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Opportunity Title: Nuclear Engineering Science Laboratory Synthesis (NESLS) - Fall 2017
Opportunity Reference Code: ORNL-NESLS-FALL2017

Organization Oak Ridge National Laboratory (ORNL)

Reference Code ORNL-NESLS-FALL2017

How to Apply Applicants must apply through www.Zintellect.com. All profile and application questions/requirements must be completed and both profile and application must be completed and submitted before application can be reviewed.

The profile and application (two-step process) will require:

1. Contact information
2. Education information (i.e. dates of attendance/graduation, GPAs, majors, etc.)
3. Awards and honors
4. Employment information and nature of work
5. Information on special skills, research, areas of interest and /or expertise
6. An updated resume
7. Contact information for references, including email
8. Unofficial academic record showing name, school name, current classes and GPA - **official transcript is not required**
9. Availability dates (if applicable)

For questions, contact *NESLS@orau.org.*

Application Deadline 9/15/2017 11:59:00 PM Eastern Time Zone

Description **NESLS Goals**

- Maximize the abilities of students through cooperative research with mentors at a national laboratory
- Increase research opportunities
- Provide a learning environment useful to both national laboratories and students
- Train the next generation of nuclear scientists

Research areas of interest may include:

Nuclear Security Technologies: Material protection, control, and accounting, Radiation detection, Safeguards Transportation technologies, Arms control assessments, Fissile material, Detection Export control, Fissile material disposition, Nuclear threat reduction

Nuclear Systems Analysis, Design, and Safety: Radiation shielding, Systems analysis, Reactor physics, Facility safety, Criticality safety, Risk assessment, Thermal hydraulics, Regulatory support, Nuclear data and codes, System instrumentation and controls, Material and fuel irradiation, Enrichment technology, Advanced space reactors

Fuels, Isotopes, and Nuclear Materials: Nuclear fuels, Separations science and technology, Heavy element production, Nuclear process and equipment design, Stable and radioactive isotopes, Robotics and remote

handling, Medical isotope development, Chemical engineering

While You Are Here:

- Enrich your laboratory experience by attending lectures, seminars and other opportunities to learn more about ORNL and the research of many outstanding speakers
- Network with laboratory research staff and with fellow students
- Take technical tours of facilities at ORNL
- Prepare and present your project to laboratory staff and fellow students - optional for fall/spring appointments; required if appointment continues in summer

Selection: The award will be based on mentor's selection and project funding availability.

Duration: The award term may vary. Renewals/extensions are limited.

Benefits: Travel to and from (up to $500 each way); Housing allowance of $150/week if permanent address is 50 miles or more from Oak Ridge.

Health Insurance: Each participant is required to have coverage in a health insurance plan. It is the responsibility of each participant to secure insurance coverage before arriving at the appointed site.

ORCid: Each participant will be required to register for an ORCiD identifier number and provide to ORISE (instructions will be provided if selected).

All requirements to accept appointment must be met as stated in official selection notification and/or before start of appointment

NESLS Weekly Stipend Rates: Stipends are based on class status as shown below. Stipends shown are based on full-time participation; stipends and housing allowance will be pro-rated if appointed part-time.

Class Status*

- First Year (Freshman) - $529/wk
- Second Year (Sophomore) - $593/wk
- Third Year (Junior) - $653/wk
- Fourth Year (Senior) - $726/wk
- Masters Student - $863/wk
- PhD Student - $935/wk

Denotes class status completed **prior to ORNL report date and as defined by college/university. Applicants must be continuing education in an accredited degree-seeking program if graduating before or during the appointment period (i.e. seniors must have proof of continuance in a MS program or MS graduates must have proof of continuance in a PhD program in the following semester). You should not apply if you can not provide proof of current enrollment and acceptance into next academic level of courses if applicable.*

Have questions on how to apply? Contact NESLS@orau.org. For

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general program questions or additional program information, contact Julie Ezold at ezoldjg1@ornl.gov.

Qualifications

Eligibility: The ORNL NESLS program is open to full - or part-time students enrolled at an accredited U.S. college or university in a nuclear engineering, science, or eligible related degree with a 3.0/4.0 cumulative GPA at the time of appointment. Community college students must be working towards an Associate of Science or Associate of Engineering degree. Applicants must be continuing education in an accredited degree-seeking program if graduating with degree before or during appointment period and at least 18 years of age. All awards and active participation in the program are contingent upon security access approval to Oak Ridge National Laboratory.

Qualifications: Student applicants will be chosen on the basis of academic performance, class standing, career goals, recommendations, and compatibility of educational interests and abilities with the needs of ORNL.

Before you get started on your application, you should review the research areas at ORNL to assist you in determining what area might fit your career path. You can see the six discipline areas at www.ornl.gov and begin exploring each one.

a. For example, if you choose Nuclear Science, you will learn more about isotope production, reactor technology, nuclear security, the nuclear fuel cycle or fusion energy, etc. and see more about other research at ORNL in this area. If you dig deeper into the Related Publications/News/Research Highlights, you will be able to review articles, press releases, papers, publications, etc. that can help you identify key words, important terminology, papers, etc. that can be used as you answer application questions or update your resume.
b. You can also type an area of interest or key word into the search box at the top right corner on www.ornl.gov and explore the links that are provided to identify key researchers at ORNL or to go to the webpages of the directorates or divisions.
c. Most of the NESLS mentors are located in the Nuclear Science and Engineering Directorate at https://www.ornl.gov/science-discovery/nuclear-science. However, any mentor in any division at ORNL can choose to use the NESLS program if applicants fit their areas of research/technology.

After you have completed your application, you may want to reach out via email (use the Find People or Our People links at www.ornl.gov to obtain the email address) to the researchers you identify and let them know about your interest and why you would be a good fit for that researcher's projects and the division. Showing initiative through this connection process and discussing your passion for science and research and how it relates to what is happening at ORNL is a great way for you to introduce yourself to potential mentors. You should reference the ORNL research you have done as well as your background and interest in these emails and in appropriate

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application questions and essays. For pool-based programs such as NESLS, this personal connection is the key to "standing out" from the hundreds of applications received each cycle.

Eligibility Requirements

- **Degree:** Currently pursuing an Associate's Degree, Bachelor's Degree, Master's Degree, or Doctoral Degree.
- **Overall GPA:** 3.00
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (1 👁)
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (45 👁)
  - **Mathematics and Statistics** (10 👁)
  - **Other Non-Science & Engineering** (2 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (1 👁)
  - **Social and Behavioral Sciences** (4 👁)

Affirmation

I certify that: My cumulative GPA is at least 3.0/4.0; I am at least 18 years of age; I am currently enrolled in an undergraduate or graduate nuclear engineering, science or related eligible degree program at an accredited U.S. college or university OR if enrolled in an accredited community college, I am currently enrolled in an Associate of Science or Associate of Engineering degree program; if graduating before appointment period, I have been accepted into and will continue in the next level of studies at an accredited U.S. college or university and can provide proof of that acceptance (i.e. BS graduate accepted into MS progam or MS graduate accepted into PhD program).