



## Are You Ready for Grad School? Finding Fellowship Funding

*(Applying to NSF's Graduate Research Fellowship Program)*



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### Common Misconceptions about Graduate School

- Getting a Ph.D. is expensive.
  - NO! In fact, a good Ph.D. program will pay you a stipend and tuition scholarship. Typically, the main cost is the opportunity cost of delaying entering the workforce.
- You need to have a master's degree before you seek a Ph.D.
  - NO! If you have a strong undergraduate record, there's no need for a master's first. **In fact, most master's programs are self-paid.** Why incur debt? if you enjoy doing research and have a good record, you can go directly to a Ph.D. program. **(NOTE: Already having a master's degree makes you ineligible for a GRFP fellowship).**
- But what if I'm not certain that I want a Ph.D.?
  - You are not alone! You can change direction and leave early with a master's degree. (No one is going to chain you to the lab and force you to finish!)
- What if I find that I don't love research enough to go into academia (or can't get an academic job)?
  - Across all disciplines, only about 20% of Ph.D.s become academics! The rest are employed in industry, government agencies, non-profits, entrepreneurship, and other leadership roles.

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### What is a "strong" undergraduate record?

- A decent g.p.a.
- Research experience, especially in the area you want to study (although all research experience counts!)
- Three letter writers who think highly of you

**Note:** Survey the good programs in your field; identify several faculty members you'd like to work with. It doesn't hurt to reach out to them!

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### What is a graduate degree for?

- A certificate *is proof that you have particular skills*
- A professional degree *qualifies you to serve in a professional capacity* (e.g., M.D., J.D.)
- A master's degree *shows mastery of a particular field*
- A Ph.D. *is a license to create new knowledge*

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## 6 terrible reasons (and 1 good reason) to go to graduate school:

1. You've always been good at school; it's the next logical step
2. Someone is pressuring you to
3. You're the only one in your family without a Ph.D.
4. You have vision of riches
5. You want to find yourself
6. You want to hide from the job market
- 7. You love research (or believe that you might)!**

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## How will you finance your graduate degree?

Most good Ph.D. programs offer AY funding (stipend & tuition)

- Teaching assistant
- Research assistant (if your mentor has a grant)
- Graduate assistant

Federal fellowships (or other prestigious fellowships) offer more

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## 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 was NSF's first program, and has supported graduate students every year since 1952**

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## Graduate Research Fellowship Program 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.



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## GRFP predicts the future!

- Scientists, entrepreneurs, public figures
- 4 (of 12) astronauts in NASA's class of '17
- Many go on to win awards for science and leadership; many Nobel Prize Winners

Nobel Prize Field      # GRFP Awards      Delay between GRFP & Nobel

Nobel Prize Field	# GRFP Awards	Delay between GRFP & Nobel
Chemistry	8	33 years
Economics	9	40 years
Physics	17	31 years
Physiology or Medicine	5	30 years
Total	39	(41 were offered GRFPs)



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## GRFP Fellowships

Sarah Ryker  
US Dept. of the Interior (now Acting Associated Director, USGS)

Ronald Hunter  
Scientist, The Coca-Cola Company

June Andrews  
Data Scientist, Pinterest

Jeffrey Margolis  
VP External Engagement, Illinois Math & Science Academy

Maya Wei-Haas  
Assistant Editor for Science and Innovation, Smithsonian

Melissa Boone  
User Researcher, Microsoft

Engineering      Chemistry      Mathematics      Biology      Geosciences      Social Psychology

Source: NSF Division of Graduate Education Open House, 2016

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## GRFP Unique Features

- Fellowship:** Awarded to individual
- Flexible:** Choice of project, advisor & graduate program
- Unrestrictive:** No service requirement afterward
- Portable:** Can be used at any accredited U.S. institution
  - Master's, PhD, both degrees
- 2010 - 2019:** 2,000 Fellowships yearly
  - 2016: ~16,800 Applications - ~12 % success rate
  - 2017: ~13,200 Applications - ~15 % success rate
  - 2018: ~12,400 Applications - ~16 % success rate
  - 2019 and 2020: (about the same as 2018)

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## GRFP Benefits

**Five Year Award – \$138,000**

- Three years of support
  - \$34,000 stipend per year
  - \$12,000 educational allowance to institution
- Professional Development Opportunities:
  - GRIP and other internships
- Supercomputer access: XSEDE
- Career Life Balance (family leave)

*See GRFP's Solicitation*




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 **GRFP Benefits** Graduate Research Internship Program



A professional development opportunity

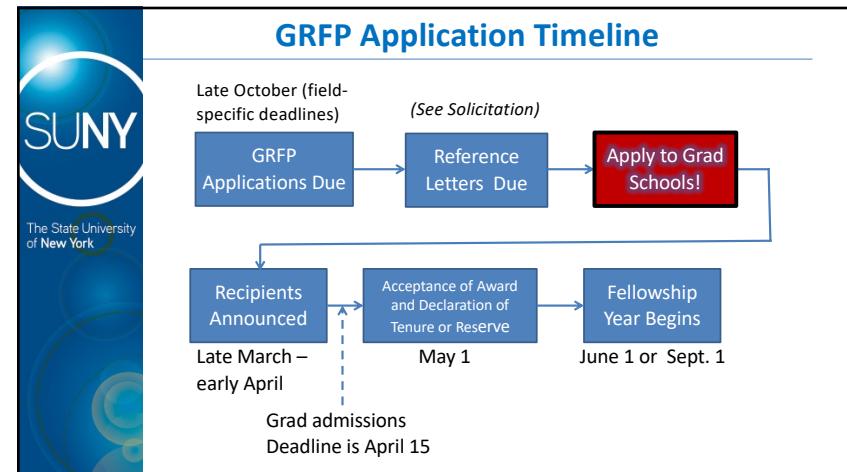
\$5,000 research allowance

Additional support varies with the host

**Current Hosts:**

- Office of Naval Research
- Smithsonian Institution
- Department of Homeland Security
- Federal Bureau of Investigation
- Environmental Protection Agency
- National Oceanic & Atmospheric Administration
- U.S. Census Bureau
- U.S. Dept. of Agriculture
- U.S. Geological Survey

