National Science Foundation
WHERE DISCOVERIES BEGIN

The NSF Graduate Research Fellowship Program (NSF GRFP)

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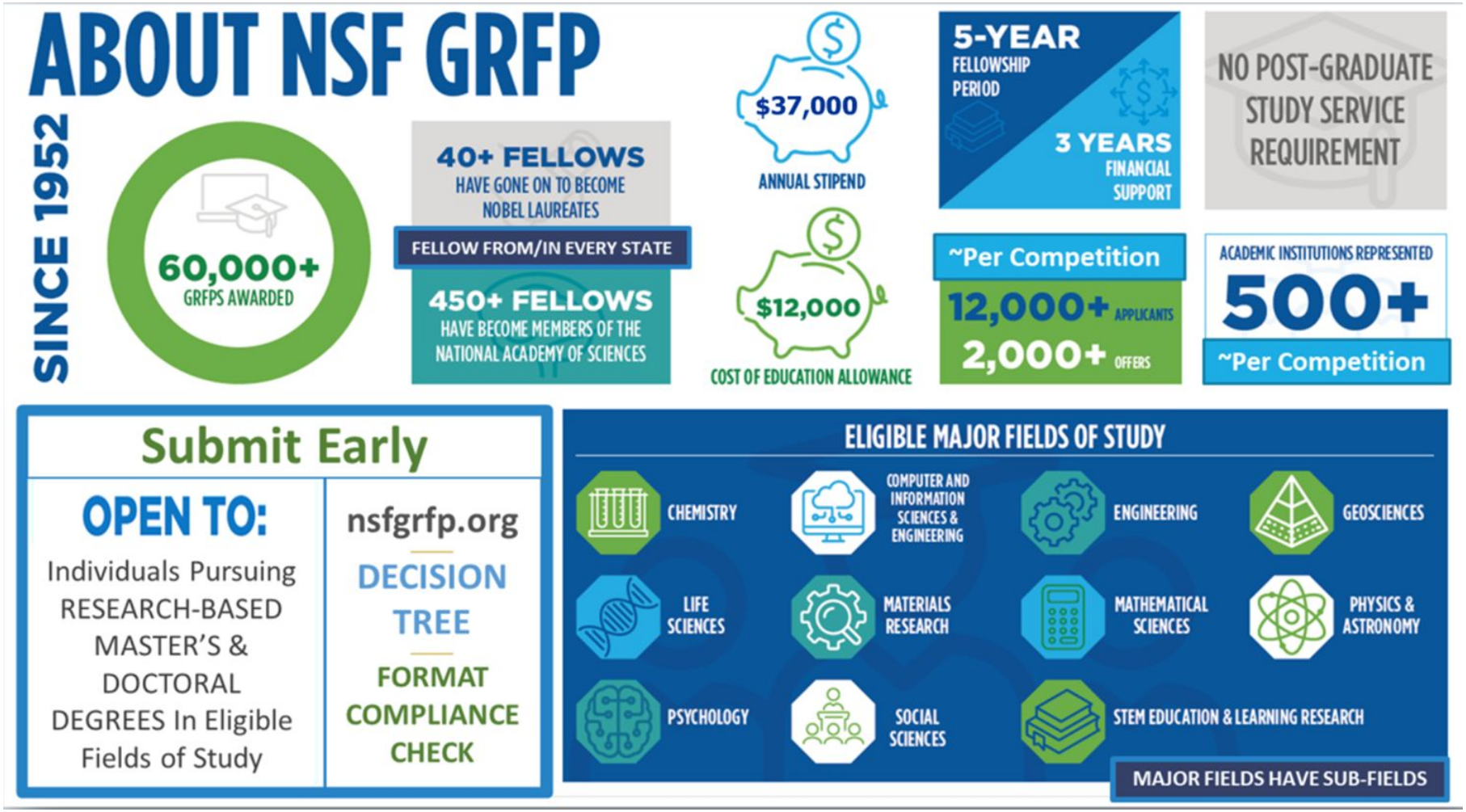
NSF GRFP Overview



NSF GRFP Overview

Fellowships for graduate study (about 1,600 awarded)

- research-based master's or doctoral degrees at accredited US institutions
- fields of science, technology, engineering, and mathematics (STEM) and STEM education

