Grant Abstract
Improving Undergraduate STEM Education: Hispanic Serving Institutions (HSI) Program

Grant Website: https://www.nsf.gov/pubs/2018/nsf18524/nsf18524.pdf

Brief Summary:
The HSI Program seeks to enhance the quality of undergraduate STEM education at Hispanic-serving institutions (HSIs) and to increase retention and graduation rates of undergraduate students pursuing degrees in STEM fields at HSIs. In addition, the HSI Program seeks to build capacity at HSIs that typically do not receive high-levels of NSF grant funding. By improving the quality of the undergraduate experience, the HSI Program expects to produce a more qualified and diverse STEM workforce.

Funding Period: Grant period may run between 3-5 years depending on the project being pursued starting in FY 2018.

Maximum Award: The maximum award allotted depends on the kind of project being pursued.
- Track 1 projects: $500,000 to $1,500,000 (up to 25 will be awarded in FY18)
- Track 2 projects: up to $250,000 (up to 18 will be awarded in FY18) – Most appropriate for Crafton.
- Resource Hub: up to $3,000,000 (one award)

Application Deadline: March 6, 2018 by 5p.m. *(submitter's local time), (submit on Grants.gov or FastLane)

Cost Share or Match: Inclusion or voluntary committed cost is prohibited.

Program Overview:
The HSI Program is accepted proposals in two tracks: (Track 1) Building capacity and (Track 2) HSIs New to NSF.

The Building Capacity track (Track 1) has three priority areas (one or more of these areas will also be integrated into Track 2 program proposals):
- Critical transitions: Critical transitions on the way to degree attainment includes i) the transition from lower-to upper-division coursework at individual HSIs and ii) the transfer of students from two-year institutions to four-year institutions. Priority Area 1 supports projects that address the retention of undergraduate students in the first two years of undergraduate studies, which are critical to student retention in STEM majors.
- Innovative cross-sector partnerships: This priority area supports mutually beneficial partnerships that yield research projects with long-term benefits to society, enhance the capacity for research at partner intuitions, and facilitate knowledge transfer between researchers and practitioners. Partners may include industry, government, academic institutions, non-profit organizations, and local communities. Projects should support innovative research and education projects that contribute to the Nation's future through discovery, learning, and innovation. Partnerships of academic institutions with organizations such as national laboratories, industrial organizations, and/or other public/private organizations should create new and meaningful knowledge and long-term benefit to society.
- Research on broadening participation in STEM: The HSI Program will support projects that investigate factors affecting the recruitment, retention, and graduation rates of undergraduate STEM students at HSIs. Investigators may consider behavioral, cognitive, affective, learning, and social differences as well as organizational, institutional, or systemic processes that may affect the participation and success of students at HSIs.

Examples of Potential Strategies to Address Areas in Track 1 may include:
- Development of new curricular materials and methods of instruction that have the potential to improve student learning in STEM.
- Alignment of STEM curriculum between two-year and four-year institutions, to support student transitions.
- Development of innovative assessment tools to measure student learning.
- Improving grants management infrastructure at HSIs.
- Developing mentoring partnerships that enhance the research capabilities at HSIs.

- Enhancing the quality of the undergraduate STEM experience in a culturally relevant manner, including support for student research experiences, especially among members of underrepresented groups.
- Examining the institutional relevance of curricular redesign and/or alignment efforts.
- Evaluating the efficacy of near-peer student mentoring.
- Implementing evidence-based active learning strategies and interventions.

Please note that one or more of the three areas listed above will be included within any Track 2 program proposals (see description in following paragraph).

The HSIs New to NSF Track (Track 2) is only open to those that have never received NSF funding or have not received NSF funding in the past five years. This grant opportunity is designed to stimulate implementation, adaptation, and innovation in one or more of the three priority areas identified in Track 1, and to broaden the number of HSIs participating in NSF programs. Prospective investigators are encouraged to provide sufficient detail to clearly inform both reviewers and NSF staff about what is being proposed. It is expected that some of the funded Track 2 projects will serve as a pilot for an idea that may be expanded in a future proposal for an NSF project.

The Resource Hub will support the needs of HSIs with little or no prior NSF funding, such as assistance with proposal writing and financial compliance. The Resource Hub will also facilitate networking and professional development that builds and strengthens collaborations among HSIs.

Restrictions:
Eligible schools can only submit one Track 1 or Track 2 proposal per year. Schools submitted proposals for Track 1 or Track 2 can also submit a Resource Hub proposal.

Budgetary limitations include:
- Track 1 and 2 projects - Equipment costs cannot exceed 30% of the total NSF budget requested.
- The Resource Hub project is not intended to support implementation activities; therefore, major equipment is not normally included. However, minimal equipment costs (less than 1% of the direct costs) are allowed if required to perform the project activities.

Merit Review Criteria
All proposals will be evaluated against two criteria:
- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review of both criteria:
1. What is the potential for the proposed activity to
   a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Questions: For general inquiries: NSF-EHR-HSI@nsf.gov; other inquiries may be directed to Andrea Johnson, Program Director: 703-292-5164/andjohns@nsf.gov.