Applying to the NSF Graduate Research Fellowship Program

Aug 1, 2016
• To select, recognize, and financially support individuals who have demonstrated the potential to be high achieving scientists and engineers, early in their careers.

• To broaden participation in science and engineering of underrepresented groups, including women, minorities, persons with disabilities and veterans.
GRFP Key Elements

Five Year Award – $138,000
• Three years of support
  – $34,000 Stipend per year
  – $12,000 Educational allowance to institution
• Professional Development Opportunities:
  GROW: International Research
  GRIP: Internships
• Supercomputer access: XSEDE
• Career Life Balance (family leave)

See GRFP’s new 3-year Solicitation, NSF 16-588.
GRFP Unique Features

- **Fellowship**: Awarded to individual
- **Flexible**: choice of project, advisor & program
- **Unrestrictive**: No service requirement
- **Portable**: Can be used at any accredited U.S. institution
  - MS, MS and PhD, PhD

- **2010 - 2016**: 2,000 Fellowships each year
  - 2016: ~16,800 Applications - ~12 % success rate
GRFP Eligibility

- U.S. citizens, nationals, and permanent residents
- Early-career: undergrad & grad students
- Pursuing research-based MS and PhD
- Science and Engineering
- Enrolled in accredited institution in US by Fall

Academic Levels

- **1:** Seniors/baccalaureates; no graduate study yet
- **2:** First-year graduate students
- **3:** Second-year grad students
  - ≤ 12 months of graduate study by August
- **4:** >12 months graduate study
  - Interruption in graduate study of 2+ years (can have MS degree)
Change to GRFP 2017 Eligibility

Change to eligibility for this year’s competition:

• Students already enrolled in graduate school may apply only once, in their 1st or 2nd year
• Those who applied as 1st year graduate students last year (2015) can apply as 2nd year graduate students in 2016
• There are no changes to eligibility for undergraduates, post-baccalaureate, or returning students

RATIONALE:

• Increase success rate for applicants
• Increase diversity of applicant pool and institutions
• Ease workload for applicants, referees, reviewers
• Maximize benefits of receiving the fellowship early

Dear Colleague Letter (NSF 16-50), FAQ (NSF 16-051)
GRFP Fields of Study

- Chemistry
- Computer & Information Science/Engineering
- Engineering
- Geosciences
- Life Sciences
- Materials Research
- Mathematical Sciences
- Physics and Astronomy
- Psychology
- Social Sciences
- STEM Education
NOT SUPPORTED

- Joint science-professional degree programs
  - e.g. MD/PhD, JD/PhD
- Business administration or management
- Counseling, Social work
- Education (except in STEM education)
- History (except for history of science)
- Research with disease-related goals (unless Biomedical Engr)
- Clinical study
  - patient-oriented research
  - epidemiological and behavioral studies
  - outcomes research
  - health services research
GRFP Application Timeline

**July/August**
- Solicitation Posted

**late October**
- Applications Due

**Early November**
- Reference Letters Due
- Fellowship Year Begins

**March - April**
- Recipients Announced

**May 1**
- Acceptance of Award and Declaration of Tenure/Reserve
Complete Application Package: Due in late October

1) Personal Information, Education & Work Experience, Proposed Field of Study, Academic honors, Publications

2) Personal, Relevant Background and Future Goals Statement (3 pages)

3) Graduate Research Statement (2 pages)

4) Transcripts (uploaded electronically)

5) Three letters of reference (received by Nov 3, 2016, 5 pm ET)

Please see new Solicitation for application details and requirements
Preparing a competitive GRFP Application

Personal 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?
  How did you become involved? Where was it done?
  Why was this project worth doing?
  What was your contribution to the project?
  How did your part of the project fit into the whole?
  What have you learned?
  Any advanced course work?

• Career aspirations and goals

  How have your experiences shaped your goals?
Preparing a competitive GRFP Application

Research Statement

Describe your Research Plan

• Communicate your research idea and approach
• Explain your research plan and methods
• What do you expect to learn? How will you know if the project is successful?
• What would you do next?

Address NSF’s review criteria

How have your experiences shaped your goals?
Two National Science Board-approved review criteria:

- **Intellectual Merit**
  How important is the proposed activity to advancing knowledge within its own field or across different fields?

