

National Science Foundation Graduate Research Fellowship Program Information Session – 2024 Application Cycle

Matthew Plooster, Ed.D.

Assistant Dean

The University of Utah Graduate School

nsf-grfp.utah.edu | www.nsfgrfp.org



What We'll Cover

- What is the NSF-GRFP
- Fellowship benefits
- Eligibility
- Eligible STEM fields
- Application components
- Application tips/reminders
- Frequently asked questions

What is the NSF-GRFP

The purpose of the NSF Graduate Research Fellowship Program (GRFP) is to help ensure the quality and vitality of the scientific and engineering workforce of the United States. A goal of the program is to broaden participation of the full spectrum of diverse talents in STEM. The program recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master's and doctoral degrees at accredited United States institutions.

As the oldest graduate fellowship of its kind, the GRFP has a long history of selecting recipients who achieve high levels of success in their future academic and professional careers. The reputation of the GRFP follows recipients and often helps them become life-long leaders that contribute significantly to both scientific innovation and teaching. Past fellows include numerous Nobel Prize winners, former U.S. Secretary of Energy, Steven Chu, Google founder, Sergey Brin and Freakonomics co-author, Steven Levitt.

- National Science Foundation



NSF Fellowship Benefits

- Five-year fellowship
- \$37,000/year stipend for three years
- Tuition coverage
- Career/life balance (family leave)
- Access to other professional development opportunities

University of Utah-Provided NSF-GRFP Benefits

- Health insurance coverage
- \$2,000/year research expenses
- Some faculty advisors offer additional fellowship bonuses

Other Important Benefits

- Mobile – you can take it anywhere in the US
- Occasionally a step up in graduate admissions
- Prestige & recognition
- Boosts resume/CV
- Establishes a pattern of seeking (and getting) external funding

Eligibility

- Must be a US citizen, national, or permanent resident
- Must be a rising senior or a first- or second-year grad student; otherwise, must have at least two years since last grad enrollment
- Non-traditional students welcome!!!
- Enrolled or intend to enroll in a research-based masters or doctorate in an eligible STEM field

Eligible STEM Fields

- Applicants will identify a field (chemistry, engineering) that overall describes their research interests
- Identified field may be the same name as program of study, sometimes not
- Applicants will then select a sub-field that (chemistry > chemistry of life processes) that is specific to research interests

Eligible STEM Fields

Chemistry | Computer and Information Sciences &
Engineering | Engineering | Geoscience | Life Sciences |
Materials Research | Mathematical Sciences | Physics &
Astronomy | Psychology | Social Sciences | STEM
Education & Learning Research

Eligibility

Who *Isn't* Supported

- Joint science/professional degree programs (example: JD/PhD, MD/PhD)
- Business administration or management degrees
- Counseling, social work
- History (except the history of science)
- Education (except the study of STEM education)
- Other professional programs (MPH, MPA, MLS, PSM, etc.)

Eligibility

Who *Isn't* Supported

- Research with disease-related goals (unless biomed engineering)
- Clinical research:
 - Patient-oriented research
 - Epidemiological and medical behavioral studies
 - Outcomes research
 - Health services research
- Ineligible studies include pharmacologic, non-pharmacologic, and behavioral interventions for disease or disorder prevention, prophylaxis, diagnosis, therapy, or treatment

Application Components

- **Transcripts** – required from all degree-granting institutions you've attended
- **Statements** – Personal Statement and Graduate Research Plan Statement
- **Reference Letters** – two letters are required, but recommended to submit three

Application Components

Transcripts

- Must list on application 1) baccalaureate institution, and 2) all graduate institutions attended
- Must submit all degree-granting institutions attended, even if you didn't graduate from that institution
- If applying in the first semester at an institution (i.e. no transcript available yet), an enrollment verification form is sufficient

