Opportunity Title: Mechanical Engineer / Ocean Engineer
Opportunity Reference Code: NEDU-2020-0005

Organization U.S. Department of Defense (DOD)

Reference Code NEDU-2020-0005

How to Apply Components of the online application are as follows:

- Profile Information
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - 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. Click here for detailed information about acceptable transcripts.
- 1 Recommendation(s)

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.

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/

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, the prospective candidate will review of all relevant engineering documentation, manuals, and AutoCAD drawing files in NEDU's possession to support the establishment of a configuration management program for NEDU's hyperbaric diving systems. In addition,

the candidate will support all Engineering Department maintenance and modernization project endeavors. NEDU is establishing 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.

The candidate will:

- 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;
- Aid in the writing and development of the Configuration Management Plan and technical manual library;
- Support processes to obtain required project materials including research of supplies, software, and equipment, development of documentation for review and approval by the Design Certification Engineer and Configuration Manager;
- Develop technical documentation, conduct product and materials research, help construct new test apparatuses, and support maintenance activities through applying the principles of engineering.
- Support in the development of a Building Information Management (BIM) and 3D drawing software solution to aid in Configuration Management.

Engineering activities at NEDU will expose the candidate 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 develop, design engineering, engineering report writing, and project estimation and budgeting.

Appointment Length

This appointment is a twelve month research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

Participant Benefits

Participants 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:

Opportunity Title: Mechanical Engineer / Ocean Engineer
Opportunity Reference Code: NEDU-2020-0005

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

Nature of Appointment

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

Qualifications

Potential candidates should meet the following requirements:

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

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 5/31/2020 11:59:00 PM.
- **Overall GPA:** 3.00
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (6 👁)
  - **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** (27 👁)
- **Age:** Must be 18 years of age