





Faculty Member Contact Information

Name	Dr. Elizabeth Esselman
Contact Info	
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Department	Biological Sciences

1 Funded, 1 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.	
X	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?

- No

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)

- 9

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

- Yes, 1 credit hour of BIOL 493

Location of research/creative activities:

- SIUE SW room 1030

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

Our lab works on preserving Illinois native orchids. All orchids require fungi for seed germination and they form relationships with them throughout the orchids life. Because they are so critical for orchid survival we collect, identify and use orchid root fungal associates to answer questions about fungal genetic diversity and try to identify isolates that will germinate orchid seeds.

Brief description of student responsibilities?

Students will learn to autoclave, subculture fungi using aseptic techniques, make and pour agar plates, isolate DNA, set up PCR reactions and pour gels to check banding patterns.

Students also help with prepping reactions to send off for sequencing and learn to interpret sequencing results. We also go out into the field periodically to collect orchid roots on the SIUE campus.

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?

Students will master aseptic technique and learn to use the autoclave, isolate DNA and perform PCR reactions.

Students who work in my lab are encouraged to present posters at state and local meetings. This work can also be used to satisfy research poster requirements for our departments required senior assignment (Biol 492M). I also encourage students to come up with ideas for their own independent projects.

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:

- I do not have any required times. We can work together to find times that will work for both of us. I sometimes ask if students can come in on a Saturday. Saturday meetings are not required.

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

- No students will just need to be able to get to the SIUE SW science building.

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

- N/A

Other requirements or notes to applicants:

- N/A