

**Opportunity Title:** Analytical Chemist - Postgraduate

**Opportunity Reference Code:** ERDC-EL-2021-0019

**Organization** U.S. Department of Defense (DOD)

**Reference Code** ERDC-EL-2021-0019

**How to Apply** Click on *Apply* now to start your application.

**Description** The Environmental Laboratory (EL) is one of the seven laboratories of U.S. Army Engineer Research and Development Center (USACE-ERDC), which is the Army Corps of Engineers' integrated research and development (R&D) organization. EL provides solutions to environmental challenges for the U.S. Army, the Department of Defense and the Nation through environmental science and engineering research and development. Researchers in EL conduct research in ecosystem science and technology, environmental resiliency, environmental sensing, ecological modeling and forecasting, risk and decision science, environmentally sustainable material, systems biology, climate change, computational chemistry, environmental chemistry and environmental security.

**What will I be doing?**

Under the guidance of a mentor, you will collaborate with federal employees and contractors on environmental chemistry and geochemistry research projects utilizing state-of-the-art equipment and instrumentation. You will investigate and solve different scientific and engineering challenges associated with the USACE civil and military missions. Research projects will include the development, optimization, and application of advanced analytical methodologies for ultra-low detection of metals, organic compounds and degradation products in complex environmental media-- primarily in soil and sediment matrices. You will gain experience with a variety of x-ray based techniques, including Synchrotron-based  $\mu$ -XRF and EXAFS, as well as hand-held spectroscopic instrumentation. Experience with a wide-variety of common analytical instrumentation and methods are preferred, including HPLC, LC/MS, GC, ICP-OES and IC. Experience with more sophisticated instrumentation such as NMR, ESR, FT-IR are desired but not required.

Analytical information will often be incorporated into novel chemical signatures resolved through machine learning/artificial intelligence algorithms—hence, the ability to develop methods for chemical analysis in complex matrices and interference reduction/removal methods is desired. Opportunity may exist for travel to domestic and foreign locations for environmental sampling. The results from the research projects will be presented at national conferences, detailed in peer-reviewed manuscripts, and final reports to funding sponsors.

**Where will I be located?** Locations varies

**Why should I apply?**

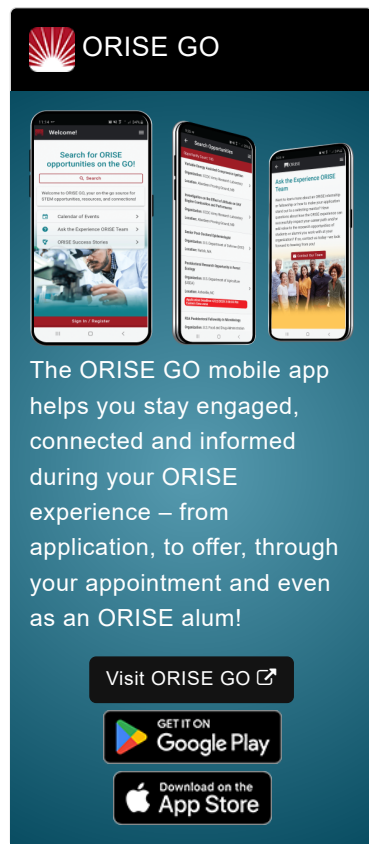
This internship provides the opportunity to independently utilize your skills and engage with experts in innovative ideas to move the proposed research forward. There are multiple opportunities available to engage in your applied research and evaluation interests.

**What is the anticipated start date?**

ERDC-EL is ready to make an appointment immediately. Exact start date will be determined at the time of selection and in coordination with the selected candidates.


**What are the benefits?**


You will receive a stipend to be determined by ERDC-EL. Stipends are typically based on the




**ORISE GO**

The ORISE GO mobile app helps you stay engaged, connected and informed during your ORISE experience – from application, to offer, through your appointment and even as an ORISE alum!

Visit ORISE GO 

GET IT ON  
 **Google Play**

Download on the  
 **App Store**

**Opportunity Title:** Analytical Chemist - Postgraduate

**Opportunity Reference Code:** ERDC-EL-2021-0019

participant's academic standing, discipline, experience, and research facility location. Other benefits may include the following:

- Health Insurance Supplement. Participants are eligible to purchase health insurance through ORISE.
- Relocation Allowance
- Training and Travel Allowance

### **What is the length of this appointment?**

This ORISE appointment is a full-time 12 month opportunity. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

### **Nature of the Appointment**

You will not enter into an employee/employer relationship with ORISE, ORAU, DOD, or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

**Qualifications** You should possess a Bachelor's degree in Chemistry, Geochemistry or a closely related field. Preference will be given to participants possessing or pursuing a Masters or Doctorate degree, with emphasis on analytical and environmental chemistry preferred. Prior experience with instrumentation or the chemistry-related fields listed in the project description will be considered.

A complete application consists of:

- Zintellect profile
- Educational and Employment History
- Essay Questions - The application includes questions specific to the opportunity
- Academic Records - For this opportunity, an official transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted.
- Current Resume/CV
- One (1) Recommendation - Applicants are required to provide contact information for at least one recommendation. You are encouraged to request a recommendation from a professional who can speak to your abilities and potential for success as well as your scientific capabilities and personal characteristics. Recommendation requests must be sent through the Zintellect application system. Recommenders will be asked to complete a recommendation in Zintellect. Letters of recommendation submitted via email will not be accepted.

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system. All documents must be in English or include an official English translation. If you have questions, send an email to [usace@orise.orau.gov](mailto:usace@orise.orau.gov). Please list the reference code of this opportunity ERDC-EL-2021-0019 in the subject line of the email. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the "Apply" button at the bottom of this opportunity

**Opportunity Title:** Analytical Chemist - Postgraduate

**Opportunity Reference Code:** ERDC-EL-2021-0019

listing. Please do not send application materials to the email address above.

*Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App Store  
or Google Play Store to help you stay  
engaged, connected, and informed during your ORISE experience and beyond!*

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#) )
    - **Communications and Graphics Design** ([2](#) )
    - **Computer, Information, and Data Sciences** ([17](#) )
    - **Earth and Geosciences** ([21](#) )
    - **Engineering** ([27](#) )
    - **Environmental and Marine Sciences** ([14](#) )
    - **Life Health and Medical Sciences** ([46](#) )
    - **Mathematics and Statistics** ([10](#) )
    - **Physics** ([16](#) )
    - **Science & Engineering-related** ([1](#) )
    - **Social and Behavioral Sciences** ([28](#) )
  - **Age:** Must be 18 years of age