



# Applying to the NSF Graduate Research Fellowship Program



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

[grfp@nsf.gov](mailto:grfp@nsf.gov)



## PART 1:

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# Program Information



# National Science Foundation

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- Independent federal agency created in 1950
- Mission
  - To promote the progress of science
  - To advance the national health, prosperity, and welfare
  - To secure the national defense
- Funds ~20% of all federally supported basic research conducted by America's colleges and universities



# GRFP Goals

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- 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

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## 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: Federal Internships
- Supercomputer access: XSEDE
- Career Life Balance (family leave)





# GRFP Unique Features

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- Awarded to individual
- **Flexible:** choice of project, advisor & program
- **Unrestrictive:** No service requirement
- **Portable:** Any accredited U.S. institution
  - MS, MS and PhD, PhD
- **2010 - 2016:** 2,000 fellowships/year

2016: ~16,800 Applications

~12 % success rate



# GRFP Solicitation

Provides the following information:

- Deadlines
- Program description
- Award information
- Eligibility requirements
- Application preparation
- Submission instructions
- Application review criteria





## PART 2:

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# Eligibility





# GRFP Eligibility

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





# GRFP Eligibility

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## Academic Levels

- **1:** Seniors or baccalaureates with no graduate study yet
- **2:** First-year graduate students
- **3:** Second-year graduate students  
( $\leq 12$  months of graduate study by August)
- **4:**  $>12$  months graduate study, with interruption in graduate study of 2+ years (*can have MS degree*)



# How often can you apply?

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*\*Dear Colleague Letter (NSF 16-50), FAQ (NSF 16-051)*

## Academic Levels

- **1:** Seniors or baccalaureates with no graduate study yet
- **2:** First-year graduate students
- **3:** Second-year graduate students ( $\leq 12$  months of graduate study by August)

***No restriction***

***Only 1 time in  
graduate  
School, in 1<sup>st</sup> or  
2<sup>nd</sup> year***



# GRFP Fields of Study

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



# NOT SUPPORTED

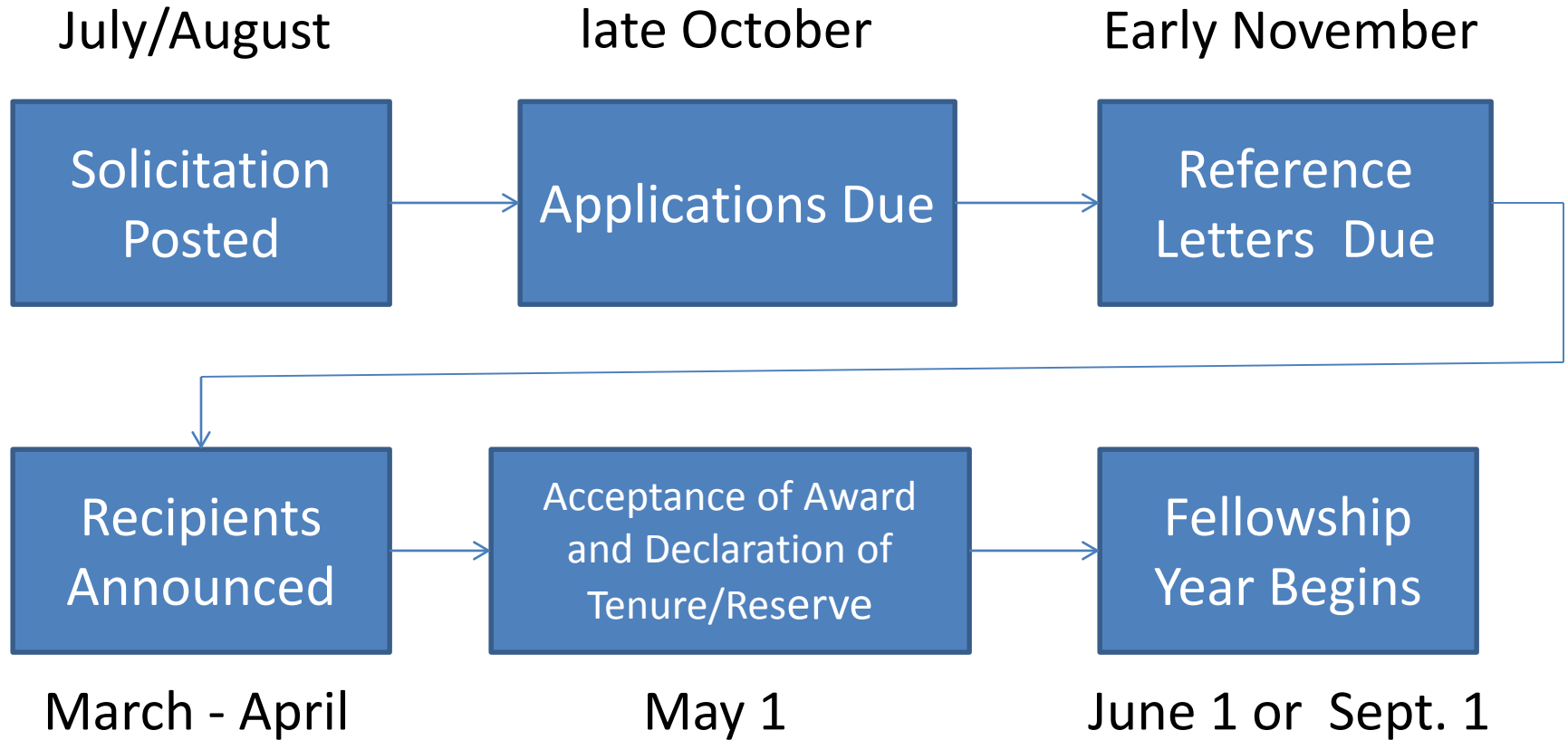
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- Joint science-professional degree pgms
  - e.g. **MD/PhD, JD/PhD**
- Business administration or management
- Counseling, Social work
- Education (except in science and engineering education)
- History (except in history of science)
- **Biomedical research for which goals are directly health- or disease-related**
- **Research focused on clinical practice**
  - Patient-oriented research
  - Epidemiological studies
  - Medical behavioral studies
  - Outcomes research
  - Health services research



