

Preparing for the GRFP

Laura Collins, Director OSDFA

Jeannie Garmon, Director, Research Office

ABOUT NSF GRFP

SINCE 1952



40+ FELLOWS
HAVE GONE ON TO BECOME
NOBEL LAUREATES

450+ FELLOWS
HAVE BECOME MEMBERS OF THE
NATIONAL ACADEMY OF SCIENCES



5-YEAR
FELLOWSHIP
PERIOD
3 YEARS
FINANCIAL
SUPPORT

NO POST-GRADUATE
STUDY SERVICE
REQUIREMENT

2020 COMPETITION
12,000+ APPLICANTS
2,000+ OFFERS

ACADEMIC INSTITUTIONS REPRESENTED
500+
2020 COMPETITION

OPEN TO:

GRADUATE STUDENTS WHO
ARE OR WILL BE PURSUING
RESEARCH-BASED MASTER'S
AND DOCTORAL DEGREES
In Eligible Fields of Study

ELIGIBLE MAJOR FIELDS OF STUDY



CHEMISTRY



COMPUTER AND
INFORMATION
SCIENCES &
ENGINEERING



ENGINEERING



GEOSCIENCES



LIFE
SCIENCES



MATERIALS
RESEARCH



MATHEMATICAL
SCIENCES



PHYSICS &
ASTRONOMY



PSYCHOLOGY



SOCIAL
SCIENCES



STEM EDUCATION & LEARNING RESEARCH



Graduate Research Fellowship Program (GRFP)

[nsfgrfp.org](https://www.nsfgrfp.org)

National Science Foundation



Graduate Research Fellowship Program

- Mission:
 - To promote the progress of science
 - To advance the national health, prosperity, & welfare
 - To secure the national defense
- Funds: ~20% of all federally supported basic research conducted by America's colleges and universities
- GRFP was NSF's first program, and has supported 60,000+ graduate students since 1952
- Graduate Research Fellows hail from every state and include 40+ Nobel Laureates

Who



- Outstanding graduate students pursuing research-based master's & doctoral degrees in fields within NSF's mission.
- Individuals who have demonstrated their potential for significant achievements in science and engineering research.
- The GRFP encourages applications from underrepresented groups, including women, minorities, persons with disabilities, and veterans, in order to broaden and diversify those participating in science and engineering.

What

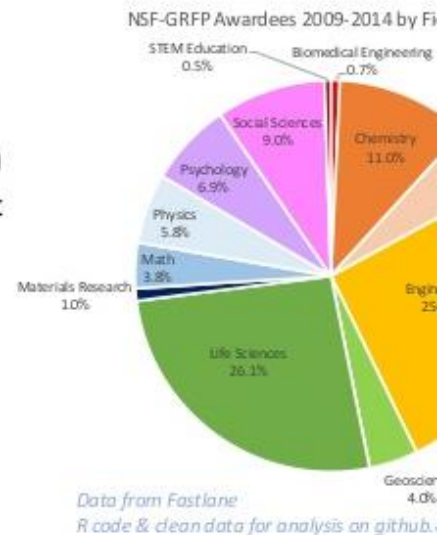


- Five year fellowship period with three years of financial support
- Annual stipend of \$34,000
- Cost-of-education allowance of \$12,000 to the institution
- No post-graduate study service requirement
- Use at any accredited, non-profit, US institution of higher education, on US campus, at which Fellow is enrolled

Proposed Field(s) of Study

Who wins these fellowships?

- Grad students with high potential to become leaders in their field
- 2000 awardees out of ~13000 applicants (~15% acceptance rate)
- Number of NSF-GRFP Awardees at UC Davis:
 - 2019: 11
 - 2018: 18
 - 2017: 15
 - 2016: 22
 - 2015: 25
 - 2014: 22



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



Developing a Successful Submission

WHAT MAKES
A GREAT
RESEARCHER?