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 **Common Misconceptions about GRFP**

- Can I still apply even I'm not in grad school yet?
  - YES! That's the best time to apply. NSF's vision for this prestigious fellowship is to recruit high-potential undergraduates to graduate school **early in their STEM training**. Undergrads compete with other undergrads, not with graduate students (and the practice may help - you will have one more chance to apply in grad school).
- But how can I write a research plan when I don't even know what program will accept me, or who I'll be working with?
  - You're in the same boat as many other applicants. You don't actually need to carry out the research plan you design – this is evaluated as evidence of your potential.
- What if I'm not accepted into the graduate program of my dreams?
  - With news of a fellowship, you may be able to advance from the waiting list; or you can begin training in another program and transfer later (awards are portable).
- Aren't GRFP fellowships for Ph.D. study? I'll be doing a master's program.
  - GRFP funds both master's and Ph.D. degrees. You can use your fellowship in a master's program (rather than self-paying!) and then roll over the remaining years into a Ph.D. program.

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 **One more (great!) reason to apply for a fellowship**

- If NSF or a similar prestigious federal fellowship program) recognizes you with an award OR with Honorable Mention, and if you remain within the SUNY system for your graduate study, SUNY will give you \$5,000 in unrestricted funds (for research, travel, professional development, or to augment your stipend!).

**The Chancellor's Graduate Research Scholarship**

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### One more (great!) reason to apply for a fellowship

- Winning a prestigious federal fellowships may qualify you for a CGRS award:

	# awards	Stipend	CoE	Portable?	Previous master's?	Timing
NSF GRFP	2,000	\$34,000	\$12K	YES	NO	early yrs
DoD NDSE	< 200	\$38,400	full tuition	YES	YES	early yrs
DoE CSGF	(few)	\$36,000	full tuition	YES	YES	early yrs
NASA	(few)	\$27K-36K	varies			any yrs
NIH NRSA (F30, F31)	(many)	\$24,816		NO	YES	final yrs
Canadian awards: NSERC, SSHRC, CIHR	(many)	(varies)				

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### GRFP Eligibility

- U.S. citizens, nationals, and permanent residents
- Early-career: undergrads who will start graduate school the next year and grad students at the start of their first or second year
- Pursuing research-based master's or PhD
- Engineering and Science (including the social sciences)
- Enrolled in accredited institution in US by the following Fall

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### 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

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### NOT SUPPORTED

- Joint science-professional degree programs
  - e.g. MD/PhD, JD/PhD
- Business administration or management
- Counseling, Social work
- Education (except STEM education)
- History (except for history of science)
- Research with disease-related goals (unless Biomedical Engr)
- Clinical research
  - Patient-oriented research
  - Epidemiological/behavioral studies
  - Outcomes research
  - Health services research

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**NOT SUPPORTED**

Individuals are not eligible to apply if they will conduct **biomedical research for which the goals are directly health-related, such as etiology, diagnosis or treatment of physical or mental disease, abnormality, or malfunction in humans and other animals.**

Research activities using **animal models of disease, for developing or testing of drugs or other procedures for treatment of disease, and statistical modeling for which the purpose is diagnosis or epidemiology also are not eligible for support.**

There are areas of **bioengineering research** directed at medical use that *are* eligible. These include research projects in bioengineering to aid persons with disabilities, or to diagnose or treat human disease, provided they apply engineering principles to problems in medicine while primarily advancing engineering knowledge. Applicants planning to study and conduct research in these areas of bioengineering should select **biomedical engineering** as the field of study.

*See GRFP Solicitation for more details*

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**GRFP Resources**

- Your SUNY campus's Fellowships Office can help!
- 2019 SUNY-wide [GRFP press release](#)
- NSF's GRFP Website: [www.nsf.gov/grfp](http://www.nsf.gov/grfp) (*Solicitation and links*)
- How-to GRFP Website: [www.nsfgrfp.org](http://www.nsfgrfp.org) (*includes tips for applying, FAQs, and resource people*)
- To apply on FastLane: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)
- Graduate Research Internship Program (GRIP): [www.nsf.gov/grip](http://www.nsf.gov/grip)
- NSF contact info
  - 866-NSF-GRFP (673-4737)
  - [info@nsfgrfp.org](mailto:info@nsfgrfp.org)



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**You are invited to join the other webinars in this series!**

**Webinar #1: Are You Ready for Grad School? Finding Fellowship Funding**  
*(Common misconceptions about graduate school; how to apply to NSF's Graduate Research Fellowship Program—its benefits, eligibility, parts of the application, review process, and basic tips for putting together a competitive application – FOR UNDERGRADS)*

**Webinar #2: Applying to NSF's Graduate Research Fellowship Program**  
*(All the basics, such as GRFP's benefits, eligibility, parts of the application, the review process, and basic tips for putting together a competitive application)*

**Webinar #3: Winning Strategies for GRFP (and How to Get Started)**  
*(NSF's review criteria, how to maximize your intellectual merit and broader impacts, and other winning strategies)*

**Webinar #4: Write! (As if Your Career Depends on it)**  
*(How to write about your research in an interesting and lively way, tailored to your audience)*

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**Thank you!**

**Questions?**

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