# GRFP Application Timeline





## PART 3:

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# The GRFP Application

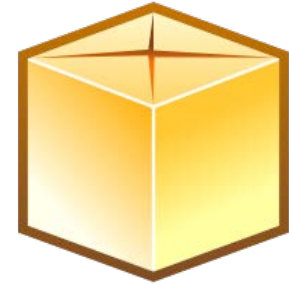


# GRFP Complete Application

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## **Complete Application Package:**

**1)** Personal information, education & work experience, proposed field of study, academic honors, publications



*See the new Solicitation for details.*





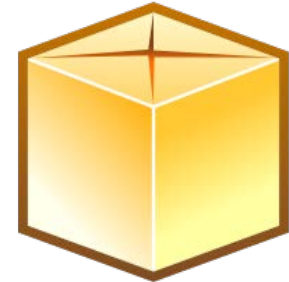
# GRFP Complete Application

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## **Complete Application Package:**

1) Personal information, education & work experience, proposed field of study, academic honors, publications

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



*See the new Solicitation for details.*



# GRFP Complete Application

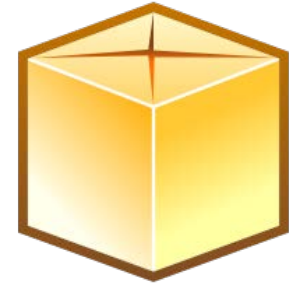
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2) Personal, Relevant Background, & Future Goals Statement (3 pages)

3) Graduate Research Statement  
(2 pages)



*See the new Solicitation for details.*



# GRFP Complete Application

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## Complete Application Package:

1) Personal information, education & work experience, proposed field of study, academic honors, publications

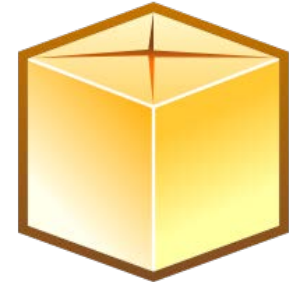
2) Personal, Relevant Background, & Future Goals Statement (3 pages)

3) Graduate Research Statement  
(2 pages)

4) **Transcripts** (uploaded electronically)

**All application deadlines are in late October**

*See the new Solicitation for details.*





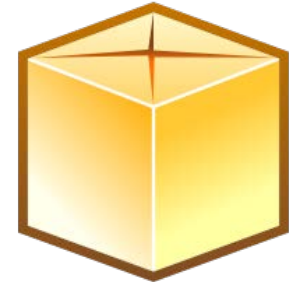
# GRFP Complete Application

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## Complete Application Package:

- 1) Personal information, education & work experience, proposed field of study, academic honors, publications
- 2) Personal, Relevant Background, & Future Goals Statement (3 pages)
- 3) Graduate Research Statement (2 pages)
- 4) Transcripts (uploaded electronically)
- 5) Three letters of reference, **due the first Thursday in November, 5 pm ET**

*See the new Solicitation for details.*





# Preparing a GRFP Application

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## Personal Statement

Demonstrate potential for STEM research

- Experiences, personal and professional, that contributed to your motivation to pursue a STEM career and your preparation for it.



