



National Science Foundation

# Graduate Research Fellowship Program



*Graduate Research Fellowship Operations Center*



# What Is the National Science Foundation (NSF)?



- Federal agency created in 1950 to promote scientific discovery, advance national welfare, and secure national defense
- Manages over \$6 billion annual budget for basic research, financial support for students, and science education
- Annually awards about 2,700 graduate fellowships, 10,000 research grants, and 30,000 graduate research assistantships

*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# NSF Graduate Research Fellowship

- Initiated in 1952 - NSF's oldest program
- More than 43,000 awardees since inception
- About 1,000 new awards each year – includes special awards for women in computer science and women in engineering
- Awarded to more than 20 Nobel laureates
- Recipients have high rate of and shorter time to Ph.D. completion, high placement in faculty positions



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Graduate Research Fellowship Benefits



- **Three years of support** over five year graduate enrollment period
- **\$30,000** annual cost of living stipend
- **\$10,500 cost-of-education allowance** paid to institution (tuition typically waived)
- **Globally portable** – award follows fellow to approved graduate institutions (up to \$10,500 educational expense reimbursed to fellow attending foreign institution)
- **\$1,000 one-time travel allowance**
- **TeraGrid supercomputer access** for both fellows and honorable mentions
- **No service requirement**

National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# More Fellowship Benefits

“The GRF has provided me with a tremendous amount of **independence** not only in terms of the college or university I attend, but the **advisor** I work with, and my **dissertation topic**, as I don’t have to rely on anyone else’s funding but my own. ”

“**Prestige** .. is a key advantage of the GRF, particularly with respect to **future job prospects**.”



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Eligibility



- Typically for seniors, first-year graduate students, or second-year graduate students in first semester (or not more than 24 semester hours of credit for graduate study)
- U.S. Citizen, National or Permanent Resident
- Pursuing research-based Masters or PhD in NSF-Supported Field

*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# NSF-Supported Fields

- Chemistry
- Computer and Information Science and Engineering
- Engineering
- Geosciences
- Life Sciences
- Mathematical Sciences
- Physics and Astronomy
- Psychology (non-clinical)
- Social Sciences (non-clinical)



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Some Areas NSF Does Not Support

- Research with disease-related goals
- Clinical work
- Business & Management
- Social work & Counseling
- Practice-oriented professional degree programs
- Joint science-professional degree programs (MD/PhD and JD/PhD)
- Medical, dental, law, or public health programs