Three years of support = $147,000

- Annual stipend of $37,000, paid monthly $3083
- Cost of education allowance to institution is $12,000 per year

International research opportunity through GROW (Graduate Research Opportunities Worldwide)

- 3-12 month international research collaboration

GRIP: Graduate Research Internship Program

Access to XSEDE cyberinfrastructure resources

Eligibility

To be eligible for the NSF GRFP, you must:

- **Be a US citizen, US national, or permanent resident**
- Be in a **research-focused Master's or Ph.D. program** in an NSF-supported field
- Intend to enroll or be enrolled in an eligible program at an **accredited United States graduate institution** by Fall 2023
- Eligibility questionnaire: https://www.nsfgrfp.org/applicants/applicant-eligibility/

Number of Attempts

You are limited in the number of attempts at this award

- Graduate students enrolled in degree-granting graduate program are limited to **one** application, submitted in the first year or beginning of the second year of their degree program
- Undergraduate seniors who have never enrolled in a graduate degree program may apply before enrolling in a degree granting graduate program.
- You can only submit **one** application per annual competition.

NSF GRFP Supported Disciplines

Chemistry

Computer and Information Sciences & Engineering

Engineering

Geosciences

Life Sciences

Materials Research

Mathematical Sciences

Physics & Astronomy

Psychology

Social Sciences

STEM Education & Learning Research

NOT Supported by GRFP

Clinical work

Counseling

Business administration & management

Social work

Practice-oriented professional degree programs

Medical, dental, law, or public health programs

Joint science-professional degree programs, e.g., MD/PhD, JD/PhD, etc.

Choosing a Primary Field

Field of study that most closely matches your proposed graduate research topic

- Note: might not be the same as your graduate department designation

This is who will review your application!

- Three experts in disciplinary fields will read your application

Proposed Field of Study, examples:

This is who will review your application!

CHEMISTRY
Chemical Catalysis
Chemical Measurement and Imaging
Chemical Structure, Dynamics, and Mechanism
Chemical Synthesis
Chemical Theory, Models and Computational Methods
Chemistry of Life Processes
Environmental Chemical Systems
Macromolecular, Supramolecular, and Nanochemistry
Sustainable Chemistry
Chemistry, other (specify)

LIFE SCIENCES
Biochemistry
Biophysics
Cell Biology
Developmental Biology
Ecology
Environmental Science
Evolutionary Biology
Genetics
Genomics
Microbiology
Molecular Biology
Neurosciences
Organismal Biology
Physiology
Proteomics
Structural Biology
Systematic Biology
Life Sciences, other (specify)

ENGINEERING
Aeronautical and Aerospace
Bioengineering
Biomedical
Chemical Engineering
Civil Engineering
Computer Engineering
Electrical and Electronic
Energy
Environmental
Industrial Engineering & Operations Research
Materials
Mechanical
Nuclear
Ocean
Optical Engineering
Polymer
Systems Engineering
Engineering, other (specify)

Deadlines *(due by 5pm local time):*

October 17, 2022

- Life Sciences

October 18, 2022

- Computer and Information Science and Engineering; Materials Research; Psychology; Social Sciences; STEM Education and Learning

October 20, 2022

- Engineering

October 21, 2022

- Chemistry; Geosciences; Mathematical Sciences; Physics and Astronomy

DO NOT WAIT UNTIL THE LAST MINUTE TO SUBMIT

The Application

Application module:

- https://www.fastlane.nsf.gov/grfp/Login.do
- https://www.nsfgrfp.org/applicants/application_components/screenshots
- https://nsfgrfp.org/applicants/application-resources/

- Personal Profile
- Education and Work Experience
- Planned Graduate Program
- Personal, Relevant Background and Future Goals Statement (3 pages, PDF)
- Graduate Research Plan Statement (2 pages, PDF)
- Transcripts
- Three letters of reference

Go to NSF GRFP Website (nsf.gov/grfp) for details

Preparing a Competitive Application

REFLECTION

of experiences and proposed research

DISCUSSION

with your NSF mentor

CONSTRUCTION

of rough draft; give to mentor to review

POLISH

to create final draft

Statement Details

- Standard 8.5" x 11"page size
- Times New Roman font for all text, Cambria Math font for equations, Symbol font for non-alphabetic characters (it is recommended that equations and symbols be inserted as an image), **no smaller than 11-point,** except text that is part of an image. **This includes references!**
- 1" margins on all sides, no text inside 1" margins (no header, footer, name, or page number)
- No less than single-spacing (approximately 6 lines per inch). Do not use line spacing options such as "exactly 11 point," that are less than single spaced.
- Compliance with these guidelines are **automatically** checked by the GRFP application module. If not compliant, your document will not be accepted.