- *How have your experiences shaped your goals?*
- *What use have you made of the resources available to you?*



# Preparing a GRFP Application

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## Personal Statement

Demonstrate potential for STEM research

- Previous research experiences

- *What was the project?*
- *Where was this research done?*
- *Why was this project worth doing?*
- *What was your part of the project?*
- *How did your part of the project fit into the whole?*
- *What have you learned?*
- *Any advanced course work?*





# Preparing a GRFP Application

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## Personal Statement

Demonstrate potential for STEM research

- Career aspirations and goals



Be sure to address both intellectual merit and broader impacts.



# Preparing a GRFP Application

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## Research Statement

Describe your Research Plan

- Motivate research question(s)
- Demonstrate understanding of the research question(s) and methods for addressing them
- Communicate original research idea and approach

Be sure to include sections explaining both intellectual merit and broader impacts.





## PART 4:

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# Merit Review Criteria



# NSF Review Criteria

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National Science Board-approved review criteria:

- **Intellectual Merit**
- **Broader Impacts**



# Intellectual Merit and Broader Impacts

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

**AND**

- How well does the proposed activity benefit society or advance desired societal outcomes?

**\* Separate sections for Intellectual Merit and Broader Impacts**



# Intellectual Merit

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Demonstrated intellectual ability and other accepted requisites 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



# Broader Impacts

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Societal benefits include, but not limited to:



- Impact of project or individual student on society
- Increased participation of underrepresented groups, women/minority, students with disabilities, veterans
- Improved STEM education in schools and teacher development
- Impact on society : Increased public scientific literacy; increased public engagement with science and technology
- Community outreach: science clubs, radio, TV, newspaper
- Potential to impact diverse, globally competitive workforce
- Increased partnerships between academia, industry and others
- Leadership potential



## PART 5:

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# Submitting a Competitive Application



# Assessment

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## Intellectual Merit

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

## Broader Impacts

- Prior accomplishments, future plans
- Individual experiences
- Potential benefit(s) to society
- Community outreach
- Reference letters



# Reference Letters

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- Three reference letters are requested
- Applicant can upload contact information of up to 5 reference letter writers
- Select reference letter writers carefully (familiarity with you as a person is important)

Reference letter writers should keep in mind:

- **Intellectual Merit and Broader Impacts**  
(give specific examples)
- **Deadline: 1<sup>st</sup> Thursday in Nov (5 p.m. ET)**





# Application Review Process

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- Applications are reviewed by panels of disciplinary and interdisciplinary scientists and engineers.
- Applications are assigned to panels based on the chosen Primary Field of study.
- 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 in GRFP

<b>Application Component</b>	<b>Intellectual Merit</b>	<b>Broader Impacts</b>
Personal Statement	Yes	Yes
Research Statement	Yes	Yes
Transcripts	Yes	Yes
Reference Letters	Yes	Yes
<b>Overall Rating</b>	<b>E/V/G/F/P</b>	<b>E/V/G/F/P</b>

<b>Rating Key</b>	
E	Excellent
V	Very Good
G	Good
F	Fair
P	Poor

An applicant receives **Ratings** and **Comments** for both Intellectual Merit and Broader Impacts.



# Before you begin your application, ask yourself:

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- 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?
- When 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 reviewers to be interested in you?





# Advice for Applicants

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- Start early
- Read Solicitation, and read it again
- Read NSF GRFP websites
- Make your list of honors, experiences, presentations, and any publications clear for the reviewers
- Pay attention to Merit Review criteria
- Ask several colleagues to comment on multiple statement drafts
- Select and confirm your reference letter writers early
- Share your application materials and the merit review criteria with your reference writers
- Monitor receipt of reference letters



# GRFP Resources

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- NSF GRFP Website: [www.nsf.gov/grfp](http://www.nsf.gov/grfp)  
*(Solicitation and links)*
- GRFP Website: [www.nsfgrfp.org](http://www.nsfgrfp.org)  
*(includes tips for applying and FAQs)*
- To apply on FastLane: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)
- Graduate Research Opportunities Worldwide (GROW): [www.nsf.gov/grow](http://www.nsf.gov/grow)
- Graduate Research Internship Program (GRIP):  
[www.nsf.gov/grip](http://www.nsf.gov/grip)
- Phone & e-mail
  - 866-NSF-GRFP (673-4737)
  - [info@nsfgrfp.org](mailto:info@nsfgrfp.org)



**Good luck!**