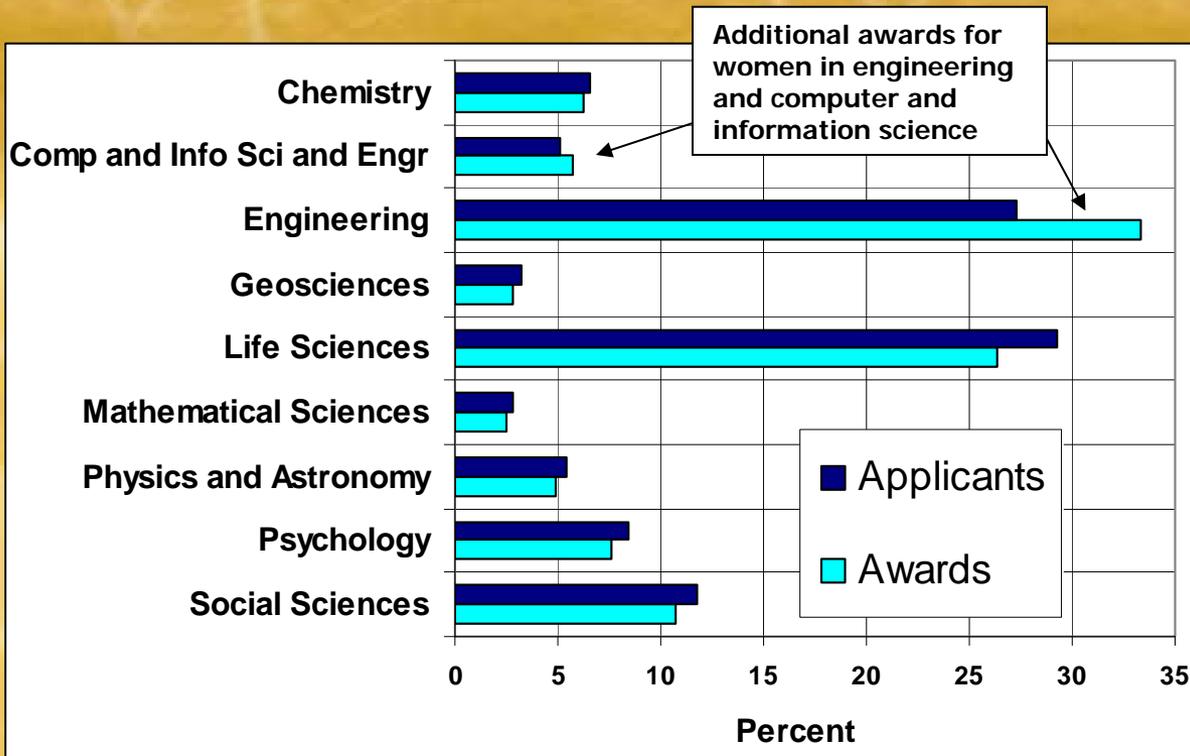
National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# What Are My Chances of Winning?



\*Data from 2007-2008 application cycle

- About 10% award success rate
- Additional 17% received honorable mention
- Number of awardees proportional to number of applications in each field
- Seniors evaluated alongside seniors, etc.



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Win by Believing in Yourself, Your Community, and Your Talents

## Avoid Self-Disqualification

Belief that:

- All other applicants are “more qualified”
- Your research, activities, or contributions are not impressive enough
- You do not have enough experience
- You are not able to express things well enough in the application



*NSF funds studies of emperor penguins who are rife with belief in themselves*



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Boost Your Chances of Winning by Demonstrating the Two NSF Review Criteria



## Intellectual Merit

NSF Definition: "Demonstrated **intellectual ability** and other accepted requisites for scholarly scientific study, such as the ability (1) to **plan and conduct research**; (2) to **work as a member of a team as well as independently**; and (3) to **interpret and communicate research**."



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Intellectual Merit Unraveled

## Demonstration of factors including:

- Strong grades, curricula, GRE scores
- Awards & honors
- Publications & presentations
- Communication skills
- Independence & creativity
- Significant research experience
- Thoughtful, student-originated research plan
- Choice of institution
- Strong references



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Boost Your Chances of Winning by Demonstrating the Two NSF Review Criteria

## Broader Impacts

NSF Definition: "Contributions that (1) effectively **integrate research and education** at all levels, infuse learning with the excitement of discovery, and assure that the **findings and methods** of research are **communicated in a broad context and to a large audience**; (2) **encourage diversity, broaden opportunities**, and **enable the participation of all citizens**-women and men, underrepresented minorities, and persons with disabilities--in science and research; (3) **enhance scientific and technical understanding**; and (4) **benefit society**."



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Broader Impacts Unraveled

## Demonstration of factors including:

- Fostering diversity on all levels (across disciplines, gender, race, economical, etc)
- Active community involvement
- Involvement with underrepresented groups
- Integration of research and education
- Diversity of experience – includes international experience
- Awareness of research's potential societal impact
- Awareness of resources and programs
- Leadership roles
- Genuine and reflective essays
- Passion



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# The Rating Sheet

This is everything you  
are rated on -  
Intellectual Merit and  
Broader Impacts  
criteria!

Rating sheets missing a required element will be returned to the panelist for completion.

