



U.S. NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 24-059

Dear Colleague Letter: Advancing STEM Education, Training and Workforce Development at HBCUs

February 20, 2024

Dear Colleagues:

This Dear Colleague Letter (DCL) encourages the submission of proposals to the Historically Black Colleges and Universities - Undergraduate Program (HBCU-UP) that generate new knowledge on the contributions of Historically Black Colleges and Universities (HBCUs) in the education, training, and workforce development of underrepresented minority students in science, technology, engineering, and mathematics (STEM) fields. HBCUs have made significant contributions in cultivating unique learning environments that foster excellence in STEM education, resulting in greater long-term outcomes (1) for enrolled students. Among the STEM PhDs awarded between 2010 and 2020 to Black students who completed their PhD in the United States, 31% earned their bachelor's degree at an HBCU (2). Overall, 11 HBCUs are noted in the top 20 bachelor's degree-granting Institutions of Black and Hispanic STEM PhD recipients. As such, the Directorate for STEM Education recognizes that the continued success of HBCUs requires intentional efforts to build institutional research capacity. In addition, the [CHIPS plus Science Act](#) of 2022 (Public Law No. 117-167) underscores the need to broadly disseminate effective models for programs and practices at HBCUs that promote the education and workforce preparation of students pursuing STEM studies and careers.

To meet this need, this DCL recognizes the diversity of HBCUs that includes their geographic distribution, range in enrollment demographics and size, as well as the variation in types of STEM degree programs (Associates, Bachelors, Masters, Doctoral and Professional) and curricular offerings. Thus, the Directorate of STEM Education values the opportunity to glean critical insights across the HBCU landscape and invites innovative ideas that highlight synergy and alignment across the institutional mission and identified STEM education and research goals. Strategies may include explorations of the cultural, environmental, and structural factors that program STEM student and/or STEM faculty success, collaborations to identify areas synergy between existing STEM-disciplinary expertise, expanding activities in

emerging research areas (such as Artificial Intelligence, Quantum Information Science and Engineering, Semiconductors, Microelectronics, Advanced Manufacturing), conducting an institutional STEM education and research needs assessment and action plan, and acquisition of equipment/instrumentation that support undergraduate STEM education endeavors. Successful projects should demonstrate an asset-based, conceptual framework that acknowledges the unique institutional context of HBCUs.

HOW TO RESPOND TO THIS DCL:

Prior to submitting a proposal in response to this DCL, interested proposers should discuss their project ideas with HBCU-UP program directors. Proposals may be submitted to the appropriate track as described in the [HBCU-UP solicitation](#), being sure to adhere to the noted solicitation specific criteria and deadlines.

In addition, HBCU-UP will also accept planning, conference, EAGER, and equipment proposals in accordance with the [NSF Proposal & Award Policies & Procedures Guide \(PAPPG\)](#) as described in Chapter II.F. Where appropriate, program officer concurrence documentation must be uploaded into the supplementary documents section of the proposal. All planning, conference, EAGER, and equipment proposals are welcome through **June 3, 2024**, but submission by **April 15, 2024** is strongly encouraged.

The proposal title should begin with “CHIPS” after any solicitation or PAPPG specific title requirements.

Questions about this DCL should be directed to the program directors for HBCU-UP:

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Sincerely,

James Moore, III
Assistant Director
Directorate for STEM Education

References

1. Edwards, A., Ortagus, J.C., Smith, J. and Smythe, A. (2023) HBCU Enrollment and Longer-Term Outcomes. (EdWorkingPaper: 23-883). Retrieved from Annenberg Institute and Brown University: <http://doi.org/10.26300/4xqa-cs32>
2. Velez, E.D., Heuer, R. (2023) Exploring the Educational Experiences of Black and Hispanic PhDs in STEM. RTI International, Alfred P. Sloan Foundation ([Exploring the Education Experiences of Black and Hispanic PhDs in STEM.pdf](#) (rti.org))