Opportunity Title: Aeronautical Engineering Design & Analysis Research Fellowship
Opportunity Reference Code: AFIT-2026-0024

Organization U.S. Department of Defense (DOD)

Reference Code AFIT-2026-0024

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 a graduate level fellowship at Wright Patterson Air Force Base, Ohio.

What will I be doing?

As an ORISE participant, you will engage in research focused on the integrated design and analysis of an advanced aircraft concept featuring a novel structural system and conventional, electric, or hybrid-electric propulsion technologies. You will explore aircraft systems engineering principles and use modeling, simulation, and analytical methods to examine aerodynamic performance, propulsion–airframe integration, aircraft configuration, and overall system effectiveness. Through this research, you will investigate how emerging propulsion technologies and innovative structural concepts influence aircraft performance, mission capability, and operational considerations.

Why should I apply?

Under the guidance of a mentor, you will gain valuable research experience while expanding your knowledge of aircraft systems engineering, integrated aircraft design, and emerging propulsion technologies. During your appointment, you will have opportunities to:

- Apply aircraft systems engineering and systems analysis concepts to integrated aircraft design and performance assessment.
- Explore aircraft design trade studies involving aerodynamic design, propulsion–airframe integration, structural concepts, and conventional, electric, and hybrid-electric propulsion technologies.
- Examine aircraft operational tradeoffs to better understand economic viability, mission requirements, and military effectiveness.
- Develop analytical and modeling skills by evaluating aircraft aerodynamics, weight, takeoff and landing performance, climb capability, propulsion-system performance, and associated flight-envelope limitations.
- Gain experience with modeling and simulation approaches used to evaluate aircraft mission performance and assess operational capabilities across representative mission scenarios.

Where will I be located?

Dayton, Ohio

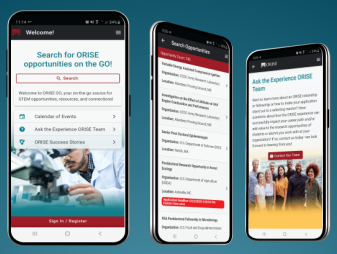
What is the anticipated start date?

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 ten-week research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability,

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project assignment, program rules, and availability of the participant.

What are the provisions?

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 provisions may include the following:

- Health Insurance Supplement (*Participants are eligible to purchase health insurance through ORISE)*
- 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 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

The qualified candidate will hold or will be currently pursuing a graduate degree (master's or doctoral) in disciplines such as Aerospace, Aeronautical or Mechanical Engineering.

Preferred Skills:

- Solid academic background in Aeronautical / Aerospace / Mechanical Engineering
- Academic or practical experience in Systems Engineering and/or Numerical Analysis
- Prior experience with Aircraft Performance, Aircraft Propulsion and/or Aerodynamic Design
- Interests and talents in developmental panel-method aerodynamics and/or modelling of propulsion systems including aerodynamic and thermodynamic considerations and/or analysis of aerospace structures including buckling analysis

Application Requirements

A complete application consists of:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)

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- Resume (PDF)
- Transcripts/Academic Records - Please upload a copy of a transcript for your current or most recent degree program that meets the disciplinary qualifications of the opportunity. Click here for detailed information about acceptable transcripts.
- One Recommendation. We encourage you to contact your recommender(s) as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application.

If you have questions, send an email to AIRFORCE@orise.orau.gov. Please list the reference code of this opportunity [AFIT-2026-0024] 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.

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!

Stipend $3,600.00 – $5,000.00 Monthly

Point of Contact Leslie

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 7/1/2027 12:00:00 AM.
- **Minimum Overall GPA:** 3.00
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Engineering** (3 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).