

**Opportunity Title:** Thermodynamics & Fluid Dynamics Undergraduate Research

**Opportunity Reference Code:** AFIT-2022-0087

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

**Reference Code** AFIT-2022-0087

**How to Apply** .Click on *Apply* at the bottom of the opportunity to start your application.

**Description** The Air Force Institute of Technology is offering an undergraduate internship at Wright Patterson Air Force Base.

### What will I be doing?

As an ORISE participant, you will join a community of scientists and researchers in an effort to design and perform wind tunnel experiments that will enable researchers to have an improved understanding of the high temperature aerothermodynamics relevant to modern airbreathing engines.

### Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. These include, but are not limited to:

- collaborating with AFIT faculty and graduate students to develop new experimental methods and hardware
- Improving the software used to acquire and process experimental data
- Utilizing CAD software, MATLAB, and LabVIEW
- Improving understanding of high temperature engine aerothermodynamics
- Utilizing techniques to evaluate novel turbine cooling architectures
- Documenting findings for presentation to other scientists and engineers

**Where will I be located?** Dayton, Ohio

### What is the anticipated start date?

Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and internships or fellowships will be filled as qualified candidates are identified.

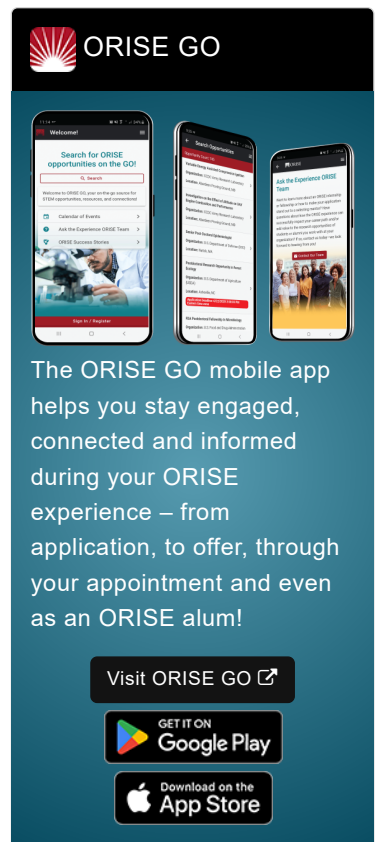
### What is the appointment length?

This appointment is a three 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.

### What are the benefits?

You will receive a stipend to be determined by AFIT. Stipends are typically based on a 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*)



**ORISE GO**

The ORISE GO mobile app helps you stay engaged, connected and informed during your ORISE experience – from application, to offer, through your appointment and even as an ORISE alum!

Visit ORISE GO [↗](#)

GET IT ON  
**Google Play**

Download on the  
**App Store**

**Opportunity Title:** Thermodynamics & Fluid Dynamics Undergraduate Research

**Opportunity Reference Code:** AFIT-2022-0087

- Relocation Allowance
- Training and Travel Allowance

### **About AFIT**

The Air Force Institute of Technology, or AFIT, located at Wright-Patterson Air Force Base, Ohio, is the Air Force's graduate school of engineering and management as well as its institution for technical professional continuing education. A component of Air University and Air Education and Training Command, AFIT is committed to providing defense-focused graduate and professional continuing education and research to sustain the technological supremacy of America's air, space and cyber forces.

### **About ORISE**

This program, administered by Oak Ridge Associated Universities (ORAU) through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and DoD. Participants do 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. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. For more information, visit the [ORISE Research Participation Program at the U.S. Department of Defense](#)

**Qualifications** Applicants should have completed at least one year of undergraduate education with a major in Engineering or Physics at the time of starting the program.

### **Application Requirements**

A complete application consists of:

- Zintellect Profile
- 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

If you have questions, send an email to [AIRFORCE@orise.orau.gov](mailto:AIRFORCE@orise.orau.gov). Please list the reference code of this opportunity AFIT-2022-0087 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

---

**Opportunity Title:** Thermodynamics & Fluid Dynamics Undergraduate Research

**Opportunity Reference Code:** AFIT-2022-0087

submitted via the “Apply” button at the bottom of this opportunity listing.  
Please do not send application materials to the email address above.

**Connect with ORISE...on the GO!** Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 12/31/2024 11:59:00 PM.
  - **Overall GPA:** 3.00
  - **Discipline(s):**
    - **Engineering** (27 👁)
    - **Physics** (16 👁)
  - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).