



**For Applicants to
the NSF Graduate Research Fellowship Program**

[nsf.gov/grfp](https://www.nsf.gov/grfp)

www.nsfgrfp.org



GRFP Goals

- 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 Initiative (family leave)





GRFP Unique Features

- 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 - 2015:** 2,000 Fellowships each year
 - 2015: 16,000 Applications - ~12.5% success rate



GRFP Solicitation (NSF 15-597)

- Contains the following information:
 - **Program description**
 - **Award information**
 - **Eligibility requirements**
 - **Application preparation**
 - **Submission instructions**
 - **Application review criteria**



GRFP Eligibility

- U.S. citizens 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

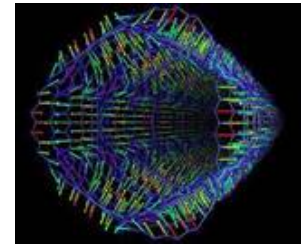
- **1:** Seniors/baccalaureates; no graduate study
- **2:** First-year graduate students
- **3:** Second-year grad students
 - ≤ 12 months of graduate study by August
- **4:** >12 months graduate study
 - Interruption in graduate study of 2+ years (can have MS degree)



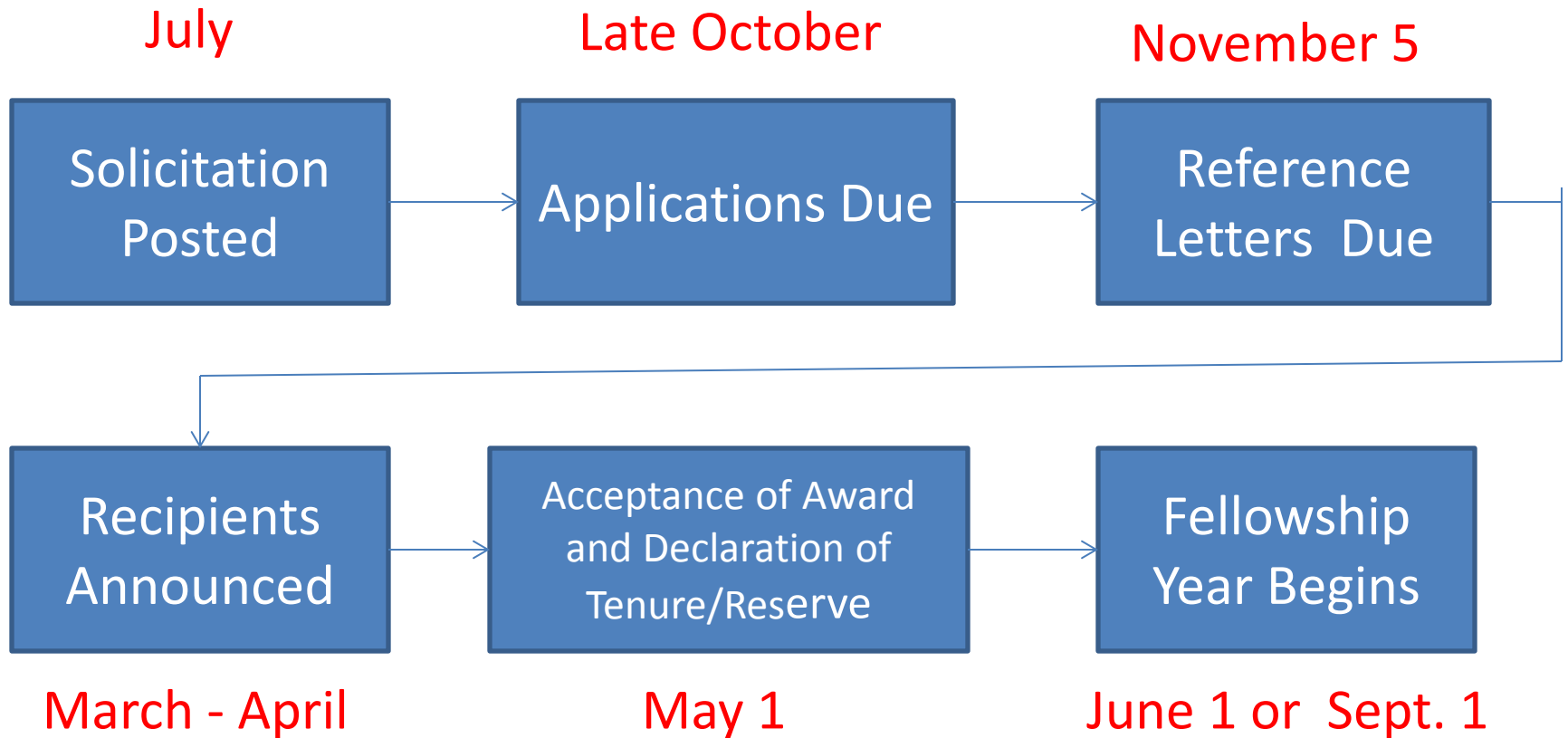


GRFP Fields of Study

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



GRFP Application Timeline





GRFP Complete Application

NSF FastLane

- Personal, Relevant Background and Future Goals Statement (3 pages)
- Graduate Research Statement (2 pages)
- Transcripts (uploaded electronically)
- Three letters of reference (received by 5 Nov 2015, 8 pm ET)

DEADLINES: October 2015 (received by 8 pm ET)

Please see 2015 Solicitation for application details and requirements



Two Statements

Statement 1:

Personal, relevant Background and Future Goals Statement

Describe your personal, educational and/or professional experiences that motivate your decision to pursue advanced study. Include examples of research and/or professional activities in which you have participated. Describe the contributions to **advancing knowledge** in STEM fields and the potential for **broader societal impacts**. Include future plans to contribute to broader impact.



Two Statements

Statement 2:

Graduate Research Plan Statement

Present an original research topic that you would like to pursue in graduate school. Describe the research idea, your general approach. Address the potential of the research to **advance knowledge** and understanding within science as well as the potential for **broader impacts** on society.



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:** 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.



