

DENIN Environmental Scholars Internships

Dates of internship: June 10, 2019 – August 16, 2019

Location: University of Delaware, Newark, DE 19711

Number of positions available: 1

Faculty Mentor: Dr. Leah Palm-Forster

Graduate Student Mentor:

Professional Staff Mentor: Dr. Ahsanuzzaman

Project Title: Experimental economics study of groundwater management (Social Dimensions)

Research Description:

We will use a laboratory economics experiment with undergraduate students at the University of Delaware to understand how risk and ambiguity aversions impact cooperative behavior related to management of common pool resources (CPR) (e.g., groundwater extraction). During the experiment, we will elicit participants' attitudes toward uncertainty (both risk and ambiguity). Participants will engage in a CPR extraction game, framed in a groundwater extraction setting, to analyze participants' groundwater extraction behavior. The CPR experiments will be conducted under different settings – specifically, we will vary (i) the level of uncertainty about the groundwater threshold, and (ii) the policy regimes under which individuals make extraction decisions. We also vary the decision-making environments by letting participants make choices alone and in groups.

Primary Research Questions:

1. Measure individuals' attitudes toward uncertainty.
2. How can individual's attitudes towards uncertainty (both risk and ambiguity) influence decisions in a lab experiment on groundwater extraction?
3. How does communication in a group impact individual decision making in a context of groundwater extraction?
4. Which policy regimes are most effective at improving CPR management in the face of uncertainty?

Research Interns will be engaged primarily with the research project described above, but interns will have opportunities to be involved in other projects that are part of the Social Dimensions research for Project WiCCED (projectwicced.org); See Internship Descriptions for the following projects to learn about other Social Dimensions research opportunities:

- Social Networks and Oyster Consumption
- Enhancing Farmers' Adoption of Decision Support Tools to Improve Irrigation Management in Delaware
- Experimental economics study of groundwater management

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 foals 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 (e.g., successful completion of APEC 100, APEC 150, ECON 101, or similar course)

Work Environment and Expectations:

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

Students will work part time during the fall and spring semesters, and full time during UD's Winter Session, January 7-February 8, 2019. Students will also participate in a retreat, communications workshop, and end-of-internship spring symposium.

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