**Multiple postdoctoral positions related to engineering education in the areas of learning sciences, undergraduate curricular development, instructional design and/or curricular & cultural change.**

Multiple units in the Georgia Tech College of Engineering are hiring for a total of five full-time, multi-year, Postdoctoral Fellowship positions in the area of engineering education starting by the Fall of 2021 with opportunities to start earlier. The positions will support a grant funded multi-department curricula innovation effort to integrate a reflective, story-centric, approach to developing undergraduate engineers’ entrepreneurial mindset. Units involved include Biomedical Engineering, Aerospace Engineering, Civil and Environmental Engineering, and Create-X. The Biomedical Engineering (BME) department is coordinating hiring for all five positions.

The postdoctoral fellows will assist the units in their implementation and improve our understanding of how students develop an entrepreneurial mindset and a self-concept as an entrepreneurially minded engineer. Work in each role will range from program development and curricular implementation to foundational research in engineering education. Fellows will work as part of a large team involving many faculty in multiple departments. The roles are described below. Candidates should apply to this pool advertisement following the instructions below. Please indicate a preferred role as well as whether you wish to be considered for other roles besides your preferred one.

**BME-1:** This role will focus on research and implementation of faculty development. Primarily, the role will involve research and learner analyses of faculty to understand what their needs are for faculty development as well as how those needs change over time. That focus will include understanding how faculty perceive students, how they approach education, and how they understand the concepts at the center of the grant. The role will also include responsibilities related to developing and facilitating faculty development activities for faculty across multiple engineering disciplines.

**BME-2:** This role will focus on learning sciences analysis of novel pedagogies. The key responsibility will be documenting and disseminating key research work on the theoretical foundations of story-driven learning and its contribution to engineering students’ entrepreneurial mindset and entrepreneurial self-concept. That includes the development of a learning sciences model of Story-Driven Learning. It will primarily focus on developing and executing a research agenda to study the impact that curricular change efforts have on students. The role will require expertise in both qualitative and quantitative educational research methods. It will include the development and utilization of appropriate measurement instruments as well as interviewing and observation. A background in either learning sciences or identity theory will likely be appropriate here. Prior experience with formal literature reviews and associated publication techniques would also be beneficial.

**BME-3:** This role will focus on documenting and disseminating curricular implementations. The goal is to understand positive and negative mutations of EM and other grant concepts that appear in the different departments’ implementations. It is centered in the area of curricular change. The work builds primarily on the concept of Fidelity of Implementation (c.f., Borrego et al., 2013; Morel et al., 2019). Work will include both curation of implementations as well as analysis of variation across different implementations. Experience with mixed-methods data and artifact analysis will be important to compare, contrast, and contextualize variation. It will include focus group work to understand faculty and student perspectives on the curricular changes in an effort to understand how variation in curricular implementation affects those perspectives.

**CEE-1:** This role will focus on research, design, and implementation of curricular interventions related to EM in a vertically integrated sequence of undergraduate courses. Responsibilities will range from proving support for program/course development and curricula implementation to foundational research in engineering education. The role will include research as well as development and implementation of faculty development. Responsibilities will also include assisting with evaluating the impact of the EML interventions on the students’ entrepreneurial mindset and entrepreneurial self-concept.

**CX-1:** This role will focus on supporting faculty in creating curricular content to teach story-driven learning (SDL) to undergraduate students. The fellow will lead identification of points in the CREATE-X Learn, Make, and Launch programs where it is optimal to integrate SDL experiences. They will also collaborate with CREATE-X Associate Directors to deploy SDL curriculum within Learn, Make, and Launch programs. This position focuses heavily on faculty development and is expected to organize and develop training workshops for faculty members throughout the College of Engineering and the Institute. The role will also include work to develop new assessment tools for SDL to measure the effectiveness of different curricular interventions.

**Dates and term:** Start Date ASAP, initial term of 1 year extensible to up to 3 years. Note, we expect the position to start remotely before shifting to in-person in Atlanta, GA as appropriate given for safe operation during COVID-19

**Qualifications:**Applications are welcome from recipients of a PhD in educational psychology; learning sciences; cognitive psychology; organizational psychology; business psychology; higher education, engineering education, research, measurement, and evaluation; or a related field. Academic and/or professional experience related to the above research areas is strongly preferred. The ideal candidate should have demonstrated the ability to perform work with faculty as well as the ability to take research from ideation to publication. Preference will be given to candidates with demonstrable prior experience in designing, implementing, and researching curricular innovation in higher education.

In addition to specific disciplinary knowledge and skill competencies, successful applicants will have demonstrated experience in one or more of the following areas: curricula change, faculty development, student development, engineering education research, and/or educational research methods. A track record of academic publications, excellent oral and written communications skills, experience working on large scale grants, and implementation-based research projects will also be beneficial. The ability to independently develop and drive a research agenda without disciplinary support will also be critical.

**Applicant Instructions**

To apply and be considered, please email a single complete packet of application materials:

* Email address: KEENPostdoc@BME.gatech.edu
* Include in packet:
	+ A completed one-page cover letter containing:
		- full name
		- physical mailing address and phone numbers
		- email address
		- brief introduction to your background in related research
		- the name of the role (or roles) described above that you wish to be considered for
	+ A statement of interest of no more than two double-spaced pages describing in further detail your interest and background as it relates to this position overall and at least one of the specific roles described above
	+ A writing sample from a peer reviewed publication that is pertinent to the position
	+ An up-to-date curriculum vitae
	+ A list of three references; no reference letters are needed at this time, but please inform your references that they will be contacted if you are a finalist.

*\* A sealed graduate transcript must be submitted at time of hire.*
Review of applications will begin immediately and continue until the position is filled.