

Faculty Member Contact Information

Name	Alan Black
Contact Info	
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Department	Geography & GIS

1 Funded, 1 or 2 Unfunded URCA Assistant

	This position is ONLY open to students who have declared a major in this discipline.	M
	This project deals with social justice issues.	
	This project deals with sustainability (green) issues.	
	This project deals with human health and wellness issues.	
	This project deals with community outreach.	
	This mentor's project is interdisciplinary in nature.	I

Are you willing to work with students from outside of your discipline? If yes, which other disciplines?

Yes

How many hours per week will your student(s) be required to work in this position?
(Minimum is 6 hours per week; typical is 9)

8

Will it be possible for your student(s) to earn course credit?

Yes GEOG 490 Up to 3

Location of research/creative activities:

Brief description of the nature of the research/creative activity?

There is growing evidence that tornadoes (tornado paths) can be influenced by terrain features. In this research, the student will combine tornado track data with topographic data (and other data as needed) to assess this relationship in the midwest, with particular focus on the Ozark region and river valleys such as the Mississippi or Missouri rivers.

Brief description of student responsibilities?

After a period of training, the student will be tasked with acquiring tornado and topographic data under the direction of the supervisor. The student will extract the data into formats suitable for future analysis. The student will combine the data with other observations (as needed) for future analysis. Depending on the interests of the student, they will have opportunities to write computer code for analysis (R or Python), to learn techniques for analyzing and visualizing these data, and the opportunity to develop and build skills in mapping data through Geographic Information Systems (GIS). The student will be responsible for setting their own schedule to perform the tasks in an efficient manner. The student will be responsible for regular communication with the faculty member regarding their progress. The work will be incorporated into one or more conference presentations and peer-reviewed scientific manuscripts, and the student may contribute to the writing process. The student is expected to contribute approximately eight hours per week to the project.

URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?

Yes

Requirements of Students

If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours) please indicate all required days and times:

Students are able to set their own hours. The student and mentor will meet weekly to discuss the project at a time that works for both parties.

If the location of the research/creative activities involves off campus work, must students provide their own transportation?

No off-campus work is required.

Must students have taken any prerequisite classes? Please list classes and preferred grades:

None.

Other requirements or notes to applicants:

Basic statistical skills and some familiarity with Excel are required.

Experience with programming is desirable but not required.

Experience with GIS is desirable but not required.