Personal, Relevant Background and Future Goals Statement

Please outline your educational and professional development plans and career goals. How do you envision graduate school preparing you for a career that allows you to contribute to expanding scientific understanding as well as broadly benefit society?

Why are you fascinated by your 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 applicant?

How will receiving the fellowship contribute to your career goals?

What are all of your applicable experiences?

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 the analysis of results?

NSF fellows are expected to become globally engaged knowledge experts and leaders.

How did your activities address the Intellectual Merit and Broader Impacts criteria?

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, as well as any unique resources that may be needed for accomplishing the research goal (i.e., access to national facilities or collections, collaborations, overseas work, etc.)

What issues in the scientific community are you most passionate about?

Do you possess the technical knowledge and skills necessary for conducting this work, or will you have sufficient mentoring and training to complete the study?

Is this plan feasible for the allotted time and institutional resources?

How will your research contribute to the "big picture" outside the academic context?

How can you draft a plan using the guidelines presented in the essay instructions?

How does your proposed research address the Intellectual Merit and Broader Impacts criteria?

Reference Letters: *(due by October 28, 5 p.m. ET):*

Two required, three preferred.

Reference writers should use letterhead, if possible, and include the following information: Name and Title of reference writer, Department, and Institution or Organization.

The reference letter should provide details explaining:

- relationship to the applicant,
- applicant's potential and prior research experiences,
- Intellectual Merits and Broader Impacts of application

Choose people that know you!

Discuss the application and **share your essays** with them.

https://nsfgrfp.org/reference_writers/requirements/

How will it be evaluated?

Two National Science Board-approved criteria:

1) Intellectual Merit

2) Broader Impacts

”Applicants must include separate statements on Intellectual Merit and Broader Impacts in their written statements in order to provide reviewers with the information necessary to evaluate the application with respect to both Criteria as detailed below. It is recommended that applicants include headings for Intellectual Merit and Broader Impacts in their statements.”

Intellectual Merit

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

How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.)

To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts?

How well conceived and organized is the proposed activity?

Is there sufficient access to resources?

How will I.M. be assessed?

- Academic performance
- Awards/honors
- Communication skills
- International experience
- Independence/creativity
- Publication/presentations
- Research plan
- Choice of institution
- References
- **Research experience**

http://www.nsf.gov/pubs/2002/nsf022/bicexamples.pdf

Broader Impacts

How well does the activity advance discovery and understanding while promoting teaching, training, and learning?

How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?

To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?

Will the results be disseminated broadly to enhance scientific and technological understanding?

What may be the benefits of the proposed activity to society?

How will B.I. be assessed?

- Prior accomplishments
- Future plans
- Individual experiences
- Integration of research and education
- Potential to reach diverse audiences
- Impact on society and connectivity
- Community outreach
- Leadership potential

Top Tips From Reviewers

Gain research experience

Become involved in leadership roles and community service

Have a strong academic record

Strive for scientific publications and presentations

Write clear and scientifically-sound essays

Display your passion and motivation in the essays

Be knowledgeable of your research topic

Demonstrate the significance of your proposed work

Make sure the proposed research is realistic

Address both Intellectual Merit and Broader Impacts

Select strong recommenders

Ensure you display a history of accomplishments

Highlight any international experience you may have

Helpful Links

http://www.nsf.gov/grfp - Official program announcement and information, information for awarded fellows, FAQ guides, and information for coordinating officials

http://www.fastlane.nsf.gov/grfp/ - Application submission & award announcements

http://www.nsfgrfp.org - Program information, applicant assistance & resources, outreach-related issues, panelist registration & information, and applicant ratings sheet review

http://www.alexhunterlang.com/nsf-fellowship - Blog containing prior winning essays; not NSF endorsed

Questions?

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