NSF Graduate Research Fellowship Program  
**APPLICANT RATING SHEET**

Applicant:  
Panel:

**Intellectual Merit Criterion**

Demonstrated intellectual ability and other accepted requisites for scholarly scientific study, such as the ability (1) to plan and conduct research; (2) to work as a member of a team as well as independently; and (3) to interpret and communicate research findings.

Overall Assessment of Intellectual Merit  Excellent  Very Good  Good  Fair  Poor

Mandatory - explain assessment to the applicant:

**Broader Impacts Criterion**

Contributions that (1) effectively integrate research and education at all levels, infuse learning with the excitement of discovery, and assure that the findings and methods of research are communicated in a broad context and to a large audience; (2) encourage diversity, broaden opportunities, and enable the participation of all citizens--women and men, underrepresented minorities, and persons with disabilities--in science and research; (3) enhance scientific and technical understanding; and (4) benefit society.

Overall Assessment of Broader Impacts  Excellent  Very Good  Good  Fair  Poor

Mandatory - explain assessment to the applicant:

Reviewer comments to the applicant on this rating sheet should be constructive and reflect the two NSF merit review criteria. Applicants will be able to view a copy of their rating sheets without the name of the reviewer on a secure web site. Maximum protection will be given to the reviewer's identity subject to the policy stated above and the Freedom of Information Act, 5 USC 552.

Applicant ID  Panelist ID  Rating

place panelist label here

Signature \_\_\_\_\_ Date \_\_\_\_\_

20078



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Evaluation Process

- Applications evaluated by field-specific panels
  - Panelists are academic and research experts in general field, not necessarily for your research topic
- Panelists complete rating sheet
  - NSF requests panelists to provide constructive comments (applicants may view)
  - Evaluated by **at least** 2 panelists (higher ranked applicants reviewed a third time)
- Panels recommend to NSF *awardees* and *honorable mentions*



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Application Materials



- 1) Personal Statement Essay (2 pages\*)
- 2) Previous Research Experience Essay (2 pages\*)
- 3) Proposed Plan of Research Essay (2 pages\*)
- 4) Description of Completed Graduate Study Essay (Optional)
- 5) Three Letters of Reference
- 6) Transcripts
- 7) GRE Scores (Highly Recommended)

\*Essays may contain images that count toward page limit

National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Constructing a Successful Application: Personal Statement

- Fascination with research area
- Examples of leadership and unique characteristics brought to chosen field
- Personal experiences and individual strengths
- How receiving the award contributes to career goals
- Typically addresses Broader Impacts criteria



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Constructing a Successful Application: Previous Research Experience Essay



- Applicable experiences, relevant to research
- Key questions, methodology, findings, and conclusions
- Team and/or independent work
- Mention all publications, posters, presentations, awards, recognition, etc.



National Science Foundation Graduate Research Fellowship Program

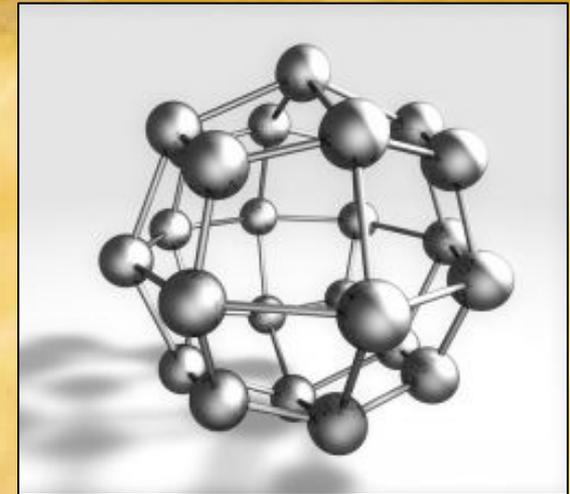
More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Constructing a Successful Application: Proposed Research Plan

- Original inquiry – introduce general theory, importance, and motivation
- How you have prepared
- Perceived scope of work during graduate study and beyond
- Detailed plan, but avoiding jargon and being overly specific
- Demonstrate research's Broader Impacts



