Applying to the NSF Graduate Research Fellowship Program

National Science Foundation

Graduate Research Fellowship Program

www.nsfgrfp.org   grfp@nsf.gov

PART 1:

Program Information

National Science Foundation

- 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

- To select, recognize, and financially support individuals who have demonstrated the potential to be high achieving scientists and engineers, <u>early in their careers</u>.

- To broaden participation in science and engineering of underrepresented groups, including women, minorities, persons with disabilities and veterans.

The Graduate Research Fellowship Program <u>OVERALL GOAL</u> is to recruit individuals into Science, Technology, Engineering, or Mathematics – or STEM *fields*.

What GRFP Fellowships Offer?

Five Year Award – $138,000

- Three years of support
  - $34,000 Stipend per year
  - $12,000 Educational allowance
    to institution

- **Professional Development Opportunities:**
  GRIP: Graduate Research Internship Program (Federal Internships)
  INTERN: Non-Academic Research Internship (see NSF 18-102)

- **Supercomputer access: XSEDE**

- **Career Life Balance (family *leave)***

GRFP Unique Features

- Awarded to individual

- **Flexible:** choice of project, choice of advisor & choice of graduate program

- **Unrestricted:** No service requirement after completion

- **Portable:** Any accredited institution located in the US to pursue Master's or Ph.D. degree

- **2010 - 2018:** 2,000 fellowships/year

  2017: ~12,439 Applications
  ~16 % success rate

GRFP Solicitation (NSF 18-573)

Provides the following information:

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

PART 2:

Eligibility

GRFP Eligibility

- U.S. citizens, nationals, and permanent residents

- Early-career: undergraduates, baccalaureate recipients, or
- 1st & 2nd year graduate students

- Pursuing research-based M.S. or Ph.D. degrees

- Science, Technology, Engineering, or Mathematics (STEM)

- Must enroll in a full-time graduate degree program in the summer or fall of the year they are offered a GRFP award

- To accept a fellowship award, if notified, you must inform NSF of your acceptance to a graduate program, if not already enrolled

GRFP Eligibility- Academic Levels

Based on the information submitted in the applications, applicants are grouped in Academic Levels (1-4). This allows separate reviewing of applicants with no graduate study (undergraduates and baccalaureate recipients).

Academic Levels

- **1:** College Seniors or baccalaureate recipients with no graduate study

- **2:** First-year graduate students

- **3:** Second-year graduate students (no more than one year of graduate study)

- **4:** More than 12 months of graduate study with an interruption of greater than 2 years *(can have M.S. degree)*

How often can you apply?

Dear Colleague Letter (NSF 16-050), FAQ (NSF 18-108)

Only one application per person per annual competition

Academic Levels

- **1:** Seniors or baccalaureates with no graduate study

  No restriction – can apply every year until enrolled in graduate school

- **2:** First-year graduate students

  Apply only once, in 1st or 2nd year

- **3:** Second-year graduate students (no more than one year of graduate study as of August 1 of the year the application is submitted)

GRFP Fields of Study

- Chemistry
- Computer & Information Systems Science/Engineering
- Engineering
- Geosciences
- Life Sciences (includes Biological Sciences)
- Materials Research
- Mathematical Sciences
- Physics and Astronomy
- Psychology
- Social Sciences (includes Economics)
- STEM Education

Sub-Fields of Study found at: www.nsfgrfp.org ; Applicants; Application Components; Choosing Primary Fields (see link below)
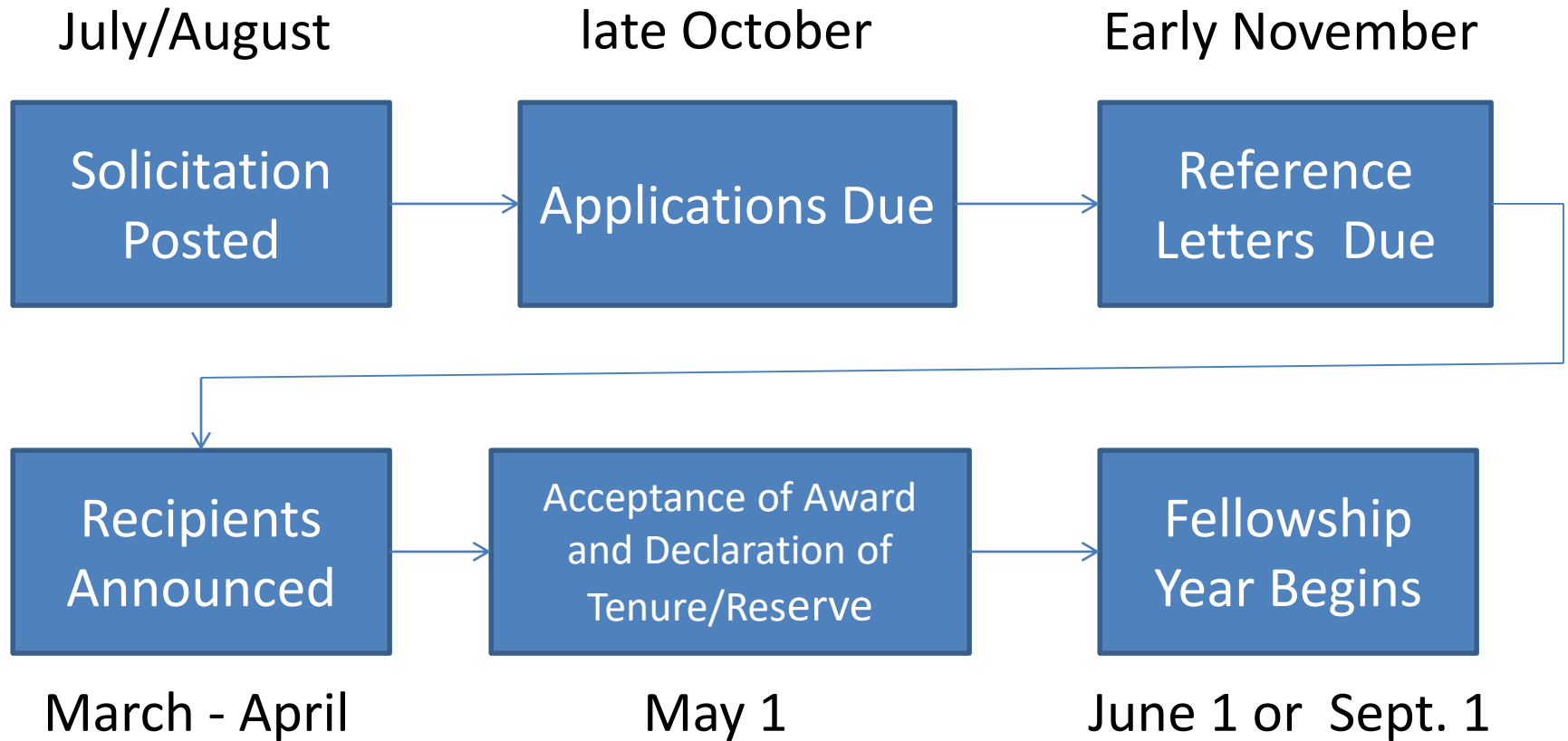https://www.nsfgrfp.org/applicants/application_components/choosing_primary_field

