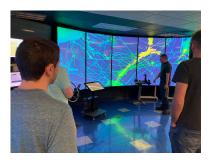
#### OCEAN EXPLORATION COOPERATIVE INSTITUTE | EXPLORING THE NATION'S BLUE FRONTIER

OCEAN EXPLORATION TRUST | UNIVERSITY OF NEW HAMPSHIRE | UNIVERSITY OF RHODE ISLAND UNIVERSITY OF SOUTHERN MISSISSIPPI | WOODS HOLE OCEANOGRAPHIC INSTITUTION



Dive into the **Bridge to Ocean Exploration (B2OE) Program** with the Ocean Exploration Cooperative Institute (OECI) at the **University of Rhode Island's (URI) Graduate School of Oceanography (GSO)!** Dip your toes into the multidisciplinary world that is ocean science with opportunities in video/data engineering, media asset management, technology asset management, applied coral science, and multimedia production.







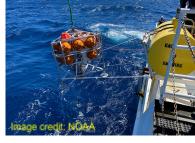
The OECI (<a href="https://web.uri.edu/oeci/">https://web.uri.edu/oeci/</a>) is a unique consortium of top oceanographic institutions: URI, Woods Hole Oceanographic Institution (WHOI), University of New Hampshire (UNH), the University of Southern Mississippi, and the non-profit, Ocean Exploration Trust. They work together to push the boundaries of ocean exploration with research and innovation in remotely-operated and autonomous vehicle operations, virtual engineering connectivity, and ocean science communication and engagement.

A core mission of the OECI is to inspire future generations of ocean scientists and engineers, and support the Blue Economy. The B2OE Program, based out of URI/GSO's Ocean Science Exploration Center, is an experiential program key to advancing this mission. Currently, the OECI is recruiting up to nine students to participate in this PAID, part-time, experiential learning program within these potential, project pathways:

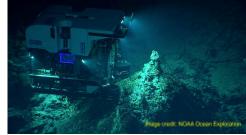
Computer science/programming
Ocean exploration data science
Ocean technology maintenance
3D modeling and animations
Multimedia production, storytelling, and/or video editing

## Project Pathway Breakdown- Ocean Exploration Data Science:

- Ocean exploration data includes large volume data sets produced that are used to map the seafloor, identify ocean organisms, understand the distribution of biology in the water column, and find locations of seafloor fluid flow. A key OECI priority is to ensure that expedition and other OECI project data is accessible to the science community and public. There are two potential projects for this pathway:
  - 1. A database management/software development project to develop a new time series database for ocean observation data obtained using benthic landers. Deep sea benthic landers (right) are rugged deep-sea tools that can be outfitted with a diverse suite of oceanographic sensors, camera systems, and data loggers to collect valuable data on deep sea ecosystems. We wish to develop a new database that enables time series analysis from these streams. Objectives include: 1) developing the database, 2) ingesting data, 3)



- developing a data dashboard that can show key findings from our datasets.
- 2. A data workflow and management project to organize and mine remotely operated vehicle (ROV) cruise data (ROV videos/photos/logs for previous research on hydrothermal vents). There would be three distinct goals for this project: a) determine if there's a way to
  - import previous data logs into a different data management system; b) if that is not possible. determine the best way to create a new, consistent data log associated with legacy ROV video data; and c) review videos/photos and/or imported logs to find observations of important animals found on vents or other hydrothermal events/features of interest.



- Useful coursework/experience requested for this project pathway:
  - Seeking students who have completed at least 1 year at CCRI
  - Suggested courses:
    - Computer literacy, including familiarity or experience with programming languages (e.g Python, JSON), markup languages (HTML, XML), operating systems (e.g. Linux) and data structures/algorithms
    - Introduction to Software Engineering, Programming Concepts, Technical Math
    - Database Design & Management to include time series databases, NoSQL type databases. (Influxdb, mongodb etc.)
    - Science coursework

### Benefits to B2OE Program participation:

- Up to \$17/hour (paid via two stipends, one in January/February 2025, and the other in May 2025)
- Exposure to cutting-edge ocean science, engineering, and media production technologies and best practices within the OECI
- Collaboration with OECI personnel; field trips to tour URI, WHOI, and other facilities, as well as local industry (if/when possible)

- Opportunity to remotely participate in NOAA Okeanos Explorer and EV Nautilus expeditions
- Peer-to-peer interaction to build communication skills
- Information exchange and networking opportunities with industry professionals during a virtual Blue Economy Career Awareness Fair

In addition to the above mentioned part-time experience, additional program requirements and expectations include:

- Time commitment of up to 10h/week (November 2024- May 2025)
- Potential for onsite and/or tele-work
- Weekly tag-ups with mentors to gauge project progress and answer questions (mentors are also available via email for questions, etc. at any time)
- Participation in OECI student events, including a virtual Blue Economy Career Awareness Fair
- Final project summary report and presentation
- Participation in pre- and post-experience 360° evaluation

### Eligibility:

- U.S. Citizenship (or F-1, J-1 visa status if applicable)
- Currently enrolled CCRI students (undergraduate/associate's degree, and/or workforce certificate)
- Degree, major, or intent to major in a field relevant to the OECI's mission; these can include, but are not limited to: STEM (science, technology, engineering and math), computer science, media production and graphic design, communications, education, and/or business operations/administration.
  - Preferred (but not required) for this pathway: Computer Studies and/or Computer Engineering students (all concentrations)

# Application Requirements:

- Interested students must complete the <u>OECI BOE online application</u> on or before 11:59 pmET, October 17, 2024.
- In addition to this application, interested individuals will also be required to submit their current resume or CV with 3 professional references listed (who can speak to the applicant's character and professional and/or academic background- this can be a professor, advisor, teacher, community member, work supervisor, mentor, etc.).



Applications will be reviewed and analyzed based on merit and relevant experience. Potential participants will be notified by **October 23, 2024**, for an in-person or virtual interview. Final selections will be made on or before **November 12, 2024**, and candidates will be notified of their program status. **The anticipated program start date, with an on-site orientation at URI's Graduate School of Oceanography campus in Narragansett, RI, will be on or before November 21, 2024.** 

Questions? Please contact Holly Morin (holly morin@uri.edu).