Application Components

Personal Statement & Graduate Research Plan Statement

- Broader impacts and intellectual merit must be addressed in each statement under a specific heading – applications missing both concepts on each statement will be returned without review
- Develop a consistent theme to weave together your personal story and your academic/career plans

Application Components

Personal, Relevant Background, and Future Goals Statement (3 pages)

- Tell your story: what motivates or inspires you, what drew you into your research?
- Show how you have taken initiative or faced challenges
- Describe your projects, contributions, and your future goals
- Label your intellectual merit and broader impacts

Application Components

Personal, Relevant Background, and Future Goals Statement (3 pages)

- Avoid narratives like, “My grandmother died of cancer so I decided to be a scientist.” Instead, say something like, “My grandmother’s passing of cancer piqued my curiosity in science, which led to studying chemistry in undergrad...”
- Avoid narratives like, “I’m pursuing a career as a scientist because I want to change the world.” Rather, say something like, “I’m pursuing a career as a scientist in physics because it combines my interest with research and innovation with my skills and background in engineering and physics.”

Application Components

Research Plan Statement (2 pages)

- Describe your research idea, including:
 - Brief background
 - Approach
 - Methods
 - Predictions
- Describe what you expect to learn
- Recognize and describe the risk – what's your plan B if the project doesn't go as planned?
- Evidence of how you think
- Needs to be clear and well-designed
- Label your research plan's intellectual merit and broader impacts

Application Components

Intellectual Merit

- The potential to advance knowledge
- Discuss: How will my proposed research advance knowledge and understanding in my field and across other disciplines?

Broader Impacts

- The potential to impact society and contribute to the achievement of specific, desired societal outcomes
- Discuss: How will my proposed research benefit my local community?

Both intellectual merit and broader impacts must be reflected in both application statements with specific heading labels

Application Components

	You (Personal Statement)	Your Work (Research Plan)
Intellectual Merit	Your merit: describe your motivation, ability, research experiences, preparation, achievements, perseverance, and your future goals (scholarly, professionally)	Merit of your work: describe your topic, innovation, rigor, creativity, new knowledge your research will create, and contributions to existing science
Broader Impacts	Your impact: describe your background, personal story, broadening participation, outreach, identity, initiative, leadership, communicating science	Impact of your work: describe the foundational nature, relevance, importance to society, and any educational or interdisciplinary connections of your research

Application Components

Advice for statements:

- NSF-GRFP is not just for scientists, but future leaders – show your leadership potential, self-starter capabilities, and ability to build community and collaboration
- Be yourself and convey who you are in the narrative – the potential of individuals is evaluated, not just the proposed research
- Use scientific terms, but don't be too jargon-heavy or overly technical; reviewers won't be experts in your field

Application Components

Reference Letters

- Two reference letters are required (three recommended) – applications with fewer than two letters will not be reviewed
- References must be from non-family members, preferably professors and researchers (familiarity with you as a person is helpful)
- If reference writer is from industry, coach them on what the GRFP is and how they can support your application

Important Considerations

- The NSF is looking to fund you, not your research team or PI
- You need previous research experience and evidence of research productivity
- You need a strong GPA

Important Considerations

NSF-GRFP Outreach Goals

- Attract a diverse and qualified applicant pool – with particular attention to:
 - Students attending Minority Serving Institutions (MSIs)
 - Students studying in EPSCoR jurisdictions,
 - Non-traditional education tracks

EPSCoR

- “Established Program to Stimulate Competitive Research (EPSCoR)”
- NSF initiative to enhance research competitiveness of STEM research in designated states/territories
- If you are from or completed undergrad in an EPSCoR jurisdiction, it may be an integral part of your story to discuss (how the locale may have impacted your trajectory)

EPSCoR Territories

- Alabama
- Arkansas
- Delaware
- Guam
- Hawaii
- Idaho
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Mississippi
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Mexico
- North Dakota
- Oklahoma
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- US Virgin Islands
- Vermont
- West Virginia
- Wyoming

Non-Traditional Students

- Non-traditional students are welcome to apply!
- In your narrative, discuss the “why” behind returning to school
 - Why back to school now?
 - Why grad school, why this area?
 - What was your motivation to take this step?