- ▷ GREAT KNOWLEDGE
- ▷ GOOD IDEAS
- ▷ EXPERIMENTAL DESIGN
- ▷ GOOD WRITING
- ▷ GREAT COMMUNICATION

NATURE
MASTERCLASSES



Help Yourself

Understand the process and search for funding

Know who to contact and build relationships

Build your research over time...start small & grow big!

Ask questions

Read Carefully

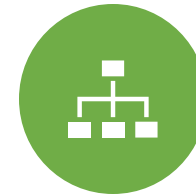
Ask yourself questions.



Is this a good match?

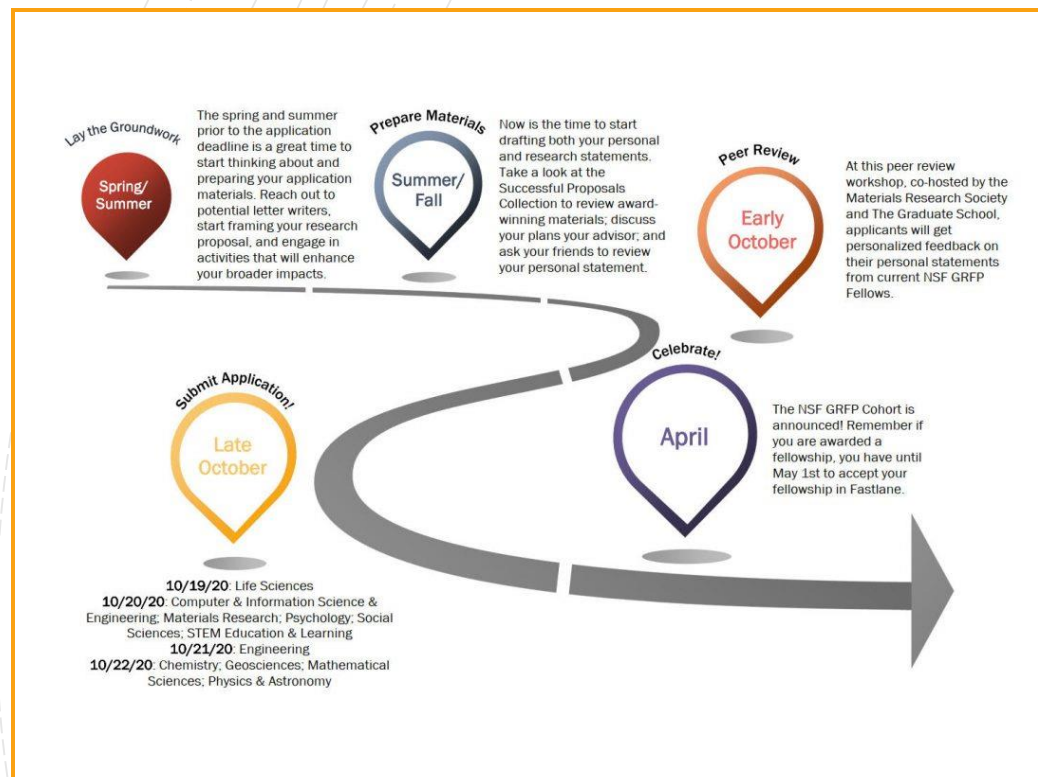


Do I have the resources and time for the project?



Do I have enough time to prepare an application?

Timeline



- In the world of grants & fellowship applications, it's NEVER too early to start
- 4-6 months is perfectly reasonable amount of time to spend on GRFP
- Typically due in late October, dependent on subfield
- Finalists announced March/April



The Grant Application Process

Before You Begin

- Responsive applications take time and planning –so plan!
- An application has many parts to it and is not limited to the project narrative
- Lean into resources

7 steps for building an engaging fellowship application process

1. Lean into your fellowship's strengths
2. Be transparent about the realities of the program
3. Create a dialogue with potential applicants
4. Align your application with the desired outcome
5. Create an accessible application process
6. Develop a consistent communication flow

Understanding the Process



- Timeline
 - Set deadlines for all major steps including drafts
 - Tasks assigned to people with deadlines
- People
 - Who can provide you with support?
 - Do you need specific items/info from others?
- Proposal packet
 - Narrative & Budget
 - Other requirements (data management, timelines, letters of support, etc)

