



CLUSTER

Collaborative Lounge for Understanding
Society and Technology
through Educational Research

Graduate Research Opportunity Engineering Education



We are an interdisciplinary group of engineers and educational researchers interested in a wide range of questions concerning engineering practice and how to prepare engineering students for the complex challenges of their future careers.

We offer an opportunity for a motivated graduate student to join our team and develop a dissertation project within the context of a larger, funded research project.

Looking for a graduate opportunity that gives you flexibility to define your program and needs?

The graduate program in the Faculty of Engineering is new and its upcoming PhD in Engineering will offer flexibility that no other program in the country provides. We will develop your program based on your individual interests and needs. This means that we can make full use of the interdisciplinary breadth of UGA's Faculty of Engineering (with members from education, social sciences and art) in assembling your committee and choosing your course work.

Want to work in a stimulating and dynamic environment?

It is our goal to broadly promote the professional growth of our students. This is why we are looking for self-motivated individuals who are enthusiastic about taking creative ownership of their project (for a possible topic see below). We are an interdisciplinary group that pushes the boundaries of the new discipline of engineering education research. This is an environment where having a broad intellectual curiosity and the ability to work well in a diverse team is essential.

Want to know what our students have to say?

"Drs. Kellam and Walther have and continue to provide a learning environment in which I can truly explore my own areas of interest while I work towards my Ph.D. in Engineering Education. It's been such an amazing experience to have professors that lobby for you and work with you to accomplish any scholarly goals. With every interest that I pursue, I have two mentors encouraging me to explore those ideas while providing guidance and cohesiveness. They have given me the liberty to research my own areas of interest while framing those pursuits in such a way that they all work synergistically to achieve my career goals." (Ashley, Graduate Student)

**See reverse for more details
and potential dissertation topic**



The University of Georgia

Like to take classes from world-renowned educational researchers?

UGA has one of the top colleges of education. Go to an international educational research conference or look through an education research journal and you'll quickly see that some of the top thinkers in educational research are faculty at UGA. Your program of study will include taking qualitative, quantitative, and mixed method courses from people that have written fundamental books in their respective areas.



Athens downtown with restaurants, shops and cafés



The Synthesis and Design Studio with undergraduate art and engineering students

Want to live in a funky place with a great music scene and cultural community?

Athens is the place for you. REM, Widespread Panic, and the B-52s started their music legacies here. Any night of the week there are plenty of options for live music (see flagpole.com's calendar for what is going on). And if you are into classical music or theater there are plenty of options. Athens' eclectic community also offers a wide range of locally grown, international and organic food and produce. And all this is only an hour away from the beautiful Appalachian Mountains and just a little further to the metropolis and international airport hub of Atlanta.

Example of possible dissertation topic:

Synergistic learning for complex engineering futures

Future engineering work will be complex with novel challenges that concern aspects of sustainability as well as social and ethical aspects of engineering work. To better prepare students to face these socio-technical problems we must move beyond fragmented approaches to engineering education towards holistic conceptions of integrated engineering learning. While there are a range of approaches that address the integration of engineering curricula (e.g. capstone design or freshmen engineering programs) we know relatively little about the ways in which students make connections between disparate aspects of their learning – we call this synergistic learning.

This graduate research opportunity is part of an NSF-funded project that aims at building a fundamental theory of synergistic learning in engineering while pushing the boundaries of integrative pedagogies through an interdisciplinary Synthesis and Design Studio. The objective of this dissertation is to research synergistic learning in the context of the Studio and develop a fundamental understanding of the influences, mechanisms and outcomes of such learning processes. According to their interest, students will develop a particular lens of inquiry (e.g. interdisciplinarity, identity formation, creativity) to guide their research effort.

Contact & more information:

Nadia Kellam:

✉ nkellam@engr.uga.edu

☎ +1 706 542 5478

Joachim Walther:

✉ jwalther@engr.uga.edu

☎ +1 706 542 0313

www.education.engineering.uga.edu/research