

Position Description

Unit of Assignment: College of Health, Science & Technology

Program/Department: Environmental Studies Program

Position Type: GRA

I. Expected Roles.

Collaborating with faculty in research on thesis project: 60%

Collecting, organizing, and analyzing other data: 20%

Clerical, field work, and lab support: 15%

Outreach: 5%

II. Undergraduate major(s) required/accepted.

Students should have completed a bachelor's degree in environmental science, ecology, geography, hydrology, or a similar discipline. Previous experience or degrees in mathematics/statistics and computer science will also be considered. Assistants must be admitted as students to the M.S. in Environmental Science program.

III. Skills required (regular and special).

Regular (General) Skills

- Proficiency with computers and productivity software including Microsoft Office (Word, Excel, PowerPoint) (required), Slack/Teams (preferred), and GitHub (preferred)
- Ability to work independently including good time management and organizational skills
- Strong written and oral communication
- A commitment to inclusive and equitable practices, including the ability to communicate with a diverse group of students/faculty/staff/professionals within and outside UIS

Special Skills

- Background with statistics and data analysis
- Coding for data analysis, preferably in R or Python (preferred)
- Hydrologic, ecological, or environmental modeling (preferred)
- Laboratory and/or field work experience in the environmental sciences (preferred)

Evidence of all skills should be demonstrated in the application process through previous coursework, publications, work projects, and written and oral communication throughout the application and interview process.

IV. Typical tasks and responsibilities expected to be assigned.

The assistant's primary responsibilities will be to (1) complete research pursuant to successful completion of their thesis and (2) support the continued development of a robust research agenda with Dr. Blount's laboratory. All work will focus on ecohydrology, water resource management, or similar related themes and will be closely mentored by Dr. Blount. Tasks will be assigned in consultation with Dr. Blount, guided by the formation and evolution of the research project as a collaboration between the assistant and Dr. Blount, including but not limited to:

- Conducting literature reviews and identifying a project scope

- Identifying appropriate experimental design for the proposed research project
- Collecting, managing, and analyzing data in the laboratory, field, and/or from environmental modeling
- Presenting research findings at public meetings
- Writing a proposal, thesis, and journal article summarizing the assistant's research
- Supporting and mentoring other researchers in the lab, especially undergraduates
- Data collection, field equipment installation, and other research and administrative tasks to support the overall research in Dr. Blount's lab, as needed

V. Educational benefits to the Assistant.

Through the development, implementation, and completion of a supervised research project, the assistant will:

- receive hands-on training of the scientific method and research process,
- learn effective methods for literature review,
- hone their understandings of experimental design, data collection, and analysis in the environmental sciences,
- improve their written and oral communication skills, yielding a record of presentations and publications that will prepare them for future job prospects,
- gain leadership and mentoring experience with undergraduate research, and
- build a professional network.

VI. The name and title of the anticipated supervisor.

Dr. Kyle Blount

Assistant Professor of Ecohydrology

Environmental Studies Program

School of Integrated Sciences, Sustainability, and Public Health

VII. Location of the work.

On-campus (office and laboratory environments) in Springfield, Illinois, and field work at sites within Illinois as necessary for completion of projects and thesis research as agreed upon between the candidate and supervisor.

VIII. Special tasks to be performed.

None

IX. Standards for evaluating the assistant.

The assistant will be evaluated based on successful progress towards their M.S. degree including coursework, research activities, and thesis development. Upon hire, the assistant will complete a degree plan with the supervisor and will be expected to complete coursework according to that plan. Based upon interest and literature review, the student will develop and defend their thesis proposal no later than May 2025, receiving approval from a committee to complete the degree. Although data collection and analysis may begin before defending the proposal, all analysis and writing will be completed for defense in May 2026. Successful defense of a M.S. thesis will be required to complete the degree and assistantship. The assistant will be expected to present their

work at the Student Technology, Arts & Research Symposium (STARS) at UIS both years (2025 and 2026) and may have the opportunity to present at a larger conference, pending progress and financial support. It is also an expectation that the assistant will prepare at least one peer-reviewed journal article for submission with the supervisor and other collaborators, although publication will not be required for completion of the assistantship or M.S. degree.

XI. Name and contact information for the designated primary supervisor.

Dr. Kyle Blount

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