



Introduction to NSF GRFP Resources

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PhDPlus

Session Overview

NSF GRFP Goals

GRFP Basic Information

Application Components

Review Criteria

Resources

Goal of the GRFP

NSF GRADUATE RESEARCH FELLOWSHIP PROGRAM

Ensure the vitality of the human resource base of science and engineering in the United States and reinforce its diversity

Select, recognize, and financially support individuals who have demonstrated potential to be high-achieving scientists and engineers **early in their careers**

- Focus on the individual (not the research project)
- Intellectual merit

Broaden participation in STEM of underrepresented groups, including women, minorities, persons with disabilities, and veterans

- Broader impacts

Why should you apply to the GRFP?

Five-year Award - \$138,000

3 years of support

- \$34,000 stipend per year
- \$12,000 goes to institution for tuition

Professional Development Opportunities

INTERN – Non-academic internship program

Cyber Infrastructure Resources

XSEDE – Extreme Science and Engineering Discovery Environment

Awarded to YOU (an individual)

Flexible – not tied to specific research project

Unrestrictive – no service requirement after completion

Who is eligible?

U.S. citizens, nationals, or permanent residents

Enrolled (or intending to enroll) in a full-time research-based graduate degree

Note: does NOT include MD/PhD or JD/PhD programs

Never earned a doctoral or terminal degree in any field

Not an NSF employee

Never accepted the GRFP

Who is eligible? (more criteria!)

Undergraduate seniors

1st or 2nd year graduate students **may apply once** in graduate school

Never earned a master's or professional degree in any field, or completed more than one academic year in a graduate degree-granting program, unless
(i) returning to graduate study after an interruption of two or more consecutive years immediately preceding the application deadline,
and (ii) not enrolled in a graduate degree program at the application deadline

Note: if you are a current graduate student, you do not meet these criteria

Individuals pursuing a master's degree simultaneously with the bachelor's degree (joint bachelor's-master's degree) will be limited to one application to GRFP [apply either during joint degree OR doctoral program, not both]

Eligible fields of study

- Chemistry
- Computer and Information Sciences & Engineering
- Engineering
- Geosciences
- Life Sciences
- Materials Research
- Mathematical Sciences
- Physics & Astronomy
- Psychology
- Social Sciences (includes Economics)
- STEM Education and Learning Research

Complete List of Fields (with subfields) in 2020 Solicitation

<https://www.nsf.gov/pubs/2021/nsf21602/nsf21602.htm>

Note: does NOT include clinical research or research with primarily disease-related goals

2021 Due Dates

Applications due at **5pm (local time)** in mid-October

Day of week varies by Field of Study

Monday, October 18

Life Sciences

Tuesday, October 19

Computer and Information Science and Engineering, Materials Research, Psychology, Social Sciences, STEM Education and Learning

Thursday, October 21

Engineering

Friday, October 22

Chemistry, Geosciences, Mathematical Sciences, Physics and Astronomy

What does the application involve?

Fastlane Application (Resume/CV content)

Personal information, Education, Work/Research Experience, Proposed Field of Study, Honors, Publications

Personal, Relevant Background, and Future Goals Statement

3 pages

Graduate Research Statement

2 pages

3 reference letters

Unofficial transcripts

Personal, Relevant Background, and Future Goals Statement

Tell **your story** & demonstrate your potential for STEM research

- Experiences (personal and professional) that contributed to your motivation and preparation for pursuing a STEM career
- Previous research/industrial/professional experiences
 - What was the project? What was your contribution?
 - Focus on the why (Show; don't tell!)
 - What did you learn or gain from this experience?
 - Articulate **the importance of each experience and how it contributes to your role in the scientific community**
- Career aspirations and future goals
 - How have your experiences shaped your goals?

Graduate Research Plan Statement

3-year research plan for an original research project that you will complete during funding (not binding agreement!)

