

DENIN Environmental Scholars Internships

Dates of internship: November 1, 2021 – May 15, 2022

Location: Hybrid or Virtual position. Pearson Hall, University of Delaware, Newark, DE 19711

Number of positions available: 1-2

Faculty Mentor: Daniel J. Leathers

Graduate Student Mentor: N/A

Professional Staff Mentor: Christina L. Callahan

Project Title: CEMA Climate Data Update and Information Outreach

Research Description:

The Center for Environmental Monitoring & Analysis (CEMA) is responsible for updating and maintaining weather and climate databases for use in research and service projects. One such database is the Delaware Storm Climatology, a climatology of coastal storms and coastal storm damage along the Delaware coast since 1871. Students will be trained to provide updates to this and similar databases, as needed. In addition, students will assist CEMA staff in the documentation and outreach efforts including updates to the Office of the Delaware State Climatologist website and the Delaware Climate Information Center. The latter will require interfacing with State agency staff and providing assistance to these staff when necessary. Specific project goals will be formed to cater to students' interests, however, the student should expect to gain an experience with climate and weather data curation and messaging, as well as improving interpersonal skills. This internship can be virtual or hybrid, as needed. Open to all Delaware EPSCoR students.

About CEMA:

CEMA is an environmental data services center within the College of Earth, Ocean, and Environment (CEOE) at the University of Delaware and is home to the Office of the Delaware State Climatologist, Delaware Environmental Observing System, Delaware Environmental Monitoring and Analysis Center, and the University of Delaware's Satellite Receiving Station. CEMA provides primary services to the state of Delaware and its citizens including real-time monitoring and historical environmental data repository, weather and climate outreach and expertise, and engineered environmental data products and solutions through web-based data visualization portals.

Research Questions:

How can climate data and messaging in Delaware be improved?

1. What coastal storms have impacted Delaware since 1871?
2. What applications are currently available for sharing climate information in Delaware? Are these tools effective in their messaging?

Student Learning Objectives: Professional and Research Skills

This internship focuses on the development of the following professional and scientific skills.

Broad Professional Skills	Specific Skills
Planning and time management	Ability to set and complete specific goals of varying scope
Work independently	Independent work ethic - work independently to problem-solve
Collaborative skills	Learning to complete tasks efficiently and effectively with others
Express ideas in writing and verbally	Communicate with diverse audiences - Development of impactful poster and oral presentations, and interact with professionals to develop or improve climate data and information sharing. Honing ability to parse data and information into appealing messaging for laypeople.
Broad Scientific Research Skills	Specific Skills
Interpret data	Visually analyze meteorology maps and other climate data for updates or additions to relevant databases.
Data analysis	Summarizing characteristics of storms and impacts to coastal Delaware through use of software.
Science Communication	Summarizing and relaying scientific information via multiple types of media including oral presentations, poster

Prerequisites:

Experience with Excel or spreadsheets.

Working knowledge of WordPress or other web blog platforms.

Good communication skills.

Work Environment and Expectations:

Pearson Hall 2nd floor – Department of Geography and Spatial Sciences for in-person hours; work can be completed remotely with a minimum of weekly check-ins with advisor. Hours are flexibly determined between student and mentor. Students will work part time during the fall and spring semesters, and full-time during UD Winter Session, January 4-February 5, 2021. Students will also participate in a retreat, communications workshop and end of internship spring symposium. Maximum 10 hours/week.

Stipend:

\$4,000 Direct deposit is required.

Funding Source:

National Science Foundation, Delaware EPSCoR Track I

How to apply: https://ugresearch.udel.edu/PUB_Program.aspx