

Opportunity Title: Wind Tunnel Modeling Support
Opportunity Reference Code: EPA-NSSC-0007-103

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-NSSC-0007-103

How to Apply Click [HERE](#) to apply!

Description The EPA National Student Services Contract has an immediate opening for a full time Wind Tunnel Modeling Support position with the Office of Research and Development at the EPA facility in Research Triangle Park, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

What the EPA project is about

The missions of the Center for Environmental Measurement and Modeling (CEMM) is to develop, evaluate, and apply measurements and models to characterize the sources, occurrence, transformation, transport and effects of pollutants and stressors in the natural environment. Within CEMM, the Atmospheric & Environmental Systems Modeling Division (AESMD) conducts research to advance EPA's ability to characterize atmospheric and environmental processes that impact the transport, transformation, and fate of environmental contaminants in the air and the multimedia linkages of air pollutant emissions in support of the Clean Air Act and the Clean Water Act.

AESMD scientists develop, evaluate, and apply state-of-the-science modeling tools that are used to manage air quality at local, state, regional, and global scales. Models developed by AESMD estimate the contributions of various air emission sources to ambient air pollution and inform human/ecological exposure and effects assessment. In addition, they study emission impacts from alternative energy pathways that can improve the cost-effectiveness of air quality management approaches and identify potential implications of energy system changes on air quality and other environmental media. AESMD scientists also conduct research that advances the science of atmospheric modeling tools to support robust air quality management policy decisions.

What experience and skills will you gain?

As a team member, you will provide data acquisition and data analysis support of dispersion model research conducted at the EPA's Meteorological Wind Tunnel. The team member will provide laboratory work, including wind tunnel set-up, physical model building, and data acquisition, as well as qualitative and quantitative analyses of data used to assess dispersion model performance. The selected candidate will be a member of a multi-disciplinary research team and will support the development, maintenance, and evaluation of laboratory systems and



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model evaluation databases.

How you will apply your skills

Responsibilities will include:

- Preparing wind-tunnel and field-study databases for dispersion model evaluation exercises;
- Building and installing physical wind-tunnel models for use in dispersion studies;
- Compiling meteorological data to be used in modeling exercises;
- Data analysis of wind-tunnel and dispersion modeling studies using the R programming language;
- Using Python-based software scripts to run laboratory equipment; and
- Review of scientific literature related to dispersion model development and application.

Communication-related responsibilities will include:

- Participating as a member of a multi-disciplinary research team;
- Interacting with other members of the dispersion modeling team as well as EPA scientists;
- Documenting code, methods and data acquisition activities; and
- Presenting work performed at team meetings as required.

Required Knowledge, Skills, Work Experience, and Education

- Familiarity with laboratory measurements and practices;
- Strong written, oral and electronic communication skills; and
- Experience programming in Python and R or other scripting languages.

Desired Knowledge, Skills, Work Experience, and Education

- Experience using FORTRAN and dispersion models.

Location: This job will be located EPA's facility in Research Triangle Park, NC

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$23.84 for hours worked.

Hours: Full-time.

Travel: Travel is not required.

Expected start date: The position is full time and expected to begin September 2024. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA.

Work will be performed at the following location: US EPA - 4930 Old Page Road, Durham, NC 27703

For more information, contact EPANSSC@orau.org. Do not contact EPA directly.














Qualifications • Be at least 18 years of age and

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- Have earned at least a bachelor's degree in the fields of engineering, atmospheric science, meteorology, environmental science, or a related field from an accredited university or college within the last 24 months **and**
- Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
 - **Degree:** Bachelor's Degree received within the last 24 month(s).
 - **Overall GPA:** 2.00
 - **Discipline(s):**
 - **Business** ([11](#) )
 - **Chemistry and Materials Sciences** ([12](#) )
 - **Communications and Graphics Design** ([6](#) )
 - **Computer, Information, and Data Sciences** ([17](#) )
 - **Earth and Geosciences** ([21](#) )
 - **Engineering** ([27](#) )
 - **Environmental and Marine Sciences** ([14](#) )
 - **Life Health and Medical Sciences** ([51](#) )
 - **Mathematics and Statistics** ([11](#) )
 - **Other Non-Science & Engineering** ([13](#) )
 - **Physics** ([16](#) )
 - **Science & Engineering-related** ([2](#) )
 - **Social and Behavioral Sciences** ([30](#) )

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Bachelor's degree in the fields of engineering, atmospheric science, meteorology, environmental science, or a related field from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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