



To: Distribution List

From: Faculty Research Development Office
Office of the Vice President for Research

Subject: Limited Competition: Improving Undergraduate STEM Education: Computing in Undergraduate Education (IUSE:CUE) NSF 19-546

Date: March 1, 2019

UNM Researchers,

Computing is increasingly central to innovation across a wide range of disciplinary and interdisciplinary problem domains. As a result, undergraduate CS programs are being called upon to prepare larger and more diverse student populations for careers involving computer science. Many of these students are not traditional CS students who want to major in CS and pursue careers as software engineers, database architects, or user interface specialists. Rather, they are interested in integrating advanced computational skills and methods with domain-specific knowledge from their non-CS majors.

The National Science Foundation aims to support partnerships of Institutions of Higher Education (IHEs) as they begin to rethink the role and positioning of CS education, looking perhaps at CS+X or X+CS programs (where X is a discipline or set of disciplines that may include both STEM and non-STEM subjects) but also at a more holistic restructuring of interdisciplinary degree pathways, with the goal of better preparing a wider, more diverse range of students to collaboratively use computation across a range of contexts and challenging problems. NSF encourages proposers to use their efforts to re-envision the role of computing to also better integrate the study of ethics into their curricula.

This solicitation intends to build community around efforts that are robust and operate across a range of IHEs. Therefore, proposals must comprise a **multi-institutional partnership**, with a lead IHE and 2-4 additional IHE partners.

Full proposals are due to the sponsor by May 9, 2019. Proposals that do not include an ethics component may request a maximum budget of \$300,000 over 18 months; and proposals that do include an ethics component may request a maximum budget of \$350,000 over 18 months. See the following link for further details:

https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf19546

This is a limited competition and UNM is limited to participate on two proposals as the lead and/or partner.

Please submit a 3-page pre-proposal addressing the components below, plus references, budget overview and PI and Co-PI biosketches in NSF format. (References, budget overview and biosketches do not count against the 3-pages.) All documents must be submitted as a SINGLE PDF file, 11point font, by noon, March 22, 2019, to limited@unm.edu with the subject line: “NSF CUE – your name” or “NSF CUE Ethics – your name”. No late submissions will be considered.

Pre-Proposal Required Components

- PI name, department, contact information
- Identification of 2-4 Institutes of Higher Education (IHE) partners (this partnership is referred to as a Network Improvement Community or NIC)
- Co-PI names, institutes, departments, contact information
- Title of proposal

- An overview of the intended Networked Improvement Community (NIC): how it will be managed and organized, its common goal(s) and metrics, and plans for communication and convenings of members.
- Plans to broaden participation in computing at UNM and the partner IHEs. Identify relevant characteristics and needs of participants from the underrepresented or under-served groups that are to be served in this effort, and include specific plans or strategies for addressing or accommodating those needs
- If relevant to the specific proposal, include an overview of the plan to better integrate the study of ethics into the proposed curriculum
- A plan for external, critical reviews of proposed designs and activities (external review panel, advisory board, or third-party evaluator are appropriate) including a description of how the PI will report and use the results of the project's external, critical review process.

If you have questions, please contact limited@unm.edu.

If you are affiliated with HSC, please contact Corey Ford (CFord@salud.unm.edu) or Cassandra Misenar (CMisenar@salud.unm.edu) for more information.