

Opportunity Title: Biomechanics Engineering Research
Opportunity Reference Code: NAMRU-Dayton-2022-0003

Organization U.S. Department of Defense (DOD)

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

Description The Environmental Health Effects Laboratory at the Naval Medical Research Unit Dayton researches the physical, physiological and cognitive effects of exposure to environmental stressors, to include chemicals, particulate matter, noise, temperature/humidity and altitude effects, in addition to other physiological stressors (such as fatigue, dehydration, etc).

What will I be doing?

This research opportunity involves neck and back pain initiatives through activities/projects in support of the Spine Health Improvement Program (SHIP) at the Naval Medical Research Unit Dayton. Under the guidance of a mentor, you will take part in projects studying neck and back pain in aviators and aircrew as well as biomechanical systems integration/evaluation. This opportunity provides hands-on, educational experience with biomechanics/ergonomics research, utilization of biomechanical measurement technologies such as motion capture/tracking, studying concepts of electromyography and force transducers in the effects of interventions for the warfighter. You will also have the opportunity to collect and analyze biomechanical data as well as gain exposure to DoD collaborations with Air Force and Army colleagues.

Why should I apply?

This internship provides the opportunity to independently utilize your skills and engage with experts in innovative ideas to move the proposed research forward. There are multiple opportunities available to engage in your applied research and evaluation interests.

Where will I be located? Wright Patterson Air Force Base, Dayton, OH

What is the anticipated start date?

NAMRU-D is ready to make an appointment immediately. Exact start date will be determined at the time of selection and in coordination with the selected candidate.

What is the length of the appointment?

This ORISE appointment is a full-time twelve month duration. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

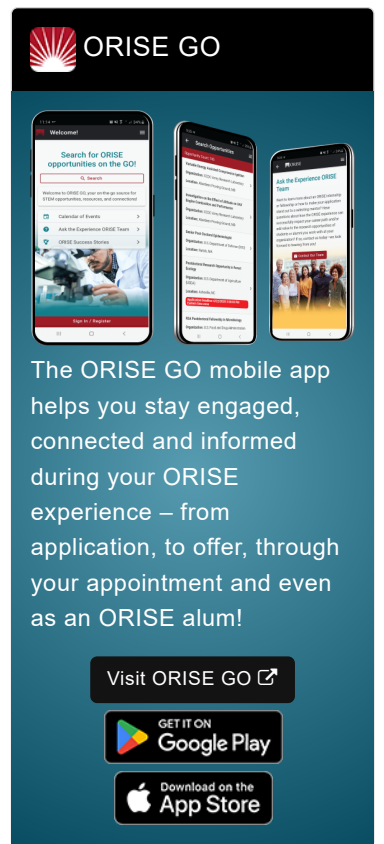
What are the benefits?

You will receive a stipend to be determined by NAMRU-D. 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


You will not enter into an employee/employer relationship with ORISE, ORAU, DOD, or any other




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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 Minimum bachelor's degree in engineering (i.e., mechanical, biomedical/bioengineering, aerospace, electrical, etc.) or kinesiology/movement sciences. Coursework completed (minimum in statics and dynamics (highly favorable), experience with programming in MATLAB / LabVIEW (highly favorable), biomechanical measurement tools such as motion capture, electromyography, force transducers, and physiologic sensors (desired, but not required).

A complete application consists of:





- Zintellect profile
- Essay Questions - The application includes questions specific to the opportunity.
- Academic Records - For this opportunity, an official transcript or copy of the student academic 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. All documents must be in English or include an official English translation. If you have questions, send an email to navy@orise.orau.gov. Please list the reference code of this opportunity NAMRU-Dayton- 2022-0003 in the subject line of the email. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the "Apply" button at the bottom of this opportunity listing. Please do not send application materials to the email address above.

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- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or currently pursuing.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) )
 - **Communications and Graphics Design** ([1](#) )
 - **Computer, Information, and Data Sciences** ([16](#) )
 - **Earth and Geosciences** ([21](#) )
 - **Engineering** ([27](#) )
 - **Environmental and Marine Sciences** ([14](#) )
 - **Life Health and Medical Sciences** ([45](#) )

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- **Mathematics and Statistics** ([10](#) )
- **Other Non-Science & Engineering** ([5](#) )
- **Physics** ([16](#) )
- **Social and Behavioral Sciences** ([28](#) )
- **Age:** Must be 18 years of age