GRFP Application

NSF GRFP APPLICATION PROCESS

Application Deadlines- October and dependent on applicants Major Field of Study

- October 17, 2022- Life Sciences
- October 18, 2022- Computer and Information Science, Materials Research, Psychology, Social, Behavioral and Economic Sciences, STEM Education and Learning
- October 20, 2022- Engineering
- October 21, 2022- Chemistry, Geosciences, Mathematical Sciences, Physics and Astronomy

ALL APPLICATIONS MUST INCLUDE:



• TRANSCRIPTS

Transcripts are **REQUIRED** for all degree-granting programs listed.



• STATEMENTS

GRFP applicants are required to provide two statements: a Personal Statement and Graduate Research Plan Statement



• REFERENCE LETTERS

Two letters are required. Three letters are recommended.



Graduate Research Fellowship Program (GRFP)

[nsfgrfp.org](https://www.nsfgrfp.org)

- Personal Information
- Education, Work and Other Experience
- Electronic Transcripts
- Proposed Field(s) of Study
- Proposed Graduate Study and Graduate School Information
- Three reference letter writers
- Personal, Relevant Background and Future Goals Statement
- Graduate Research Plan Statement

Review Criteria



- What is the potential for the proposed activity to:
 - Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
 - Benefit society or advance desired societal outcomes (Broader Impacts)?
- To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
- Proposal well-reasoned, well-organized, and based on a sound rationale?
- Qualifications to conduct the proposed activities?
- Adequate resources to carry out the proposed activities?

Review Criteria



- Intellectual Merit: the potential to advance knowledge
- Broader Impacts: the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

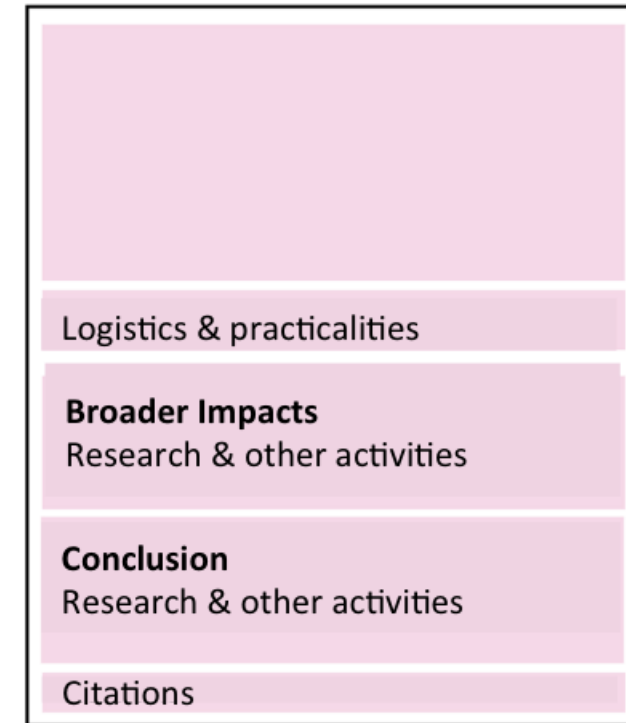
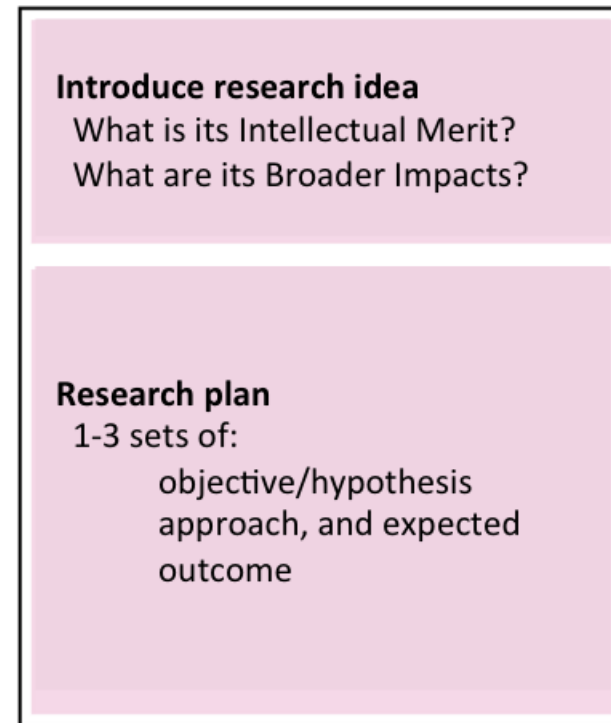
Personal Statement



