

## **DENIN Environmental Scholars Internships**

Dates of internship: June 7 through August 13, 2022

Location: Based on the ever-changing campus response to COVID student projects can be conducted in-person, virtually or hybrid depending on safety, feasibility and campus protocol.

**This internship will be virtual.** If it becomes safe, feasible, and allowed through campus protocol, working in person will take place at the Center for Experimental and Applied Economics, Townsend Hall, University of Delaware, Newark, DE 19711

Number of positions available: 1-2

Postdoctoral Research Fellow Mentor: Dr. Diya Ganguly

**Project Title:** Homeowner Valuation of Information about Septic System Condition

### **Research Description:**

Onsite septic systems are prevalent across Delaware and the coastal plains of the Eastern United States. However, there is limited monitoring or enforcement of the condition of these systems. Some data suggest that between 20% and 80% of onsite septic systems are not functioning as intended and are causing significant environmental harm. One study of the Chesapeake Bay found that the estimated two million neighboring septic systems contribute about nine million pounds of nitrogen per year to the Bay.

This project investigates homeowner behavior with respect to septic system maintenance and information seeking. Using an experimental approach, we will measure homeowner willingness to pay (or willingness to accept) for a pump out of their home system, or for information on the condition of their system. This paper will also investigate available data on septic tank permits in Delaware to simulate the potential impacts of differing mechanisms aimed at reducing negative environmental externalities. This information is important for developing effective policy and regulation of septic systems in coastal areas of Delaware.

### **Research Questions:**

1. Do homeowners have a positive value of information about the condition of a septic system?
2. What is homeowner willingness to pay for (or cost share) a pump out of a septic system?

## Student Learning Objectives: Professional and Research Skills

The DENIN scholars program helps students develop skills that foster future research interest and professional success. 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
Express ideas in writing	Write descriptions of research procedures, create a poster of your research, communicate via email professionally and in a timely and consistent fashion
Express ideas verbally	Discuss research activity in lab meetings, present poster at symposium
Work independently	Independent work ethic – work independently or with peers to problem solve
Develop professional network	Work with lab team and broader Social Dimensions and Project WiCCED team to develop professional network, and utilize peer-groups to problem solve.
Maintain professional attitude and work principles (i.e. integrity, responsibility, diligence, following ethical standards)	Be on time, learn procedures, ask questions if unsure, respect everyone you work with, complete and maintain Institutional Review Board (IRB) Certification to work with human subjects in research

Broad Scientific Research Skills	Specific Skills
Understand scientific terms	Behavioral, experimental and environmental economics
Locate scientific articles and resources	Conduct searches for literature on environmental valuation
Understand research questions	
Read and understand research articles	
Apply research tools and techniques in research experiments	Participate in the development of and data collection of surveys to quantify willingness to pay for water quality improvements.
Understand, apply, and explain scientific concepts and theories	In lab meetings, with lab personnel, and during research symposium

### Prerequisites:

Introductory experience with economics is preferred.

### Work Environment and Expectations:

Office/economics laboratory environment: Work will primarily take place in 025 Townsend Hall or on-line. Hours are flexibly determined between student and mentor.

**Stipend:**

\$3,500 Direct deposit is required.

**Funding Source:**

National Science Foundation, Delaware EPSCoR Track I

**How to apply:** [https://ugresearch.udel.edu/PUB\\_Program.aspx](https://ugresearch.udel.edu/PUB_Program.aspx)