*National Science Foundation Graduate Research Fellowship Program*

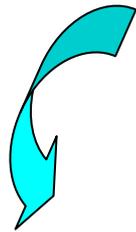
More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Constructing a Successful Application: Formulating Essays

**Understand impact and importance** of experiences and proposed research on the real world



**Discuss ideas** with experts, mentors, family and peers

**Construct essays**; give to experts, mentors, family and peers to review



**Polish to create final draft**



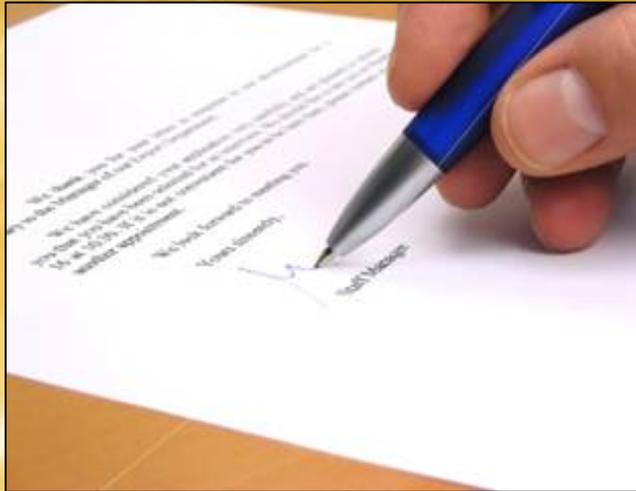
National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Constructing a Successful Application: Reference Letters



- Choose three appropriate references
- Should know you as a scientist and personally
- Provide them 6-8 weeks
- Share application materials and review criteria (good letters address Intellectual Merit and Broader Impacts)
- Follow up with referees and track submission of letters using FastLane



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Constructing a Successful Application: Important Points



1. Start the process early
2. Read the FAQ: <https://www.fastlane.nsf.gov/grfp/>
3. Demonstrate review criteria in application materials
4. Be clear, concise, confident, and truthful
5. Draw on accomplishments more than promises
6. Submit application to field, based on who you want to review it
7. Ensure essays address all application questions
8. Check for spelling and grammatical errors
9. Verify essays upload correctly **AND** are in appropriate place
10. Press "Submit" button
11. Regularly check application status

National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Insight From An Experienced Panelist

## Common Reasons Applicants Are Not Successful:

- Poor Broader Impacts
- Choice of prestigious school over research-matched school
- Inappropriate or uninformative reference reports
- Weak personal statement
- Poor support from proposed mentor



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Program Cycle

Application: Online application available  
mid-August

Deadlines: Early November (varies by field)

Awards: NSF announces awards late March

\*Refer to Solicitation at: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/)



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Apply to Win!!!

Applying always produces a winning result - besides feedback on your ideas from experts, it is great preparation for:

- Other award applications
- Graduate school applications
- Job applications
- Writing publications
- Professional connections

**...and you just might win the fellowship too.**



*National Science Foundation Graduate Research Fellowship Program*

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)



# Additional Information

## NSF Graduate Research Fellowship

### Program Solicitation and Deadlines

- <http://www.nsf.gov/grfp/>

### Online Application, User Guides and Official Announcements

- <http://www.fastlane.nsf.gov/grfp/>

### Operations Center, Outreach, and Helpdesk

- <http://www.nsfgrfp.org>

### Questions about Application Process

- Telephone: 866-NSF-GRFP (673-4737)
- Email: [info@nsfgrfp.org](mailto:info@nsfgrfp.org)

A copy of this presentation can be found at:  
<http://www.nsfgrfp.org>



National Science Foundation Graduate Research Fellowship Program

More Info: [www.nsf.gov/grfp/](http://www.nsf.gov/grfp/) or [www.nsfgrfp.org](http://www.nsfgrfp.org)

Apply at: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)