- **Broader Impacts**
  How well does the proposed activity benefit society or advance desired societal outcomes?
Demonstrated intellectual ability and other evidence of potential for scholarly scientific study, such as the ability to:
- Plan and conduct research
- Work as a member of a team as well as independently
- Interpret and communicate research
Societal benefits may include, but are not limited to:

- Impact of research or individual student on society
- Increased participation of underrepresented groups, women/minority, students with disabilities, veterans
- Outreach: Mentoring; improving STEM education in schools
- Impact on society: Increasing public scientific literacy; increasing public engagement with science and technology
- Community outreach: science clubs, radio, TV, newspapers, blogs
- Potential to impact a diverse, globally competitive workforce
- Increasing collaboration between academia, industry, others
- Leadership
Conveying your potential

Intellectual Merit
- Academic performance; grades, curricula, awards, etc.
- Graduate Research plan
- Research/professional experience
- Reference letters

Broader Impacts
- Prior accomplishments and future plans
- Individual experiences
- Potential benefit(s) to society
- Community outreach or novel activities
- Reference letters
Application Review Process

• Applications are reviewed by panels of disciplinary and interdisciplinary scientists and engineers.

• Applications assigned to panels based on the applicant’s chosen *Primary Field(s) of Study* and the discipline(s) represented.

• Applicants are advised to select the Primary Field of Study that is most closely aligned with the proposed graduate program of study.

• Holistic evaluation
Holistic review is a flexible, individualized way of assessing an applicant’s interests and competencies by which balanced consideration is given to experiences, attributes, and academic achievements and, when considered in combination, how the applicant has **demonstrated potential** for significant achievements in science and engineering.
Holistic Review in GRFP

<table>
<thead>
<tr>
<th>Application Component</th>
<th>Intellectual Merit</th>
<th>Broader Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Statement</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Research Statement</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Transcripts</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reference Letters</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Overall Rating</td>
<td>E/V/G/F/P</td>
<td>E/V/G/F/P</td>
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Rating Key

<table>
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<tr>
<th>Rating</th>
<th>Description</th>
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<tr>
<td>E</td>
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<td>V</td>
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<td>G</td>
<td>Good</td>
</tr>
<tr>
<td>F</td>
<td>Fair</td>
</tr>
<tr>
<td>P</td>
<td>Poor</td>
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An applicant receives **Ratings** and **Comments** for both Intellectual Merit and Broader Impacts.
Before beginning your application, ask yourself

• What's special, unique, distinctive, and/or impressive about you or your life story?

• What details of your life might help the reviewers better understand you or set you apart from other applicants?

• How did you become interested in this field and what have you learned about it (and about yourself) that has convinced you that you are well suited to this field?

• How have you learned about this field—through classes, readings, seminars, work or other experiences, or conversations with people already in the field?

• What reasons can you give for the reviewers to be interested in you?
Reference Letters

- 3 reference letters are required for a complete application
- You can list up to 5 reference letter writers (ranked)
  The top 3 will be used
- Select your reference letter writers carefully (familiarity with you as a person is important).
  Share your statements with them if you can.

Your reference letter writers should keep in mind:

- **Intellectual Merit and Broader Impacts** (give examples)
- Deadline: Nov 3, 2016, 5:00 p.m. Eastern Time
Advice for Applicants

- Start early!
- Read the newest Solicitation, *and read it again.*
- Read NSF GRFP websites.
- Make your list of honors, experiences, presentations, and any publications clear for the reviewers.
- Select and confirm your reference letter writers and monitor receipt of their letters on the GRFP website.
- Pay attention to NSF’s merit review criteria.
- Identify several colleagues and have them comment on your statement drafts.
- Share your application materials and the merit review criteria with your reference letter writers.
GRFP Resources

• NSF GRFP Website:  [www.nsf.gov/grfp](www.nsf.gov/grfp)  
  *(Solicitation and links)*

• GRFP Website:  [www.nsfgrfp.org](www.nsfgrfp.org)  
  *(includes tips for applying, FAQs, and resource people)*

• To apply on FastLane:  [www.fastlane.nsf.gov/grfp](www.fastlane.nsf.gov/grfp)


• Graduate Research Internship Program (GRIP):  [www.nsf.gov/grip](www.nsf.gov/grip)

• Phone & e-mail
  – 866-NSF-GRFP (673-4737)
  – [info@nsfgrfp.org](mailto:info@nsfgrfp.org)
Good luck!