Common Weaknesses

- Unorganized personal statement that doesn't tell a clear story
- A research statement that is unclear, incomplete, or unpolished:
 - Too much or too little detail
 - Failure to “own” your research
 - Lacking recognition of research risks
- Dense writing that is difficult to understand or is uninteresting
- Too much jargon
- Failure to address your broader impacts

What You Can Do Now

As a current or incoming grad student...

- Work with your faculty advisor/PI to develop your research plan; as a grad student, they are your primary partner in fellowship-applications
- Speak specifically about your grad school choices
- Have a firm research plan – this should be more specific than when you were finishing undergrad

What You Can Do Now

- Read the 2023 solicitation (2024 available in July/August)
- Make a plan between today and the October deadlines
- Identify your strengths and weaknesses
- Move any ongoing research projects along
- Finish any pending articles
- Thematically organize your personal statement
- Begin drafting statements early and go through multiple drafts with your faculty mentor and peers

Frequently Asked Questions

Q: How many times can I apply?

A: Once you begin your graduate program, can apply just once, as a first year or second year student; individuals in a bachelor to masters joint program can apply once.

Frequently Asked Questions

Q: I'm starting grad school this fall, but I've taken a year of non-matriculated courses. Does this count as time in a grad program?

A: No, the NSF will only count the time in a matriculated (degree-seeking) program. Courses taken here and there, such as to bolster your grad school application, don't count as time in a program.

Frequently Asked Questions

Q: Applying as a grad student; is it more important for me to reflect on my graduate experience rather than undergraduate? Is there a secret formula?

A: No, there is no secret formula. You'll want to focus on the experience that is meaningful for your story.

Frequently Asked Questions

Q: I'm in the first year of a PhD program, but previously earned a masters; am I eligible?

A: Maybe. Having a masters completed will make an applicant ineligible, unless the masters was followed by a continuous interruption in graduate study of two or more years.

Frequently Asked Questions

Q: Are there citizenship requirements?

A: Yes, applicants must be US citizens or permanent residents.
The citizenship requirement is non-negotiable.

Frequently Asked Questions

Q: Can I apply for the GRFP if I'm planning to attend a foreign institution?

A: Awardees must be attending a US institution of higher education. However, this does not preclude you from conducting research in another country.

Frequently Asked Questions

Q: I didn't attend an Ivy League or elite university for undergrad; will I have a chance?

A: Absolutely. The NSF values diversity among institutions, programs, topics, and people.

This fall, the U will have 50 NSF graduate fellows on campus.

Included in this diversity are students from MSIs and EPSCoR territories.

Frequently Asked Questions

Q: I've worked on papers not ready for publication, will this be a problem?

A: While having publications can be very helpful for your application, publications are not required and you can be successful in receiving the fellowship without having publications.

Frequently Asked Questions

Q: I worked in industry before heading to grad school; can an industry professional write a letter of recommendation?

A: Yes, but you'll want to make sure that the letter writer understands what the GRFP is. You'll want to take the time to educate them appropriately on what the GRFP is and the sort of letter of recommendation they'll need to write.

Frequently Asked Questions

Q: When are applications due?

A: October

Q: When will applicants be notified of the results?

A: April

Resources

- Annual solicitation ([nsfgrfp.org](https://www.nsfgrfp.org))
- Previous workshops, tools, & resources found online (nsf-grfp.utah.edu)
- Your faculty mentor
- The University of Utah Writing Center (writingcenter.utah.edu)
- Graduate fellowship advising (fellowships@gradschool.utah.edu)

Questions?

Matthew Plooster, Ed.D.

Assistant Dean

The University of Utah Graduate School

801-581-6020

fellowships@gradschool.utah.edu