



Graduate Student Fellowships in Science, Technology, Engineering and Mathematics (STEM Fellows)

For the improvement of graduate science, technology, engineering and mathematics education in West Virginia

Program Announcement WVSR.STEM.2022 (replaces STEM-F.2018.WV.025)	Proposal Deadline November 1, 2021 (due by 5 p.m.)
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Eligibility

Organization: West Virginia University and Marshall University

Principal Investigator (PI) Eligibility: Vice President of Research (VPR) or another designated senior academic official. If another individual or agent is making the application, endorsement of the VPR will be required.

Limit on Proposals: One from each eligible institution

Award Information

Type of Award: Cost Reimbursable

Anticipated Award Notification: January 1, 2022

Anticipated Award Date: September 1, 2022

Award Period: Up to 4 years dependent on funding availability

Number of Awards: 2

Maximum Funding per Award: The combined amount of the two awards cannot exceed \$500,000 per year. STaR reserves the right to cap individual awards based on program success and availability of funds.

Cost Share Requirement: None required but encouraged

Program Description

Pursuant to WVC 18B-1B-10, the Research Challenge Fund (RCF) was created by the West Virginia Legislature to fund research and development at institutions of higher education and to increase competitiveness for external funding. STaR Division: Science, Technology and Research at the West Virginia Higher Education Policy Commission (STaR) is home to the RCF. The RCF provides common goals with the National Science Foundation (NSF) and the NSF EPSCoR program for investments to build competitiveness. With the RCF resources, this program funds PhD graduate student recruitment and fellowships to attract and support high quality doctoral students that help address that goal.

Highly qualified and committed graduate students are essential to a university's research capacity. West Virginia produces a low number of graduate students enrolled in science, technology, engineering, and mathematics (STEM) fields and few doctorates are awarded in STEM fields. To address these challenges in graduate education, the STaR plans to reserve \$500,000 annually from the Research Challenge Fund (RCF) for the next 4 years, to help West Virginia University and Marshall University recruit and support outstanding doctoral students in STEM fields. STaR is particularly interested in the use of these fellowships to attract highly qualified and diverse graduate students.

Proposal Components:

Project Summary: Provide a one-page summary that includes a heading and the project abstract. The heading should include the title of the proposed endeavor and the names of the submitting institution and Principal Investigator. The abstract should briefly describe the project goals, content, what is being supported, and expected outcomes.

Project Description: The project description is limited to 10 pages (including a 1-2 page budget justification) with 2.5-cm margins on all sides and must use a legible 11-point font (such as Arial or Times New Roman). Each university is asked to submit a detailed strategic plan, endorsed by its VPR, for graduate STEM education that includes at least the following elements:

- *STEM graduate programs and student demographics*
 - A description of qualifying STEM graduate programs, including the number of doctoral students currently enrolled in each program and demographics, the level of support required per student, and any existing sources of support
 - Identification of key strategic areas/disciplines where an investment in graduate education is most critical to building the university's research capacity, and an explanation of how such an investment will build this capacity
 - A description of the research experiences available or proposed for students in each discipline or investment area
 - The current number of graduate students (master's and doctorate) studying in existing and proposed areas, demographics of those students (as it relates to underrepresented groups in STEM and if they have ties to West Virginia), and their current means of support
 - Projected number of doctoral students per year that would be funded
- *STEM implementation plan*
 - A long-term plan for identifying and recruiting outstanding graduate students in key strategic areas/disciplines and a budget for these activities if relevant
 - A long-term recruitment and retention plan with milestones for increasing diversity of graduate students in STEM fields
- *STEM goals and management*
 - Linkages to undergraduate research programs (e.g., SURE, INBRE, REU, LSAMP, EPSCoR, etc.)
 - Linkages to Primarily Undergraduate Institutions (PUI's) in recruiting outstanding undergraduate

- students to graduate STEM careers
- Identification of travel or recruiting expenses anticipated
- Describe methods for communicating, coordinating and managing activities including identification of project leadership
- Describe the evaluation process that will be used to monitor progress under the project and discuss the personnel involved
- *Budget justification*
 - The manner in which Research Challenge funding will be used to support graduate students (e.g., tuition waivers, living stipends, health insurance, book stipends, etc...)
 - Identification of travel or recruiting expenses anticipated
 - If/how Research Challenge funding will augment other funding sources
 - The total amount of funding requested

Given STaR's emphasis on infrastructure growth in promising cluster areas, university strategic plans should pay special attention to existing research growth strategies.

Personnel: Include a biographical sketch for each key personnel member. A two-page biographical sketch in NSF format is required for the Principal Investigator (if you provided the bio when you registered, that is sufficient). If additional investigator(s) or co-PIs will play a significant role in the proposal, you should include their biosketches. A table providing the name, academic rank, and research area for the doctoral research mentors/advisors must also be included.

Budget: Provide a budget request for each year and a cumulative budget. A budget justification, not to exceed two pages, and addressing each budgetary line-item, must be prepared and submitted at the end of the Project Description (the budget justification is to be included in the page limit for the Project Description). A budget spreadsheet/template can be downloaded from the GO! system.

Other Requirements

Citizenship: Students who will receive program funds must be citizens or non-citizen nationals of the United States or have been lawfully admitted for permanent residence by the time of the award. Non-citizen nationals are people who are not citizens of the U.S., but who owe allegiance to the U.S. They generally are people born in outlying possessions of the United States (e.g., American Samoa). Individuals who have been lawfully admitted for permanent residence must have a currently valid Permanent Resident Card (I-551), known popularly as a Green Card, or other legal verification of such status.

Application: Proposals must be submitted via the Grant Opportunity (GO!) system.

Cost Sharing: No cost sharing is required. However, STaR will consider the positive impact of leveraging internal and external support in the overall consideration of each proposal.

Indirect Cost Limitations: Overhead costs are not allowed.

Other Budgetary Limitations: Supplies and equipment costs are not allowed except that the student may

elect to purchase supplies with his or her stipend. A reasonable travel budget for student and mentor participation in research-related events may be considered. Other expenses such as recruiting expenses may be considered as long as they are directly related to the project.

Review and Award Procedures: STaR will review the applications and plans submitted by the institutions, provide feedback on their contents, and recommend the amount of the STEM fellows grants to be awarded to each applicant. Upon approval by the Senior Director, these awards will be approved and processed by the Higher Education Policy Commission.

Reporting Requirements: All recipients of STaR funding are required to provide an annual written report to STaR on July 1. Data must be provided in the report that includes standard demographics of the student population served and success of students pursuing STEM degrees and graduate programs. Evidence of student engagement, including publications, participation in other competitions, academic achievement, and research accomplishments, should be included. Financial reporting and invoicing should be done no more than monthly and no less than quarterly and shall be on a reimbursement basis. Invoices should reflect expenses by budget item. For multi-year awards, annual reports are July 1. The final report is due November 1, 2026, must be filed using the GO! system reporting function.

Contact Information

For questions, please contact the program officer:

Dr. Juliana Serafin, Senior Director

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For technical assistance or help using the GO! system, please contact:

Dr. Jack Smith

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