

dB-SERC Mentor-Mentee Evidence-Based Teaching Awards

Submission Deadline: There is no deadline, these awards will be made on a rolling basis

Overview

The Discipline-based Science Education Research Center (dB-SERC) invites proposals for Mentor-Mentee Evidence-Based Teaching Awards from the Natural Sciences faculty members in the Dietrich School of Arts and Sciences at the University of Pittsburgh. The awards are for mentoring doctoral students in evidence-based teaching with a focus on transforming at least a two week segment of a natural science course to improve student learning outcomes in a measurable way. Both the faculty mentor and the student will receive an award of \$1000 for course transformation in which the faculty will mentor the student and they will implement and assess an evidence-based teaching module. Proposals should include a project description describing how student-centered, evidence-based active engagement techniques will be employed and an evaluation plan for assessing the extent to which learning was improved via the transformation efforts. The module should extend at least over two weeks of instruction.

Faculty mentors and students receiving the awards are expected to attend two dB-SERC lunch meetings with other Natural Science faculty members to discuss 1) the project design for feedback, and 2) the project outcomes. The student will also be asked to give a talk or present a poster at Pitt at an appropriate venue.

Proposals should meet some or all of the following criteria. Strong proposals will meet more than one of the following guidelines:

- Clearly describe the proposed transformation, including student-centered evidence-based active engagement techniques to be used.
 - Rationale for the proposed change(s) should also be discussed.
- Have well-defined, measurable learning goals (e.g., content-related goals, attitude related goals, affective goals).
- Include a well-defined evaluation plan for assessing the extent to which the various learning goals have been achieved (e.g., use of established assessments from discipline-based education research, student interviews etc.)
- Be sustainable and scalable (e.g., after the funding period is over, the materials and assessments used should be easily adaptable by other faculty member teaching the same course).

Eligibility

All full-time faculty members who teach undergraduate courses at the University of Pittsburgh main campus are eligible to submit proposals.

Size and Duration of Awards

The faculty mentor and the student mentee will each receive a \$1,000 honorarium. The honorariums will be awarded upon completion of the project.

Submission Deadline and Notification of Awards

Awards will be made on a rolling basis, so there is no deadline for submission. After a proposal is submitted, dB-SERC will send confirmation of receipt after which a decision regarding the award will be made within two to four weeks.

Submission Method

All proposals should be emailed to the dB-SERC proposal email address: dbserc@pitt.edu

Consultation

dB-SERC is happy to provide consultation to the faculty mentors and student mentees preparing a proposal for this award. If you would like consultation on the proposal, send an email to dB-SERC (dbserc@pitt.edu)

Format of the proposal

Each proposal must contain the following features:

1. Cover sheet which includes:

- A. Project Title
- B. Name and signature of the corresponding Project Director and mentor and student mentee(s) with department affiliation, phone number, and e-mail address.

2. Body of the Proposal

The length of the main body of the proposal should not exceed three single spaced pages (12 point font). Three pages includes the abstract. The main body of the proposal must include the following:

- A. Abstract (one paragraph)
- B. A clear description and rationale for the proposed course transformation

dB-SERC is an interdisciplinary center and proposal review will be done by individuals or a committee convened for this purpose by the dB-SERC Director who may not have expertise in your subject area. Please describe your project such that a scientist or engineer outside your field can understand and evaluate your proposed transformation.

The description of the course transformation proposal must include:

- Specific measurable learning and/or attitudinal goals for students in the course.
- Description of the assessments used to measure the extent to which each of the goals is met.
 - Both summative assessments and low-stakes formative assessments can be described.
 - Examples of course assessment include controlled study (comparing transformed and traditional course), comparison with data from literature, or other well-defined measures.
 - Appropriate instruments could include pre-/post-tests (e.g. of content, attitude, epistemology, self-efficacy etc.), in-class clicker questions, conceptual individual and/or group quizzes, perhaps even impact on DFW rates or. Our website (www.dbserc.pitt.edu) includes information which can be helpful in designing an evaluation plan (e.g., contains a list of established assessments in each natural science discipline and information about evidence-based teaching strategies).

At least one paragraph which provides rationale for the proposed transformation should be included. It is strongly encouraged that the rationale be based on previous experience or published research on teaching and learning.

C. How the faculty mentor will mentor the mentee (what will each of them do) and how the proposed course transform will help students learn evidence-based teaching and learning

3. Appendices

A letter of support from the department Chair or Associate Chair should be submitted as the first Appendix. Other Appendices are optional but can include additional relevant materials (e.g., proposed assessment tasks and/or instruments). The total number of pages including all appendices cannot exceed 3 pages.

University Copyright Policy

Any copyrightable materials created by faculty, staff, or students as a result of this University-funded project will be owned by the University subject to a royalty-sharing agreement with the creator. For specific information, please refer to University Policy 11-02-02, *Copyrights*, at www.cfo.pitt.edu/policies/policy/11/11-02-02.pdf.

Proposal Review Process

All proposals will be reviewed by individuals or a committee convened for this purpose by the dB-SERC Director. Strong considerations will be given to proposals which:

- Are considered to meet more of the criteria set forth on page 1 of this document.
- Include quality assessments that are likely to provide an accurate depiction of the impact of the instructional transformation.
- Attempt to transform teaching of topics in large, foundational, introductory courses with large DFW (drop, fail, withdraw) rates or laboratory courses.

- There is a clear synergy between the mentor and mentee and the mentor is clearly interested in helping the mentee learn about evidence-based teaching and learning.

Reporting and Other Requirements

As noted earlier, faculty mentors and students receiving the awards are expected to attend two dB-SERC lunch meetings with other Natural Science faculty members to discuss 1) the project design for feedback, and 2) the project outcomes.

Successful applicants will be required to prepare a short summary report (1-2- pages) describing the outcome(s) of the project. The summary report should be emailed to dB-SERC (dbserc@pitt.edu) no later than one month after the end of the award period.