4 Postdoc-Level Positions in STEM Education at Texas State University (1 program-focused; 3 research-focused)

OVERVIEW

We are advertising four postdoctoral-level positions related to instructional change in undergraduate STEM. The positions are associated with three recently awarded NSF grants: (1) "Building Capacity: Creating Faculty-Student Communities for Culturally Relevant Institutional Change" (2 positions); (2) "Furthering the Work of Undergraduate STEM Transformation: Modeling Instructional Change Teams"; and (3) "Developing Faculty Resources of Evidence-Based Practices that Improve Learning and Equity in STEM." One of the positions will primarily focus on programmatic work and may involve synergistic research activities. The other three positions will primarily focus on research and will involve synergistic programmatic activities as appropriate.

Minimum qualifications for all positions are:
- PhD in a STEM and/or Education field
- Commitment to counteracting systemic inequities in STEM
- Motivation and ability to engage with diverse students and junior researchers
- Motivation and ability to engage with STEM faculty
- Enthusiastic and motivated learner

Other desirable qualifications align with the responsibilities of each position, as described below. Candidates who identify with underrepresented minority groups are particularly encouraged to apply.

The salary for each position is between $50,000-$55,000 per year. Review of applications will begin on November 20, 2019. Preferred start dates are between January 1 and May 1, 2020. Initial appointments will be for one year, renewable as funding remains available (3-5 years). We are willing to explore the possibility of a remote work arrangement for projects #2 and #3. However, relocation to San Marcos is preferred, and we cannot guarantee that a remote arrangement is an option.

Interested candidates should submit a 1-3 page cover letter and a CV to STEMEdPostdocs@txstate.edu. The cover letter should explain the candidate's interest in one or more of the positions and why they are a good fit for the position(s), based on alignment with the required qualifications and any other desirable qualifications (e.g., past experience relevant to the job responsibilities). Candidates should clearly indicate in which position(s) they are interested in their letter. The cover letter should also specify a preferred state date and, if the candidate has not yet received their PhD, when they expect to receive it. If the candidate is requesting a remote work arrangement, this should also be specified in the letter. The CV should include a list of professional experiences, publications, and contact information for three professional references. Shortlisted candidates may be asked to submit a writing sample and three letters of recommendation.

Information about each position is detailed below.

POSITION-SPECIFIC INFORMATION
Project #1: Faculty-Student Communities *(NSF #1928696, PI Heather Galloway, Co-PIs Eleanor Close, Alice Olmstead, Cynthia Luxford, and Li Feng)*
During this five-year project, we aim to engage faculty and students across Texas State University's College of Science and Engineering in workshops, departmental self-assessments, redesign of lower-division gateway courses, and project-level decision making. Participating STEM departments will receive intellectual, material, and logistical supports to empower faculty-student teams in developing sustainable communities of practice focused on culturally relevant instruction. The project will also involve three research strands that focus on communities of practice among faculty and students, STEM student trajectories at Texas State, and student graduation rates and STEM workforce outcomes for Texas State and other Hispanic Serving Institutions.

Position #1: The first position will be primarily focused on enacting and managing the programmatic aspects of the project. This will include expanding a well-established Learning Assistant program (https://learningassistantalliance.org/). In collaboration with the rest of the project team, the selected candidate will be expected to engage in programmatic activities such as: designing and facilitating workshops for STEM faculty; facilitating conversations within STEM departments about students' perspectives on their courses; designing and facilitating summer institutes and weekly preparation meetings for faculty-student course redesign teams; teaching a STEM pedagogy course for students; contributing to project-level meetings with emerging faculty leaders from across the college; and performing other management and administrative tasks as needed. Exact activities will vary depending on the stage of the project. The selected candidate may also engage in research activities related to faculty-student community development. Co-PIs Close and Olmstead will be the co-advisors for this position.