- Describe your research idea, your research plan and methods, and resources needed/available
 - What is creative about this?
 - What do you expect to learn?
 - How will you know if you're successful?
 - Alternative approaches?
- **Demonstrate your ability** to develop a research question, hypothesis, and the knowledge/resources to execute it
- Address the potential of research to **advance knowledge**, as well as its potential for the **broader impacts** on society
- What skills do you have to make this project possible?
- Keep the scope of the project feasible for a graduate project

Reference Letters

3 reference letters needed for a complete application

- Provide information for up to 5 references & rank them
- Only top 3 letters submitted will be reviewed

Who to choose?

- Your current research advisor & your previous research advisor
- People who are familiar with you AND can speak to your intellectual merit and broader impacts
- Consider recommendations from outside your primary field of study (if appropriate)

Share your statements (complete drafts is okay!) with them

You can give them suggestions of what you'd like them to mention

- Their letter should complement the rest of your application (even the other reference letters)

NSF Review Criteria

Intellectual Merit

The **potential to advance knowledge** within your field or across different fields

Broader Impacts

The **potential to benefit society** and contribute to the achievement of specific, desired societal outcomes

Intellectual Merit

The **potential to advance knowledge** within your field or across different fields

- Your demonstrated intellectual ability (such as grades, curricula, awards, research products, etc.)

Other evidence of your potential to be a high-achieving scientist or engineer, such as your ability to:

- Plan and conduct research
- Work as a member of a team as well as independently
- Interpret and communicate research
- Take initiative, solve problems, persist

Broader Impacts

The **potential to benefit society** and contribute to the achievement of specific, desired societal outcomes

- Potential impact of the **individual** (you!) on society
- Potential impact of **your research** on society

Examples of Societal Benefits:

- Increasing participation of underrepresented groups, women, students with disabilities, & veterans in STEM
- Outreach: Mentoring; improving STEM education in schools
- Increasing public engagement with science and technology
- Community outreach, e.g. science clubs, newspapers, blogs
- Increasing collaboration between academia, industry, others

Apply now or next year?

For graduate students starting at UVA in Summer or Fall 2021:

Apply this year if you:

- Have extensive research experience (with publications and/or conference presentations)
- Are already involved (or have a plan for getting involved) with UVA organizations
- Have someone (e.g., advisor, lab rotation PI, DGS) to provide guidance on your research plan & write a strong letter

Apply next year if you:

- Anticipate a publication within the next year
- Need time to strengthen your relationship with a research advisor
- Want to get more involved (broader impacts)

UVA Resources for 2021

PhD+ Giant Angstrom GRFP Preparation Course

- Self-paced
- Videos, tip sheets, off-line worksheets
- Weekly office hours (times to be set)
- ~50 hours to complete course and construct application

Strategy: Make the reviewers **love** you and **trust** you by telling a compelling story!

A bit more information and link to registration:

<https://phdplus.virginia.edu/events/deadline-phd-nsf-grfp-preparation-course-registration>

UVA Resources for 2021

PhD+ & GWL GRFP Reviewer Panel

Learn about how applications are reviewed, gather insights and tips for your application, and ask questions about the process!

Thursday, September 16 | 2pm

Registration by early August

PhD+ GRFP Writing Sessions

Brief discussion of GRFP tips and best practices followed by dedicated writing time

(likely) Tuesdays, August 31, September 14 & 28 | 4pm

Registration by early August

[UVA Collab](#)

Reference letter guide, previous awardee statements, and more!

Additional Resources Available

NSF GRFP solicitation

(<https://www.nsf.gov/pubs/2021/nsf21602/nsf21602.htm>)

NSF GRFP FAQ

(<https://www.nsf.gov/pubs/2020/nsf20114/nsf20114.jsp>)

Blogs and Websites

Advice, timelines, previous awardee materials

<https://www.alexhunterlang.com/nsf-fellowship>

<http://www.malloryladd.com/nsf-grfp-advice.html>

<http://www.clairemckaybowen.com/fellowships.html>

Questions?

If you think of additional questions, please reach out:

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