Faculty Member Contact Information

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<thead>
<tr>
<th>Name</th>
<th>Dr. Kevin Tucker</th>
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<tr>
<td>Contact Info</td>
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<tr>
<td>SIUE Email</td>
<td><a href="mailto:kevtuck@siue.edu">kevtuck@siue.edu</a></td>
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<td>Phone Number</td>
<td>618-650-5868</td>
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<td>Campus Box</td>
<td>1652</td>
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<tr>
<td>Department</td>
<td>Chemistry</td>
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1 Funded, Unlimited Unfunded URCA Assistants

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<tr>
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<th>This position is <strong>ONLY</strong> open to students who have declared a major in this discipline.</th>
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<tr>
<td></td>
<td>This project deals with social justice issues.</td>
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<tr>
<td>X</td>
<td>This project deals with sustainability (green) issues.</td>
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<td>X</td>
<td>This project deals with human health and wellness issues.</td>
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<td>This project deals with community outreach.</td>
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<td>This mentor’s project is interdisciplinary in nature.</td>
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Are you willing to work with students from outside of your discipline? If yes, which other disciplines?
- Yes, but similar fields

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)
- 6-8 hours

Will it be possible for your student(s) to earn course credit?
- Yes—CHEM 296, 396, or 496 (0-2 credit hours)
Location of research/creative activities:
- 3325 SW, BLI, Field Locations

Brief description of the nature of the research/creative activity?
Dr. Tucker believes that research is a collaborative endeavor and has active collaborations in chemistry, biology, environmental science, exercise physiology, medicine, geography, and geology. Research topics span from watershed science and environmental toxicology to analytical method development to address measurements in human cancer and agricultural products. Students in my lab will learn a variety of techniques including solid-phase extraction, mass spectrometry, and environmental sampling.

Current Projects: (collaborators)
- Quantitation of Pharmaceuticals, Pesticides, and Herbicides in Fresh Water (along with N, P and other parameters) (Dr. Robert Dixon)
- Quantitation of Phenolics, Flavonoids, and Mycotoxins in Corn (Dr. Carrie Butts-Wilmsmeyer)
  - Mass Spectrometry Imaging of Various Substrates
- Targeted Metabolomics in Gynecological Cancers (Department of Medical Microbiology, Immunology, and Cell Biology's Dr. Andrea Braundmeier-Fleming)
  - Quantitation of Statin Drug effects in Worms
- Quantitation of PPCPs in International Waters (NIU Department of Geology's Dr. Megan Brown and Dr. Melissa Lenczewski)
  - Quantitation of pesticide residues in food products

I am always interested in recruiting independent, self-motivated, bright freshman and sophomore Chemistry and Biochemistry majors as well as majors from Environmental Science and Biology. Please reach out if you have an interest in the types of work that we are performing.

Brief description of student responsibilities?
Students in my lab are assigned to work in teams based on the project. Each project has a team leader who is responsible for training new students in the methods that are performed in the lab and planning the weekly/monthly experiments. New students in my lab are expected to show up and contribute to the work that is happening in the group. You will learn what is happening very quickly and how to perform all of the different procedures in the lab so you can operate as an independent contributor to your project within the first half of a semester in the lab. The weekly tasks that students perform will vary by project team but may include environmental sampling of
soil or water, lab processing of samples using extraction techniques and filtration and providing assistance to senior lab members with data processing.

**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?**

All students who join my lab are expected to buy into the overall goals of the lab and contribute to the big picture projects. By the end of the first semester, you will learn how to be a productive lab member, how to operate independently in the lab, and you will start learning about the primary literature that exists around our work. By continuing to work in the lab, you will gain experience in leading and training other group members, reading and presenting research papers, presenting your work at conferences, and potentially writing your own proposal for a grant.

**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 work around their own schedule, however longer blocks of time lead to larger accomplishments in the lab.

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

- Students must be able to provide their own transportation when needed.

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

- Students must have taken CHEM 121a/125a and CHEM 121b/125b and achieved excellent grades in both.

**Other requirements or notes to applicants:**

- The student should be independently motivated and a hard worker. The individual will be able to be shown how to perform laboratory tasks, but must be willing to show up and put in the time required to be successful.