Position #2: The second position will be primarily focused on collecting and analyzing various kinds of student data before, during, and after course redesigns. The selected candidate will be expected to engage in research activities such as: conducting and synthesizing the results of focus groups with STEM students; gathering and analyzing institutional student data; working with STEM faculty to collect and analyze qualitative and quantitative student data using research-based assessments; amending materials for institutional review board approval; and disseminating results through publications and presentations. Exact activities will vary depending on the stage of the project. The selected candidate will be expected to co-mentor undergraduate research students as appropriate. The selected candidate will also be expected to help faculty and students interpret data, and to contribute to the implementation of workshops and summer institutes. Co-PI Luxford will be the primary advisor for this position.

Project #2: Instructional Change Teams *(NSF #1914857, Lead PI Alice Olmstead, Western Michigan University (WMU) PI Andrea Beach, WMU co-PI Charles Henderson)*
This project aims to develop empirically-based guidance for leaders who aim to support teams working to improve undergraduate STEM courses. It builds on a prior national-scale qualitative study led by the PI team (NSF#1525393). During this three-year project, we will pursue a two-phased, mixed-methods study to diagnose what factors lead to desirable outcomes for instructional change teams.

The postdoctoral research position will span all aspects of the project. The selected candidate will be expected to engage in activities such as: identifying and recruiting study participants; conducting and analyzing interviews and focus groups; reviewing relevant literature; developing and refining the survey instrument; collecting and compiling survey data; preparing reports for study participants; amending

materials for institutional review board approval; and disseminating results through publications and presentations. The selected candidate will be expected to co-mentor undergraduate research students at Texas State as appropriate. The selected candidate will also be expected to collaborate remotely with PI Beach and a graduate student at Western Michigan University to engage in quantitative research activities such as: learning about and applying current survey development best-practices; statistically testing the pilot instrument; analyzing survey data; and synthesizing quantitative results for presentations and publications. PI Olmstead will be the primary advisor for this position.

Project #3: Faculty Resources *(NSF #1928596, PI Ben Van Dusen, co-PIs Eleanor Close, Robert Talbot, Jayson Nissen)*
This four-year project includes three strands of work that collectively support STEM faculty at Hispanic-Serving Institutions (HSIs) in implementing, adapting and assessing evidence-based instructional strategies that support equitable outcomes. We will interview HSI STEM faculty; conduct workshops and provide resources supporting faculty in conducting scholarship of teaching and learning; and use the LASSO database to research potential bias in research-based assessments. The postdoctoral research position will span all aspects of the project, with an initial focus on the interview study. The selected candidate will be expected to engage in activities such as: identifying and recruiting study participants; conducting and analyzing interviews; reviewing relevant literature; creating / amending materials for institutional review board approval; and disseminating results through publications and presentations. Exact activities will vary depending on the stage of the project. The selected candidate will be expected to co-mentor undergraduate research students as appropriate. The selected candidate will also have opportunities to contribute to the creation and implementation of faculty workshops at regional and national conferences. The postdoc will be mentored by Eleanor Close (Texas State University) in collaboration with Jayson Nissen (J. M. Nissen Consulting), Bud Talbot (CU-Denver), and Ben Van Dusen (project PI, CSU-Chico).

ADDITIONAL JOB INFORMATION
Texas State University is a large, diverse Hispanic Serving Institution in Central Texas, between Austin and San Antonio. The College of Science and Engineering includes seven STEM departments and a growing number of discipline-based education research faculty. Selected candidates will have regular opportunities to interact with faculty, students, and other postdocs who are engaged in education research (see, in particular, http://txstper.wp.txstate.edu and http://luxford.wp.txstate.edu/). Interactions and cross-project collaboration among recent postdoc hires, as well as participation in potential future grant-writing activities with the project teams, will be encouraged.

Please contact Eleanor Close (eclose@txstate.edu), Alice Olmstead (alice.olmstead@txstate.edu), and/or Cynthia Luxford (cluxford@txstate.edu) if you have questions about any of the positions. Please email STEMEdPostdocs@txstate.edu to apply and if you have general questions about the application process.