- Maximum Length – 3 pages
- Must address NSF's review criteria of Intellectual Merit and Broader Impacts.
- Write, revise, rewrite, repeat...start drafts early!
- Why YOU – NSF is funding PEOPLE not projects, so this is your chance to convince them you deserve this more than anyone else!

Research Plan Statement

- Maximum length – 2 pages, including all references, citations, charts, figures, images, and lists of publications and presentations
- Address NSF's review criteria of Intellectual Merit and Broader Impacts.
- Remember, NSF GRFP funds the person, not the project. Write your proposal based on the research you are doing/have done, demonstrating your ability to write a sound proposal
- Write for a general science audience and assume the reviewer is in your primary field, but not your subfield.



Letters of Reference

Letters of Recommendation

- 3 Preferred Endorsers & 2 Alternates
- Ask for them just before fall, if you can
- Ask for exactly what you're looking for:
 - "Could I receive a positive letter of recommendation from you?"
 - Copy the NSF prompt and tips for letters of rec. into the email.
 - https://www.nsfgrfp.org/reference_writers/tips
- Make sure you ask those who really know you and can use personal experience to support their positive opinion of you.

The reference letter should provide details explaining the nature of the relationship to the applicant, comments on the applicant's potential and prior research experiences, statements about the applicant's academic potential and prior research experiences, statements about the applicant's proposed research, and any other information to enable review panels to evaluate the application according to the NSF [Merit Review Criteria](#) of Intellectual Merit and Broader Impacts.

Applicants can improve their chances of obtaining **strong** reference letters by doing the following:

1. Choose your references carefully; choose people that can speak to your abilities and potential, rather than someone with a prominent title.
2. Provide referees sufficient time to write a strong letter.
3. Discuss the application and share your essays with them.
4. Inform them that reference letters should reflect both your "intellectual merit" and "broader impacts."
5. Track submission of letters using your status page in the FastLane application module - if necessary, remind reference writers about deadline. No late letters will be accepted under any circumstances.
6. Have backup references in case one of your primary reference writers cannot submit their letter.

https://www.nsfgrfp.org/applicants/application_components

- Ask for letters of reference early –3 months notice
- Over ask – up to 5 letters are accepted, 3 minimally are needed
- Get a diverse set of letter writers; keep in mind the review criteria (intellectual merit & broader impacts – who can speak to this on your behalf?)
- Provide letter writers with copies of your resume/CV, statement drafts, and award details
- Offer to connect them with Fellowship Advisor for additional support
- Gently remind your writers of the deadline as it approaches



Tools & Support

Resources & References

"There are no secrets to success.
It is the result of preparation, hard
work, and learning from failure."
- Colin Powell

- <https://www.nsfgrfp.org/>
- <https://www.slideshare.net/KelseyWood1/nsfgrfp-what-you-need-to-know>
- <http://www.clairemckaybowen.com/fellowships.html>
- <http://www.malloryladd.com/nsf-grfp-advice.html>
- <https://www.alexhunterlang.com/nsf-fellowship>

Concluding Advice



Be Yourself

- Start early
- Ask for help – advisors, faculty, and past winners
- Find your voice, incorporate in both statements
- Write for your audience – general science review panel
- Remember the merit review criteria
- Plan ahead, set weekly goals, submit early
- Share your story, be memorable!