

Vanderbilt-wide Limited Submission Opportunity

2025 NSF Scholarships in Science, Technology, Engineering, and Mathematics Program (S-STEM)

Applications due December 3, 2024

Vanderbilt (VU + VUMC): *This is a joint competition for VU and VUMC investigators. All investigators should follow these instructions.*

Vanderbilt University may submit no more than **two proposals** (either as a single institution or as subawardee or a member of an inter-institutional consortia project) to the NSF [Scholarships in Science, Technology, Engineering, and Mathematics Program \(S-STEM\)](#).

The main goal of the S-STEM program is to enable low-income students with academic ability, talent or potential to pursue successful careers in promising STEM fields. Recognizing that financial aid alone cannot increase retention and graduation in STEM, the program provides awards to institutions of higher education (IHEs) not only to fund scholarships, but also to adapt, implement, and study evidence-based curricular and co-curricular activities that have been shown to be effective supporting recruitment, retention, transfer (if appropriate), student success, academic/career pathways, and graduation in STEM.

The program seeks to (1) provide scholarships to domestic low-income academically promising students with demonstrated financial need pursuing a degree in one of the S-STEM eligible disciplines; (2) adapt and implement evidence-based curricular and co-curricular activities to support NSF S-STEM scholars; (3) increase retention, student success, and graduation of these low-income students in STEM; (4) test strategies for systematically supporting student academic and career pathways in STEM in ways that are congruent with the institutional context and resources; and (5) disseminate findings on what works related to the supports and interventions undertaken by the project, in particular to other institutions working to support low-income STEM students.

The S-STEM program encourages collaborations, including but not limited to partnerships among different types of institutions; collaborations of S-STEM eligible faculty, researchers, and academic administrators focused on investigating the factors that affect low-income student success (e.g., institutional, educational, behavioral and social science researchers); and partnerships among institutions of higher education and business, industry, local community organizations, national labs, or other federal or state government organizations, as appropriate.

Scholars must be domestic low-income students, with academic ability, talent or potential and with demonstrated unmet financial need who are enrolled in an associate, baccalaureate, or graduate degree program in an S-STEM eligible discipline. Proposers must provide an analysis that articulates the characteristics and academic needs of the population of students they are trying to serve. NSF is particularly interested in supporting the attainment of degrees in fields identified as critical needs for the Nation. Many of these fields have high demand for training professionals that can operate at the convergence of disciplines and include but are not limited to quantum computing and quantum science, robotics, artificial intelligence and machine learning, computer science, data science and computational science applied to other frontier STEM areas and other STEM or technology fields in urgent need of

domestic professionals. It is up to the proposer to make a compelling case that a field is a critical need field in the United States.

S-STEM Eligible Degree Programs

- Associate of Arts, Associate of Science, Associate of Engineering, and Associate of Applied Science
- Bachelor of Arts, Bachelor of Science, Bachelor of Engineering and Bachelor of Applied Science
- Master of Arts, Master of Science and Master of Engineering
- Doctoral

S-STEM Eligible Disciplines

- Technology fields associated with the S-STEM-eligible disciplines (e.g., biotechnology, chemical technology, engineering technology, information technology).
- Disciplinary fields in which research is funded by NSF, **with the following exceptions:**
 1. Clinical degree programs, including medical degrees, nursing, veterinary medicine, pharmacy, physical therapy, and others not funded by NSF, are ineligible degrees.
 2. Business school programs that lead to Bachelor of Arts or Science in Business Administration degrees (BABA/BSBA/BBA) are not eligible for S-STEM funding.
 3. Masters and Doctoral degrees in Business Administration are also excluded.

Note that there are 3 Tracks and a Collaborative Planning grant mechanism for which an application can be submitted, and each track has its own separate budgetary considerations. The proposal limits apply only to Tracks 1-3, **not** to Collaborative Planning grants.

Track 1: Institutional Capacity Building; may request up to \$1,000,000 for up to 6 years.

-Track 1 projects seek to increase the participation of institutions that have never had an award from the S-STEM program or the STEM Talent Expansion (STEP) program. This requirement applies to the institution as whole. One S-STEM or STEP award to any department or school within the institution makes the entire institution ineligible for a Track 1 award.

Track 2: Implementation-Single Institution; may request up to \$2,000,000 for 6 years.

-Track 2 proposals have the same S-STEM goals as Track 1 proposals. They involve only one institution, but they will serve more Scholars than Track 1 proposals. Any IHE (as described under the eligibility section) can submit a Track 2 proposal, whether or not the institution has received prior S-STEM or STEP awards.

Track 3: Inter-institutional Consortia; may request up to \$5 million for up to 6 years

-Track 3 projects support multi-institutional collaborations that focus on a common interest or challenge. For example, a collaboration among community colleges and four-year institutions may focus on issues associated with successful student transfer from 2-year institutions to 4-year programs. In another

example, a multi-institutional collaboration may focus on investigating factors, such as self-efficacy or identity, that contribute to the success or degree attainment of domestic, low-income students in different types of institutions.

Collaborative Planning Grants to Develop an Inter-institutional Consortium; may request up to \$100,000 for one year

(***Note that the proposal limits do not apply to collaborative planning grant proposals.)

Collaborative Planning projects provide support for groups of two or more IHEs and other potential partner organizations to establish fruitful collaborations, increase understanding of complex issues faced by low-income students at each institution, establish inter-institutional agreements when necessary and develop mechanisms for cooperation in anticipation of a future Track 3 proposal that will benefit all institutions and their scholars as equal partners.

This category of projects aims to provide proposers from two or more institutions the funds and time to establish the relationships and agreements necessary for submitting an Inter-institutional Consortia S-STEM proposal. It is expected that proposers will be ready to write and submit this Inter-institutional Consortia proposal within 1-2 years of receiving a Collaborative Planning grant award. Any subsequent proposals to S-STEM based on this work must describe the results of the planning effort.

See the [solicitation](#) for more details.

Internal Application Information

Interested faculty should visit

<https://vanderbilt.infoready4.com/#freeformCompetitionDetail/1955858> to submit an application for the internal LSO competition and to find additional information about the opportunity. The deadline for the internal competition is **December 3, 2024**.

Required application materials include:

1. Brief (2-page maximum) research plan including summary budget;
2. Recent Biographical Sketch or CV
3. (Optional) A letter of support from your department chair/center director/other.

Any questions about this opportunity or the LSO process may be directed to LSO@vanderbilt.edu.