

Internships

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Internships

Graduate and Undergraduate Student Nuclear Engineering Internships

The Graduate and Undergraduate Student Internships are intended to enhance the education of students majoring in science, mathematics, engineering, technology, or other areas that support the mission of the Department of Energy's Nuclear Energy Program. The Department of Energy's (DOE) Nuclear Reactor Technology lead laboratories are Argonne National Laboratory (ANL) and the Idaho National Laboratory (INL). These laboratories will make awards to eligible graduate and undergraduates through a grant from DOE. The internships provide an intensive introduction to science and engineering careers through the guidance of experienced mentors. Graduate-level internships in the program are available at Oak Ridge National Laboratory (ORNL).

The program is open to students who have completed their sophomore year and are currently enrolled as a full-time student at the time of application. All awards are contingent upon security access approval by the host laboratories. Participants will not be allowed to commence with the program until this approval is given.

For further information and to apply, please visit http://www.dep.anl.gov/p_shared/gusnef/gusnef.htm.

Laboratory-Graduate Research Appointments: Laboratory-Graduate Research (Lab-Grad) appointments are available for qualified U.S. university graduate students who wish to carry out their thesis research at Argonne National Laboratory under the co-sponsorship of an Argonne staff member and a faculty member at the student's home institution. The university sets the academic standards and awards the degree. In practice, participation by the faculty member varies from full partnership in the research to general supervision of the student's thesis work. The Argonne staff sponsor undertakes to keep the faculty sponsor informed about the student's progress, and he/she attends the thesis defense.

Lab-Grad appointments are for a one-year term with annual renewals being contingent upon satisfactory performance by the appointee. Appointments usually start when the student begins full-time thesis research at Argonne after having completed all other academic requirements. In certain cases, students may be awarded support for pre-thesis studies on campus, provided that they intend to carry out their thesis research at Argonne.

Support of a Lab-Grad appointee consists of a stipend, tuition payment up to \$5,000 per year, and certain travel expenses. In addition, the student's faculty sponsor may receive payment for limited travel expenses. In cases where the student's annual tuition cost exceeds \$5,000 per year, the university is expected to accept this amount as full tuition payment.

An application for a Lab-Grad appointment may be submitted at any time during the year and an appointment may begin at any time. To be eligible for a Lab-Grad Appointment, a student must be a United States Citizen or Permanent Resident Alien. A completed application should be submitted at least one month prior to any proposed starting date.

For further information and to apply, please visit http://www.dep.anl.gov/p_graduate/labgrad.htm.

Thesis-Parts Appointments: Thesis-Parts Appointments support qualified graduate students who wish to visit Argonne for periods from a few days to a few months, so that they may utilize special Laboratory facilities. Financial support, consisting of travel, housing and a per diem payment, may be provided to help defray the cost of visiting Argonne. Applications are best made through an Argonne staff person or research division appropriate to the proposed activity.

For further information and to apply, please visit http://www.dep.anl.gov/p_graduate/thesispa.htm.

Guest Graduate Appointments: Guest Graduate Appointments are available for qualified graduate students who indicate that access to Argonne National Laboratory will be beneficial to their thesis research and to Argonne programs. The student's university department chairperson must indicate approval of the appointment for thesis research. A Guest Graduate is provided a gate pass, usually for one year, and the student may visit Argonne whenever appropriate. A Guest Graduate receives no stipend or living expense reimbursements from the Laboratory.

For further information and to apply, please visit http://www.dep.anl.gov/p_graduate/gstgrad.htm.

International Student Exchange Program: Appointments are available for three-month summer appointments in various nuclear related technologies at prestigious research centers in France, Germany, and Japan. Graduating seniors and graduate students who are United States Citizens or Permanent Resident Aliens majoring in science, mathematics or engineering at universities or colleges in the United States.

Salaries will be paid by the research centers to which the students are assigned. Funds for transportation and incidental expenses will be provided.

For further information and to apply, please visit http://www.dep.anl.gov/p_graduate/ISEP/index.html.

Academic Year and Summer Science Undergraduate Laboratory Internship Programs: The Program extends for a ten week period that typically begins in early June and runs through mid-August. In response to the growing national security concern for decreasing numbers of U.S. citizens in graduate programs for science, technology, engineering, and mathematics, the U.S. Department of Energy (DOE) – Office of Science sponsors the Science Undergraduate Laboratory Internship Program. This program provides special training and research experiences to undergraduate students at the DOE National Laboratories. SULI enables students to pursue technical careers and advanced educational opportunities by giving them direct exposure to major scientific research facilities and also to the laboratory's scientific and technical staff. Limited numbers of appointments are available during the Fall and Spring semesters for 15 weeks.

Participating students receive a stipend and spend 10 weeks in the summer at a DOE National Laboratory where they: (a) are matched with world-renowned scientists who serve as mentors; (b) are trained to use advanced scientific instruments; (c) attend seminars and lectures on scientific inquiry and recent discoveries; (d) complete a research project which is formally documented in a paper or presentation; and (e) develop professional and technical communication skills.