NSF Review Criteria



National Science Board

GOVERNING BOARD OF THE NATIONAL SCIENCE FOUNDATION & POLICY ADVISORS
TO THE PRESIDENT AND CONGRESS

- Two National Science Board-approved criteria
 - Intellectual Merit
 - Broader Impacts



Intellectual Merit and Broader impacts

- 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

- 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

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 audiences: museums, aquarium
- Development of a diverse, globally competitive workforce
- Increased partnerships between academia, industry and others
- Leadership potential
- Plans to share your science with the broader community



Intellectual Merit Assessment

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

Broader Impacts Assessment

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





GRFP Advice for Applicants

- Start early
- Read Solicitation, and read it again
- Read NSF GRFP websites

- Select and confirm reference letter writers
- Pay attention to Merit Review criteria
- Identify several colleagues and have them comment on multiple statement drafts
- Share your application materials and the merit review criteria with reference writers
- Monitor receipt of reference letters (3 required for review)



Reference writers

- Select your reference writers carefully, as they will provide important information about your potential as a leader, researcher, and educator – **familiarity with you as a person is important**
- Your selected reference writers will submit their own references; provide them all necessary information well in advance of deadline
- You may request up to 5 references. It is your responsibility to ensure three letters of references are submitted by the published deadline in order for your application to be complete and reviewed



GRFP Resources

- NSF GRFP Website (nsf.gov/grfp)
 - Solicitation and links
- NSF GRFP FastLane Website (fastlane.nsf.gov/grfp)
 - Application, guides, announcements
- GRFP Website (nsfgrfp.org)
- Current & former Fellows
- Phone & e-mail
 - 866-NSF-GRFP (673-4737)
 - info@nsfgrfp.org





UR Panelists

Daniel Weix (Assoc. Professor of Chemistry)

Danielle Benoit (Asst. Professor of Biomedical Engineering)

Belinda Redden (Director of Fellowships)

Keywan Johnson, NSF Fellow in Chemistry

Emily Greenwood, NSF Fellow in Biomedical Engineering

Tessa Woodruff, NSF Fellow in Chemistry

Evan Ranken, NSF Fellow in Physics