



STRENGTHENING STEM PATHWAYS: LESSONS LEARNED IN S-STEM SCHOLAR RECRUITMENT



The National Science Foundation’s Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) program is designed to address the growing national need for a highly skilled STEM workforce by supporting academically talented, low-income students in their pursuit of STEM degrees. The program primarily serves domestic students who demonstrate both academic promise and financial need, providing scholarships to those enrolled in eligible associate, baccalaureate, or graduate programs in fields such as biological sciences, physical sciences, mathematics, computer science, engineering, and related disciplines. Funding is awarded to institutions of higher education, which then select and support eligible students through scholarships and a range of evidence-based support activities.

About the ROPEs Hub

The Research on Organizational Partnerships in Education in STEM (ROPEs) Hub advances understanding of organizational partnerships that support academic pathways for domestic low-income engineering and computing students through a broad community of practice and a multi-faceted research agenda. To support S-STEM teams, the ROPEs Hub created a series of themed office hour sessions that facilitated sharing of best practices and fostered the exchange of experiences among participating teams. This brief is based on those conversations.

Recruiting S-STEM Scholars

One of the key responsibilities for all S-STEM teams is to recruit scholars who fulfill the program’s eligibility criteria. Recruiting can be a complex process for S-STEM teams, as it involves identifying and engaging academically talented, low-income STEM students—a task that demands a well-developed strategic plan and strong partnerships.

Content adapted from presentations and discussions during ROPEs Hub themed office hours held on June 9, 2025.





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What can we do?

Population

Understanding the population that you are trying to recruit is critical for designing effective outreach and support strategies. Each recruitment stream — whether high school to community college, high school to university, community college to university, early university, or late university to graduate school — has distinct characteristics, needs, and barriers. Tailoring your approach to these unique contexts allows you to address specific challenges, communicate relevant opportunities, and build trust more effectively. By recognizing the diversity, you can ensure that your recruitment efforts are both inclusive and impactful, ultimately supporting students' successful transitions at every stage of their academic journey.



Messaging & Pitch



When crafting messages to recruit S-STEM scholars, it's important to recognize that offers that seem "too good to be true" may actually discourage interest, especially among low-income students who are often wary of scams. To build trust and encourage engagement, your messaging should be transparent, balanced, and clear about both the benefits and expectations of the program.

Highlight Mutual Value: Clearly communicate not only what students will gain from participating in the program (such as access to research, internships, and employer visits), but also what the program and institution gain from students' involvement. This balanced approach helps students see the relationship as a partnership rather than a one-sided offer.

Be Transparent About Costs: Discuss the total cost of attendance and explain how the S-STEM scholarship fits into the broader financial picture. Emphasize that the opportunity is a fair exchange—"a deal, not a handout"—to help students feel confident in accepting support (Castles et al. 2022).

Clarify Expectations and Commitments: Outline the time commitment required by the program, and distinguish between activities that are required and those that are recommended. This approach helps students understand what is expected of them and reduces anxiety about hidden obligations.

From our practitioners.....



Recognize that even with scholarships, many students feel compelled to have a job to support themselves or their families. Provide clear information about how the scholarship program may interact with work-study or part-time jobs. We recommend offering resources to help students balance work and academics.

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Trusted Disseminators

When recruiting students for S-STEM programs, students are often most receptive to information delivered by individuals they already trust. Trusted messengers can include high school guidance counselors, coaches, CTE teachers, K-12 outreach personnel, transfer outreach staff (Gurganus et al. 2019), student organizations or living-learning communities, and academic advisors (Dallas et al. 2023). Those trusted disseminators need to be convinced that you will be supportive of their students.



Equally important is ensuring that these messengers are reliable partners who will accurately and effectively communicate your program's message. To maximize recruitment impact, seek out partners whose professional goals align with your own—such as admissions personnel (who are invested in reducing summer melt), academic advisors (who focus on retention), institutional K-12 summer program leaders (with established K-12 networks), and instructors of introductory courses. However, when engaging instructors, it is crucial to provide clear guidance and well-designed strategies, as they may not be equipped to distinguish eligible from ineligible students (Gartner et al. 2021). We advocate for a mindset that thinks about all of these individuals as **partners** working together to best serve these students as opposed to a transactional-style relationship.

Effective Follow-up



Effective follow-up is essential for supporting prospective S-STEM students and ensuring they remain engaged throughout the application process. Every interaction with your institution is an opportunity to build (or lose) momentum. Start by understanding the specific steps students must complete, so you can anticipate their needs and offer timely guidance. Warm hand-offs—personally connecting students to the next staff member or resource—help foster trust and continuity. Systematically tracking progress with checkpoints ensures no student is overlooked, while appropriately frequent outreach keeps students informed and motivated.

Recognizing that many low-income and first-generation students face additional barriers, institutions should make processes as clear and accessible as possible. This means acknowledging the overlap between these groups, not underestimating the challenges posed by complex applications, and streamlining paperwork and forms to minimize unnecessary obstacles. By connecting the dots and reducing friction at every stage, institutions can create a more supportive pathway for all students.

From our practitioners.....



Involve current S-STEM scholars in outreach efforts to share their experiences and answer questions. Peer-to-peer communication increases authenticity and helps prospective students relate to the program. We have found that current students can also help you make sure your "pitch" to prospective students is the right one.

Partner with organizations such as TRIO, Upward Bound, or other campus support programs. These groups have established relationships with students who may be eligible for S-STEM and can help amplify your outreach efforts.

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