NSF Graduate Research Fellowship Program

**GRF Operations Center**

American Society for Engineering Education

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What Is the National Science Foundation (NSF)?

- Federal agency created to promote scientific discovery, advance national welfare, and secure national defense
- Manages $6 billion annual budget for science education, financial support for students, and basic research
  - Annually awards around 10,000 research grants
- Has given awards to over 170 Nobel prize winners!
- Career-long presence in most researchers’ work

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Why Does the NSF Want ME?

- Pertaining to research capability, you are strong in two major categories:
  - Intellectual Merit
  - Broader Impacts to Society
- You show a healthy mixture of:
  - Intelligence
  - Leadership
  - Social responsibility
  - Determination
  - Excitement
  - Ability to succeed in an ever-changing, complex environment

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NSF Wants to Give You Fellowship
Support for Graduate School

- Three years of support over five year period
- Portable – can be used at school of your choice, anywhere in the world
- $30,000 annual stipend - this goes in your pocket!
- Tuition waived, $10,500 cost-of-education allowance paid to university
- Typically awarded to more than 1,000 students each year

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Award Goes Beyond Monetary Rewards

“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.”

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Are You Eligible?

- Can apply as rising senior, first-year graduate student, or second-year graduate student in first semester (not more than 12 months of credit for full-time graduate study)
- U.S. Citizen, National or Permanent Resident
- Research-based Masters or PhD in NSF-Supported Field

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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)

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Some Areas NSF Does Not Support

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

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What Are My Chances of Winning?

- About a 10% award success rate
- Number of awardees proportional to number of applications in each field
- Additional 17% received honorable mention

*Data from 2006-2007 application cycle

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Boost Your Chances of Winning by Understanding NSF Review Criteria

1) Intellectual Merit

- Ability to plan and conduct research
- Excellence when working both independently and in a team
- Aptitude in interpreting and communicating research findings

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Boost Your Chances of Winning by Understanding NSF Review Criteria

2) Broader Impacts

Activities and projects that:
- Integrate research and education
- Communicate your methodology and findings to a diverse audience
- Encourage diversity and enable full participation
- Enhance global scientific and technical understanding
- Benefit your community

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This is everything you are rated on - “intellectual merit” and “broader impacts” criterion!
Application Materials

1) Personal Statement Essay (2 pages*)
2) Previous Research Experience Essay (2 pages*)
3) Proposed Plan of Research Essay (2 pages*)
4) Three Letters of Reference
5) Transcripts
6) GRE Scores (Highly Recommended)

*Essays may contain images, but they count toward page limit

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Demonstrate Review Criteria in Your Application Materials

- **Intellectual Merit**
  - Academic record
  - GRE scores (highly recommended)
  - Previous research experience
  - Proposed plan of research
  - Choice of and relevance of references
  - Appropriateness of proposed graduate institution

- **Broader Impacts**
  - Characteristics of your background, including:
    - Personal, professional and educational experiences
  - Additional information provided by references

[www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)
Constructing a Successful Application:
Personal Statement and Previous Research Experience

- **Personal Statement**
  - Why are you fascinated by research area?
  - What examples of leadership skills and unique characteristics do you bring to your chosen field?
  - What personal and individual strengths do you have that make you a qualified individual?
  - How will receiving the award contribute to career goals?

- **Previous Research Experience Essay**
  - What are all your applicable experiences, emphasizing those relevant to proposed plan of research?
  - For each experience, what were the key questions, methodology, findings, and conclusions?
  - Did you work in a team and/or independently?
  - How did you assist in analysis of results?

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Constructing a Successful Application: Formulating Research Plan

Reflect upon what captures your attention via journals, websites, and other media

↓

Analyze original research question

↓

Apply understanding of research principles and approaches to address question

↓

Draft plan following research proposal format

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Constructing a Successful Application: Formulating Essays

Discuss essays with experts, mentors and peers

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

...... Revise Essays ......

Finalize Essays

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Constructing a Successful Application: Reference Letters

- Three required
- Provide referees sufficient time to write strong letter
- Discuss application and share essays with them
- Inform them that reference letters should reflect both your “intellectual merit” and “broader impacts”
- Track submission of letters using FastLane application module - if necessary, remind referees about deadline

[Link: www.fastlane.nsf.gov/grfp]
Constructing a Successful Application:
Other Important Points

⇒ Convey confidence in your abilities
⇒ Be clear and concise in conveying your ideas
⇒ Can submit your application to a primary field or multidisciplinary fields
⇒ Start early and budget your time throughout application process
⇒ Read the FAQ: https://www.fastlane.nsf.gov/grfp/
⇒ Make certain your essays address application questions - check them for spelling and grammatical errors
⇒ Compose essays so that a broad range of people can appreciate your efforts
⇒ Verify essays have uploaded correctly AND are in appropriate place
⇒ Press the “Submit” button
⇒ Regularly check the status of transcripts and reference letters – if needed, follow up with schools and referees

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Evaluation Process

- Applications are evaluated by field specific panels
  - Panelists are academic and research experts in the panel field, but *may not* be experts in your specific research specialty

- Panelists complete rating sheet evaluating application’s intellectual merit and broader impacts
  - For each criterion, panelists describe the application’s strengths and areas for improvement
  - Each application is evaluated by *at least* 2 panelists

- Panels make recommendations to NSF regarding *awardees* and *honorable mentions*

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Apply To Win!!!

- Going through the application process always produces a winning result; besides the 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!

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Program Cycle

Program Announcement: www.nsf.gov/grfp

Application: Online application available mid-August at www.fastlane.nsf.gov/grfp

Deadlines: November 1-9, 2007 (varies by field)

Awards: NSF announces awards late March 2008 (All applicants may read their rating sheets online after awards are announced)

www.fastlane.nsf.gov/grfp
Additional Information

NSF Graduate Research Fellowship

Program Announcement, Online Application and Deadlines
- Website: www.fastlane.nsf.gov/grfp

Question about Application Process
- Telephone: 866-NSF-GRFP (673-4737)
- Email: help@nsfgradfellows.org

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