

**Opportunity Title:** Human Physiological Research Support Training in Diving and Hyperbaric Environments

**Opportunity Reference Code:** NEDU-2020-0002

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

**Reference Code** NEDU-2020-0002

**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](mailto: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/>

The prospective candidate will support research under Warfighter Human Performance involving basic and applied integrative physiology research. The research primarily involves development of thermophysiological and performance guidance and testing of thermal protection equipment for military operations.

The candidate's contribution to ongoing research activities may include the following:

- 1) Coordinate and execute physiological experimentation to include, but not



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limited to human performance testing, nutrition assessment, pulmonary function testing, examination of the effects of hyperbaric and extreme environments on thermoregulation and cardiovascular, autonomic, respiratory, and muscular physiology.

2) Collect and analyze data using statistical and graphing software, as well as specialized software to measure physiological variables such as body temperature, peripheral blood flow, oxygen consumption, lactate threshold, and hemodynamic status.

3) Develop technical documentation, abstracts, journal articles, and presentations. Develop new ideas that promote current research. Prepare and publish scientific manuscripts under the direction of the Principal Investigator.

4) Maintain laboratory organization, equipment, and required supplies for project execution.

5) Support processes to obtain required project materials including research of supplies and equipment, development of documentation for review and approval by the PI and Fiscal Office, and maintenance of purchasing logs.

This opportunity will allow the candidate to engage with state-of-the-art equipment and cutting edge research that compliment and further the candidate's educational background. Specifically, the candidate will receive training in scientific methodology for integrative human physiological experimentation for the diving and extreme environments operational and research communities.

### **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:

- 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





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will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

**Qualifications** Research activities at NEDU will expose the candidate to all aspects of the research process, from laboratory research and experimental design to collection and analysis of data, and publication or reports. Potential candidates should meet the following requirements:

- Experience working with biomedical instrumentation to measure physiological parameters such as heart rate, blood pressure, metabolic rate, and skin temperature.
- Ability to identify physical signs which may be observed during exercise that are indicators of distress.
- Excellent written and oral communication skills.
- Excellent organizational and time management skills.
- Experience in biomedical laboratory research preferred. Strong organizational and communication skills, and ability to work with a diverse, interdisciplinary team required.
- Proven knowledge of Microsoft Word, Excel, LabVIEW, MATLAB, or other data acquisition coding.
- Familiarity with rigorous biomedical research operations and equipment.
- A bachelor's or master's degree in physiology, kinesiology, or biology required. Master's degree preferred.

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or currently pursuing.
  - **Overall GPA:** 3.00
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#) )
    - **Communications and Graphics Design** ([2](#) )
    - **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](#) )