

NSF Graduate Research Fellowship Program

***GRF Operations Center
American Society for Engineering Education***

www.fastlane.nsf.gov/grfp



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

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**



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**.”

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

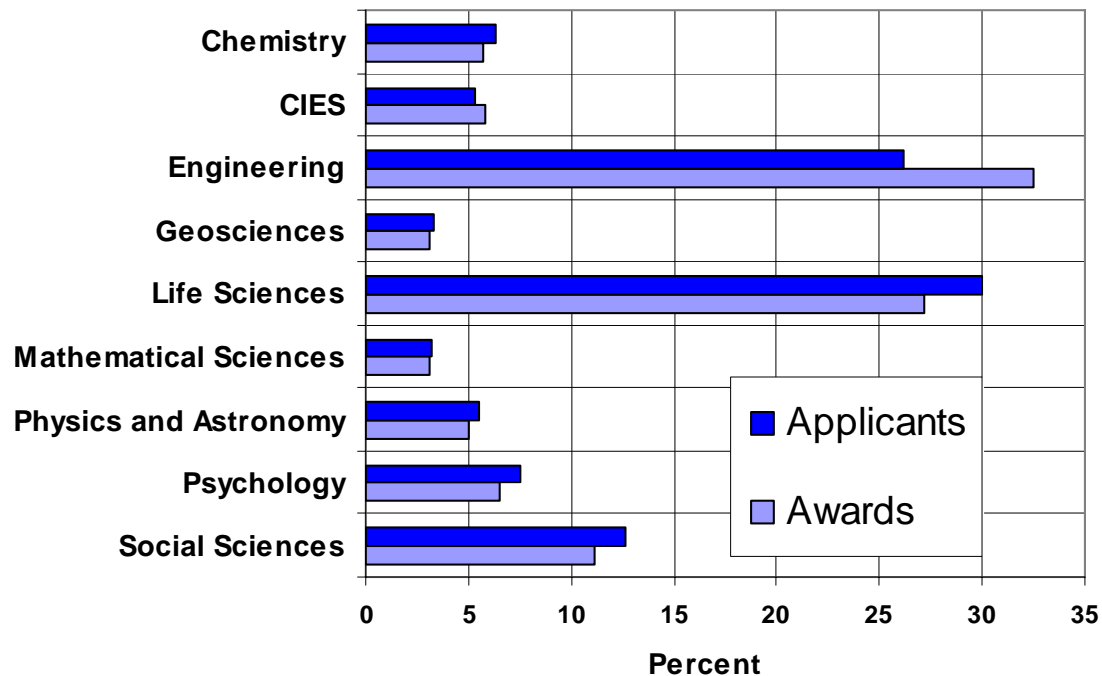
Some Areas NSF Does Not Support



- 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

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

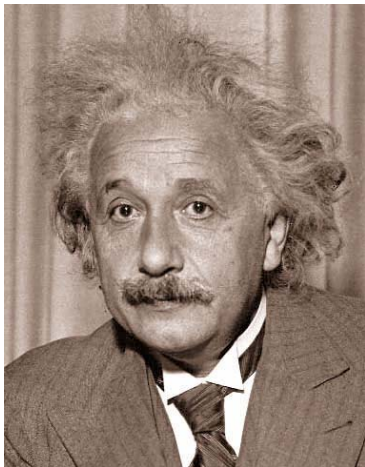
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Boost Your Chances of Winning by Understanding NSF Review Criteria



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



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



The Rating Sheet

This is everything you are rated on - "intellectual merit" and "broader impacts" criterion!



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	<input type="checkbox"/> Excellent <input type="checkbox"/> Very Good <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
<i>Mandatory</i> - 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	<input type="checkbox"/> Excellent <input type="checkbox"/> Very Good <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor
<i>Mandatory</i> - 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

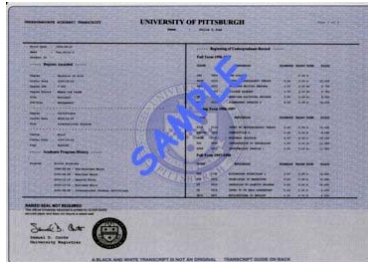
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Signature

Date

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

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

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

Constructing a Successful Application: Formulating Essays

Discuss essays with experts, mentors and peers

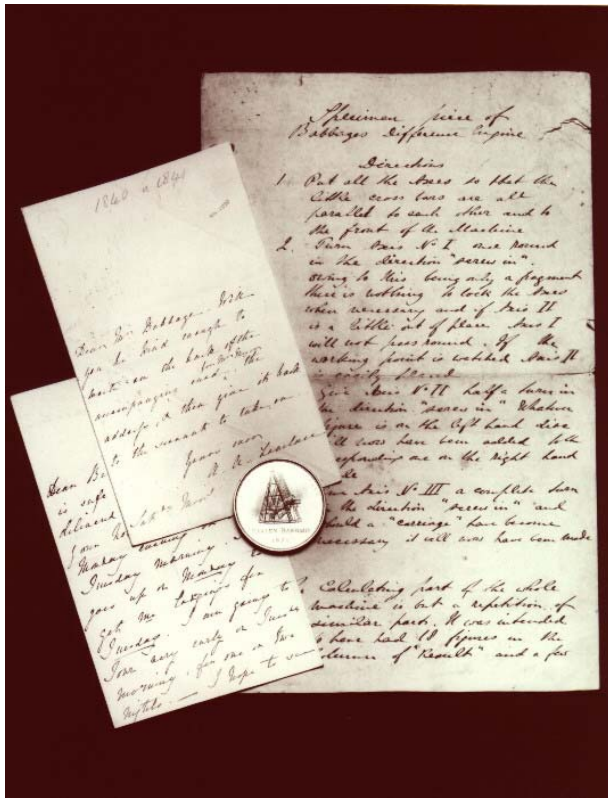
Understand impact and importance of your experiences and proposed research on the real world

..... **Revise Essays** *.....*



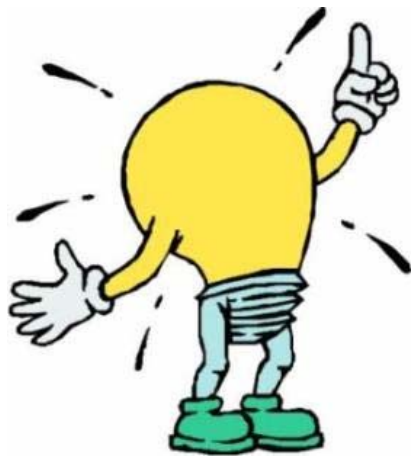
Finalize Essays

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

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

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
- Panelist 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*



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!

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



OPPORTUNITIES for GRADUATE RESEARCH SUPPORT

SPONSOR	NAME	WEBSITE
National Science Foundation	Graduate Research Fellowship Program	www.nsf.gov/grfp
National Science Foundation	LSAMP Bridge to the Doctorate	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5477
National Science Foundation	Integrative Graduate Education and Research Traineeship (IGERT) program	www.igert.org
Department of Defense	National Defense Science and Engineering Graduate Fellowship (NDSEG)	www.asee.org/ndseg
Department of Defense	Science, Mathematics, and Research For Transformation Program (SMART)	www.asee.org/smart

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