

**Opportunity Title:** EPA Microbiological Assessment of Coastal Waters Internship

**Opportunity Reference Code:** EPA-ORD-CEMM-GEMMD-2020-01

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-ORD-CEMM-GEMMD-2020-01

**How to Apply** *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!

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. All transcripts must be in English or include an official English translation. Click [here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations. Click [here](#) for detailed information about recommendations.

All documents must be in English or include an official English translation.

**Application Deadline** 11/3/2020 3:00:00 PM Eastern Time Zone

**Description** **\*Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click [here](#) for information about the selection process.

**EPA Office/Lab and Location:** A research opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Environmental Measurement and Modeling (CEMM), Gulf Ecosystem Measurement and Modeling Division (GEMMD), Ecosystem Dynamics and Effects Branch (EDEB) located in Gulf Breeze, Florida.

**Research Project:** This research project is to conduct microbiological assessment of coastal waters (marine, estuarine and freshwaters), including field and lab investigations into the temporal dynamics of phytoplankton, cyanotoxins, endotoxins, bacteria and viruses in cyanobacteria-dominated and in opportunistic freshwater and fecal-contaminated coastal environments. The proposed research project will also include examining a suite of water quality parameters including nutrient speciation and concentrations in concert with 16s and 18s DNA sequencing.

Under the guidance of a mentor, the participant may participate in the following research activities:

- Conducting classical phycological techniques that include intensive microscopy, phytoplankton identification, single-cell isolation, and culturing;



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- Field trips organized to aseptically collect beach/marine waters, including measurements of water-quality parameters;
- Processing beach water for enumeration and identification of fecal indicator bacteria, viruses, and nutrients;
- Tracking samples and recorded in laboratory log books and in electronic data sheets.

**Learning Objectives:** This unique research opportunity will investigate multiple trophic levels and expose the research participant to a combination of classical and cutting-edge techniques. The research participant will be mentored in field and lab quality assurance data standards, laboratory data processing, and recording/maintaining data using laboratory notebooks. The research participant will expand their knowledge interacting with a diverse group of researchers on interdisciplinary cross-cutting scientific issues related to the coastal water assessments and investigations. The research participant will have latitude in exercising independent initiative and judgment in the research project, commensurate with their level of education and training. The research participant may communicate their findings both to Agency personnel and to the broader scientific community through presentations and peer-reviewed journal papers. These communications may also include presentations to non-technical audiences, including outreach and communication to community and educational groups.

**Mentor(s):** The mentor for this opportunity is Stephanie Friedman ([friedman.stephanie@epa.gov](mailto:friedman.stephanie@epa.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** ~December 2020. All start dates are flexible and vary depending on numerous factors. Click [here](#) for detailed information about start dates.

**Appointment Length:** The appointment will initially be for one year and may be renewed three to four additional years upon EPA recommendation and subject to availability of funding.

**Level of Participation:** The appointment is full-time.

**Participant Stipend:** The participant will receive a monthly stipend commensurate with educational level and experience. Click [here](#) for detailed information about full-time stipends.

**EPA Security Clearance:** Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA.

**ORISE Information:** This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education

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(ORISE), was established through an interagency agreement between DOE and EPA. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

**Questions:** Please see the [FAQ section](#) of our website. After reading, if you have additional questions about the application process please email [EPArpp@ornl.gov](mailto:EPArpp@ornl.gov) and include the reference code for this opportunity.




### Qualifications

The qualified candidate should have received a bachelor's or master's degree in one of the relevant fields, or be currently pursuing the degree with completion by the appointment start date. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Experience with culturing of microorganisms, cell culture, algal culture, bacterial enumeration, DNA and/or RNA extraction, PCR, qPCR, RT-PCR, and preparation of media and reagents

### Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or anticipated to be received by 12/21/2020 11:59:00 PM.
- **Discipline(s):**
  - **Engineering** (1 )
  - **Environmental and Marine Sciences** (11 )
  - **Life Health and Medical Sciences** (8 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).