

Opportunity Title: Hyperbaric Engineer - Postgraduate - Naval Experimental Dive Unit (NEDU)

Opportunity Reference Code: NEDU-2021-0002

Organization U.S. Department of Defense (DOD)

Reference Code NEDU-2021-0002

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

Description This opportunity takes place at the Navy Experimental Diving Unit (NEDU) in Panama City, Florida. NEDU's mission is to conduct manned, unmanned, and biomedical research; develop, test, and evaluate diving, hyperbaric, life support, and submersible systems and procedures; and ensure all diving equipment and procedures meet the safety standards and operational requirements to expand the U.S. Navy's advantage during any undersea military operation. NEDU is equipped with the United State's largest research hyperbaric chamber complex for wet and dry hyperbaric/diving operations, a 55,000 gallon test pool, and state-of-the-art physiological research facilities. For further information, please visit <https://www.navsea.navy.mil/Home/SUPSALV/NEDU/>

What will I be doing?

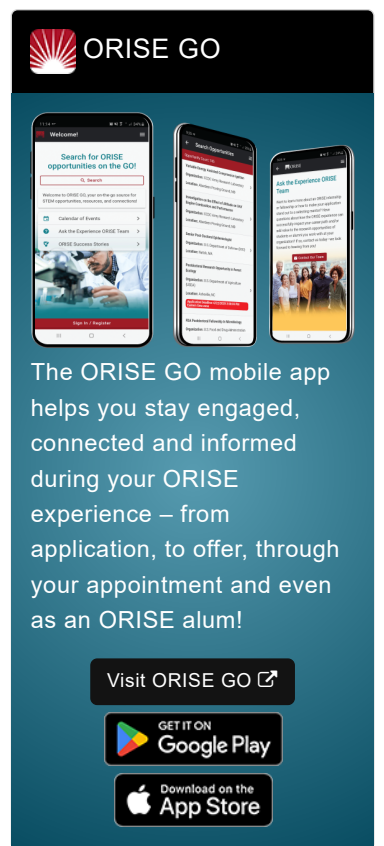
NEDU utilizes its unique shore based hyperbaric diving systems to conduct all manned and unmanned diving research on behalf of the Department of Defense. The Engineering Department is charged with the maintenance, operation, and modernization of these hyperbaric systems and also conducts limited engineering related research in support of military diving.

Under the guidance of a mentor, you will conduct the primary role of review of all relevant engineering documentation, manuals, AutoCAD drawing files, and as built systems in NEDU's possession to support the establishment of a joint identification drawings to support the configuration management program for NEDU's hyperbaric diving systems. In addition to configuration management support, you will research with the senior engineers and outside vendors to aid in the integration effort of incorporating a helium reclaim system at the Command and you will support all Engineering Department maintenance and modernization project endeavors.

NEDU has established a Configuration Management Plan (CMP) to provide organizational and managerial guidance and direction for all of NEDU's unique diving systems. Configuration Management (CM) is defined as a management process for establishing and maintaining consistency of a product's performance, functional, and physical attributes with its requirements, design and operational information throughout its life. The objectives of CM are to identify and document the characteristics of a Configuration Item (CI); to control changes to these characteristics; to provide information on the status of change action; and to audit and review the item for compliance with contractual and identification requirements.


You will gain knowledge in the following areas:


- Compile all relevant hyperbaric system engineering documentation, technical manuals, and records in NEDU's possession;
- Field verify hyperbaric chamber systems, sub-systems, and components against current drawings in preparation of drawing updates.
- Development of Joint Identification Drawings.
- Support processes to obtain required project materials including research of supplies, software, and equipment, and development of documentation for review and approval by the Design Certification Engineer and Configuration Manager.
- Develop an actionable plan for the integration of a helium reclaim system for the Ocean




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Simulation Facility.

- Develop technical documentation, conduct product and materials research, help design and construct new test apparatuses, and support maintenance activities through applying the principles of engineering.

Why should I apply?

This fellowship provides the opportunity to expose you to all aspects of mechanical engineering practice to include, hyperbarics, diving physics, diving physiology, materials science, hydraulics, pneumatics, heat transfer, electrical power, electronic controls, project plan development, design engineering, engineering report writing, and project estimation and budgeting.

What is the anticipated start date?

NEDU 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 NEDU. Stipends are typically based on the 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

This ORISE appointment is a full-time twelve 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 meet the following requirements:

- B.S. or M.S. in mechanical or ocean engineering.
- Knowledge in developing and reviewing engineering documents, 3D models and simulations, calculations, technical manuals, and drawings with subsequent document and planning generation.
- Knowledge in conveying engineering related technical details with clarity and precision to engineers and non-engineers alike.
- Knowledge in report writing and formatting to establish plans and processes related to engineering principles.

A complete application consists of:

- Zintellect profile
- Education and Employment History
- Academic Records - For this opportunity, an official transcript or copy of the student academic

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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. If you have questions, send an email to navy@orise.orau.gov. Please list the reference code of this opportunity in the subject line of the email. All documents must be in English or include an official English translation.

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- Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
 - **Overall GPA:** 3.00
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) )
 - **Communications and Graphics Design** ([6](#) )
 - **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](#) )
 - **Age:** Must be 18 years of age