• Advertise, recruit and participate in the intern selection process.
• Promote STEM education, especially the IDoTeach program and the STEM-ED courses at
Boise State University.

- Facilitate an orientation with interns to review inquiry-based instructional approaches and share tips for interacting with youth.
- Communicate with Site Coordinators to check on interns
- Serve as the main point of contact for interns, site coordinators and site instructors.

**NOYCE II PRINCIPAL INVESTIGATOR and Co-PIs**

- Identify and secure formal partnerships.
- Supervise the Intern Program Manager.
- Advertise, recruit and participate in the intern selection process.
- Promote STEM education, especially the IDoTeach program and the STEM-ED courses at Boise State University.
- Manage the internship program budget.
- Handle participant informed consent for human subjects research.
- Approve intern stipend payments.
- Evaluate the intern program and contribute to annual grant reports.

**GRANT EVALUATION COORDINATOR**

- Identify program evaluation instruments.
- Conduct interviews, observe internship activities, and coordinate data collection efforts.
- Participate in analysis of findings and make recommendations for program improvement.
- Prepare annual grant reports.

**IN CASE ISSUES ARISE...**

**INTERNS**

- Discuss program/site concerns with the site instructor. If necessary, escalate to the site coordinator and the Internship Program Managers.
- For Intern Program questions or concerns (stipends, etc.), contact a Program Manager.

**SITE INSTRUCTORS & SITE COORDINATORS**

- Discuss concerns about performance directly with the intern. If improvement is not made, contact the Internship Program Manager.
- For intern program questions or concerns (stipends, etc.), contact the Intern Program Manager.

**CRITERIA FOR DISMISSAL**

- Each intern is expected to comply with the Roles and Responsibilities delineated in this handbook.
• If expectations are not being regularly met, site staff and the Intern Program Manager will work with the intern to foster improvement.
• If satisfactory progress is still not made, the intern may be subject to dismissal.
• Any dismissals must be issued through the Intern Program, not through the site staff.

GOALS FOR THE INTERN PROGRAM
• For student interns to develop a deeper understanding of STEM Education
• For Internships to provide for a range of learning activities; planning, instructing, tutoring, demonstrations, and providing leadership.
• For interns to represent a diverse group of students, including many second-career students.
• To connect interns with the community through professional partnerships.

IDoTeach PROGRAM
STEM-ED 101 and STEM-ED 102; Inquiry Approaches to Teaching and Inquiry-Based Lesson Design

DESCRIPTION: Interns have explored teaching as a career option through the IDoTeach program. They have planned and implemented inquiry-based science and/or mathematics lessons in local elementary (STEM-ED 101) and middle school (STEM-ED 102) classroom settings. Fieldwork in these courses has been completed under experienced supervision of an IDoTeach Master Teacher and a Mentor Teacher.

These courses allow STEM students to:
  • observe at local schools.
  • access classrooms and experiences of expert mentor teachers.
  • plan, practice, and team teach inquiry-based lessons at local.
  • instruct engaging science and math lessons.
  • reflect on teaching practices using STEM lessons to K12 Students.

Additionally, interns participate in five one-hour seminar sessions at Boise State throughout the summer. They share their experiences and develop portfolios to document them.

Registration: my.boisestate.edu
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