NOT SUPPORTED

- Joint science-professional degree programs
  - 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)
- **Research with primarily disease-related goals**
- **Clinical research**
  - patient-oriented research
  - epidemiological and behavioral studies
  - outcomes research
  - health services; public health research
  - focus on disease etiology and treatment

GRFP Application Timeline

July/August

late October

Early November

Solicitation Posted

Applications Due

Reference Letters Due

Recipients Announced

Acceptance of Award and Declaration of Tenure/Reserve

Fellowship Year Begins

March - April

May 1

June 1 or Sept. 1

PART 3:

The GRFP Application

GRFP Complete Application

Complete Application Package: *Due in late October*

1) Personal Information, Education, Work/Research 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) <u>Three</u> **letters of reference**

Please see the most recent Solicitation (NSF 18-573) for application details and requirements.

NSF Review Criteria

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?

Intellectual Merit

<u>Your</u> potential to discover new knowledge

- Your demonstrated intellectual ability (such as grades, curricula, awards, etc.)

Other evidence of your potential for scholarly scientific study, such as your ability to:

- Plan and conduct research
- Work as a member of a team as well as independently
- Interpret and communicate research
- Take initiative, solve problems, persist

The potential of <u>your approach to your field of study and your Research Plan</u> to lead to new knowledge

Evidence of <u>intellectual merit</u> can be found in all parts of the application - Personal Statement, Research Plan, letters, experiences, awards, achievements, transcripts.

Broader Impacts

- **Potential impact of the <u>individual</u> (you!) on society**
- **Potential impact of your <u>research</u> on society; why it's important**

Societal benefits may include, but are not limited to:

- Increasing participation of underrepresented groups, women, students with disabilities, veterans
- Outreach: Mentoring; improving STEM education in schools
- Increasing public scientific literacy; increased 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

Likewise, evidence of <u>broader impacts</u> can be found in all parts of the application - Personal Statement, Research Plan, letters, experiences, awards, achievements.

Preparing a competitive GRFP Application

<u>Personal Statement</u>

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 future 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

Avoid jargon, and communicate clearly for non-specialists

Make your contributions clear

Formatting your application

- Follow the formatting instructions in the solicitation!

- Fonts, margins, number of pages (check your application PDF)

- Applications that don't comply with format requirements will be **returned without review**.

Prepare a competitive application

- Start early! Look at the NSF GRFP website (www.nsfgrfp.org).
- Read the current Solicitation (NSF 18-573), and refer back to it as you prepare your application.
- Read the Frequently Asked Questions (FAQs)(NSF 17-123), and call NSF if something is confusing to you.
- Describe your honors, experiences, presentations, and any publications (etc.) clearly for the reviewers.
- Select and confirm your reference letter writers and monitor receipt of their letters on the GRFP website.
- Share your application materials and the merit review criteria with your reference letter writers.
- Pay attention to NSF's merit review criteria.
- Your statements should be interesting and clear. Ask several colleagues to read and comment on drafts.

Reference Letters

- 3 reference letters are needed for a complete application.
- You can list up to 5 reference letter writers (ranked).
    The top 3 will be used.
- Reference letter deadline is shortly after application is due.
    – see the *Solicitation* for details.
- If one only two letters arrive, your application can still be reviewed (or you can withdraw it if you like).
- Select your reference letter writers carefully (familiarity with you as a person is important).
    Share your statements with them if at all possible.

GRFP Resources

- NSF GRFP Website: www.nsf.gov/grfp

  (Solicitation & FAQs; NSF 18-573 and NSF 17-123) (Eligibility links and FAQs; NSF 16-050 and NSF 16-051)

- GRFP Website: www.nsfgrfp.org

  (includes tips for applying, FAQs, and resource people)

- To apply on FastLane: www.fastlane.nsf.gov/grfp

- Graduate Research Internship Program (GRIP):www.nsf.gov/grip

- Non-Academic Research Internships for Graduate Students (INTERN);
- https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf18102

- Phone & E-mail; 866-NSF-GRFP (673-4737); info@nsfgrfp.org

Good luck!

Questions?