**Project WiCCED Undergraduate Internships**

Dates of internship: Fall 2023 – May 2024

Location: Online

Number of positions available: 1

Faculty Mentor: Daniel Leathers

Graduate Student Mentor: n/a

Professional Staff Mentor: Tina Callahan

**Overview:** Project WiCCED is a multi-institutional project in partnership with National Science Foundation and the State of Delaware aimed at assessing major threats to Delaware’s water quality, and developing viable technological and policy solutions for meeting the challenges imposed by them. Research will involve a combination of laboratory, outdoor field work and/or computational environments. We seek a diverse group of undergraduate students to join our team in a welcoming, collaborative environment.

**Project Title: Project WiCCED Data Wrangling and Data Visualization**

**Research Description:**

The Data Core portion of Project WiCCED works with researchers and personnel throughout Project WiCCED to provide opportunities for data hosting and sharing, as well as visualization support. The primary goal of the “Project-wide data and information clearinghouse portal” is to provide a summary of the on-going data collection and development efforts through the entire Project WiCCED team. This internship will consist mainly of online work with communication via Zoom and email. Some in-person meetings may be required.

**Research Questions:**

* What research is being conducted throughout the entire Project WiCCED team?
* What information can be documented about each project (ie. Metdata) to help document the work?
* How can this information be best shared and what additional visualizations can be employed, such as maps and interactive web applications?

**Student Learning Objectives: Professional and Research Skills**

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

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| 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. Honing ability to deliver scientific results/impacts to people of multidisciplinary backgrounds. |
| Broad Scientific Research Skills | **Specific Skills** |
| Understand scientific terms  | General vocabulary to help with categorization and communication. |
| Recognize simple patterns in research data | Basic data interpretation (qualitative and quantitative). |
| Utilize software for visualization and organization  | Working with softwares to build web-enabled data discovery tools that will improve data visualization |
| Analyze research data  | Excel or Google Spreadsheet to form effective figures and tables. |
| Understand, apply, and explain scientific concepts and theories | Freedom to form questions and plan methods for addressing challenges. Learning to communicate results through oral presentations and posters. |

**Prerequisites:**

Familiarity and experience with GIS (ie. ArcGIS Online, ArcGIS Pro, etc.), social media, and spreadsheets and basic graphing in Excel. Strong communication and organizational skills are preferred.

**Work Environment and Expectations:**

Laboratory environment: N/A

Field work environment: N/A

Computational environment:

The internship is part time during the academic year. The exact hours and expectations are established between the student researcher and mentor.

**Stipend:**

$5,000 - Direct deposit is required.

**Funding Source:**

National Science Foundation EPSCoR Project WiCCED

**Application deadline:**

September 15, 2023

**How to apply:** https://ugresearch.udel.edu/PUB\_Program.aspx