

IUSE: EHR Program

Improving Undergraduate STEM Education

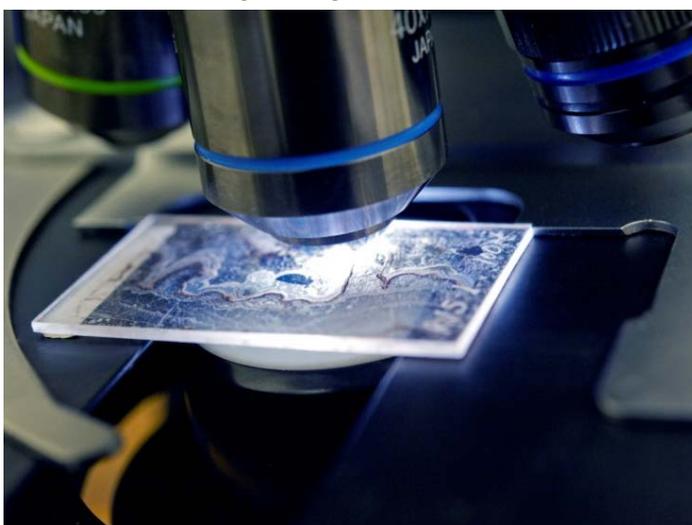
Project Approach 1: Exploration and Design Small-scale projects may seek to establish the basis for development and implementation of new interventions or strategies, develop strategies for the adoption, adaptation, and implementation of effective practices, or adapt and implement strategies shown to be effective at other institutions. They may also pose new interventions or strategies, and explore challenges to their adoption, with the goal of informing policy, practice, and future design or development of components in the STEM higher education enterprise. Results of Exploration projects are expected to be significant enough to contribute to the body of knowledge about STEM teaching and learning and/or effective means to broader implementation.

Project Approach 2: Development and Implementation Larger-scale projects may focus on new or promising interventions or strategies to achieve well-specified STEM learning objectives, including making refinements that build on small-scale testing. The Engaged Student Learning Track has two levels of Design & Development projects. *Level I* projects focus on achieving propagation beyond a single institution or work to promote change across multiple STEM disciplines within an institution. Level I projects should carry the development to a state in which the evaluation of the project produces evidence to determine whether or not the project's efforts are effective. *Level II* projects are intended to support large-scale efforts. This level also supports long-term research on efforts to effect change in student learning practices, in order to learn what has been achieved.

Exploration and Design proposals may be submitted at any time. Consult the Important Information and Revision Notes section of the solicitation for further details. Proposals for **Workshops, Conferences, and Special Projects** addressing critical challenges in undergraduate STEM education may be submitted at any time following consultation with a program officer.

Both tracks of the IUSE: EHR program support

- research and development of innovative learning resources;
- design research to understand the impact of such resources, including replication studies, that deepen and broaden our understanding of effective practices;
- strategies to implement effective instruction in a department or departments, within or across institutions;
- faculty development projects;
- design and testing of instruments for measuring student outcomes;
- employ Creative Commons Attribution, Attribution-ShareAlike, or Attribution-NonCommercial-ShareAlike licenses; and
- proposals for untested and unconventional activities that could have a high impact on learning and contribute to transforming undergraduate STEM education



For more information, and to see abstracts of current awards, please visit:
http://nsf.gov/funding/pgm_summ.jsp?pims_id=505082

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