Students are recruited from all U.S. undergraduate institutions and **must:** (a) be currently enrolled as a undergraduate student; (b) be interested in a career in science, technology, engineering, or mathematics; (c) be 18 years or older at the start of the program; (d) be a United States Citizen or Permanent Resident Alien; (e) have a cumulative grade point average of 2.5 or above; and (f) have health insurance.

For further information and to apply, please visit http://www.dep.anl.gov/p_undergrad/summer.htm.

Summer Community College Institute (CCI) of Science and Technology Programs: In response to the growing national economic need for a technologically skilled workforce, the U.S. Department of Energy (DOE) – Office of Science created the Community College Institute (CCI) of Science and Technology. This program provides special training and research experiences to community college students at the DOE National Laboratories. The CCI Program enables students to pursue technical careers by giving them direct exposure to major scientific research facilities and also to the laboratory's scientific and technical staff.

Participating students receive a stipend (\$400/week) and spend 10 weeks in the summer at a DOE National Laboratory where they:

- are matched with world-renowned scientists who serve as mentors;
- are trained to use advanced scientific instruments;
- attend seminars and lectures on scientific inquiry and methodology;
- receive training on career planning and transition to 4 year colleges; and
- develop professional communication skills.

Students are recruited from all community colleges and **must:** (a) be currently enrolled as an undergraduate student in a community college or accredited two year college and completed at least one semester of 12 credit hours; (b) be interested in a career in science or technology (including computer science); (c) be 18 years or older at the start of the program; (d) be a United States Citizen or Permanent Resident Alien; (e) have a cumulative grade point average of 3.25 or above; (f) be enrolled in at least six hours of coursework at the time of application; and (g) have health insurance.

For further information and to apply, please visit <http://www.scied.science.doe.gov/scied/CCI/about.html>.

Pre-Service Student Teacher Fellowships: This Program is designed to provide educational training and research experiences at Department of Energy laboratories for a diverse group of highly motivated undergraduate students who

are interested in becoming K-12 pre-college science, mathematics, and technology teachers. The program allows pre-service teachers to learn about the applied world of science, mathematics, and technology, and provides opportunities to creatively transfer this knowledge to the classroom. Students are under the mentorship of master teachers and laboratory scientists to help maximize the building of content, knowledge, habits of mind and skills through the research experience. Workshops will allow participants to receive specific examples and suggestions for applying what they learn to their academic program and ultimately to their own classrooms.

In order to demonstrate an understanding of the scientific enterprise, each pre-service teacher will work with the scientist mentor and master teacher to: (a) prepare an abstract and research paper for submission to an undergraduate research journal; and (b) deliver an oral presentation of the technical and educational relevance of the research conducted. In order to demonstrate an understanding of the educational applications in a way that specifically builds upon and incorporates the laboratory experience into a classroom setting, each pre-service teacher will work with the scientist mentor and master teacher to prepare an educational module that is inquiry-based and aligned with national standards.

Eligibility is limited to undergraduate college students who intend to become K-12 teachers with a specialty in science, mathematics, or technology. Students **must** also be either a matriculating junior or senior at a four-year university, a graduating community college student; or have recently graduated with a four year degree and are in the process of becoming certified to teach. In addition, the student must meet the following requirements: (a) be a United States Citizen; (b) be 18 years or older at the start of the program; (c) have a cumulative grade point average of 3.0 or above; (d) have completed a minimum of two lab science related courses or two math courses beyond algebra; and (e) have taken a computer course or demonstrate basic computer skills.

For further information and to apply, please visit http://www.dep.anl.gov/p_undergrad/pst.htm .

Research Aide Appointments: In addition to research participation opportunities, Argonne offers temporary employment appointments to college/university students. These appointments, made primarily during the summer months, are designed to provide the Argonne scientific and engineering staff with technical assistance. Student-level temporary employees are paid on an hourly rate, are expected to possess the skills required to do the assigned task when they arrive, and do not participate in the seminar series and field trips. Understanding of the scientific basis for the temporary employee's work is generally not emphasized. Students applying for temporary employment should use the student programs application form, clearly marking the temporary employment box.

For further information and to apply, please visit http://www.dep.anl.gov/p_shared/researchAide_appts/shorterm.htm

Cooperative Education Program: Appointments made primarily during the academic year are available to undergraduate and graduate students. Salaries are competitive and are based upon the field of study and academic year status of the student. Applications may be submitted at any time. Students must maintain full-time student status throughout their appointments. This includes the final semester before graduation. Documentation of status must be provided each semester. Students can extend their appointments for up to three months following graduation.

Argonne has two types of CO-OP Programs: Alternating (a semester at Argonne followed by a semester at college/university) and parallel (part-time work to a maximum of 24 hours per week concurrent with full-time college/university enrollment).

A student who is employed in the CO-OP Program is expected to work a minimum of one year as a parallel CO-OP or three semesters as an alternating CO-OP. Students who are interested in shorter lengths of employment should apply for a Research Aide Appointment. Graduate CO-OP opportunities are available to students while they are attending graduate

For further information and to apply, please visit http://www.dep.anl.gov/p_shared/coop/coop.htm