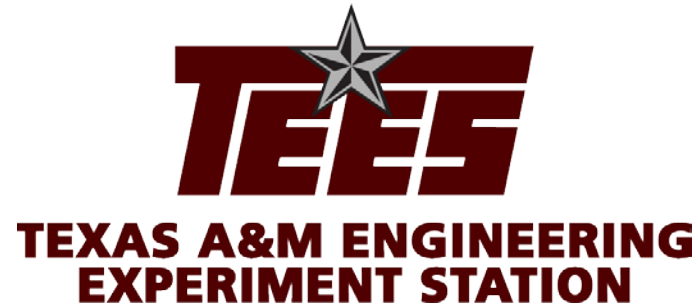


NSF Graduate Research Fellowship Program (GRFP) NSF 16-588

June 12, 2017
Summer Seminar

Laurie S. Garton, Ph.D.
TEES Research Development
lsgarton@tamu.edu





Why Fellowships?

- **Benefits**

- Independence/flexibility
- Competitive stipend over 3 years for NSF

- **Prestige**

- Highly selective/National competition

- **Experience**

- Rigorous application process
- Proposal writing experience
- Identify career goals



GRF Program Goals

- Support demonstrated potential to be high achieving scientists and engineers
- Broaden participation

NSF overall strategy:

- Globally-engaged workforce
- National leadership in research & innovation

Funding Level

\$46,000+

Supplements

**XSEDE –
Cyberinfrastructure**

**\$12,000 Cost of
Education**

\$34,000 stipend

X 3 =

**\$138,000+
over 5
years**

Supplements and Resources

- GROW – Global Research Opportunities Worldwide
 - <http://www.nsf.gov/grow>
 - International collaboration – 2-12 month stay
 - \$5,000 travel allowance

Supplements and Resources

- GRIP – Graduate Research Internship Program
 - <http://www.nsf.gov/grip>
 - Engage in research with partner federal agencies – ONR, DHS, FBI, EPA, others
 - \$5,000 travel/relocation/research
 - 10 weeks – 12 months

Supplements and Resources

- XSEDE – Extreme Science and Engineering Discovery Environment
 - Cyberinfrastructure resources – supercomputing time
 - <https://www.xsede.org/>
 - Also available to Honorable Mentions



Funding History

~12,000 applications/year since 2010

~17% success rate

~2000 fellowships offered/year

TAMU about 15 each year,

TAMU BS - 10 last year – 7 engineering

TAMU Grad School – 12 last yr - 6 engr

Number offered is proportional to the number of applications reviewed in a field.



Eligibility

- U.S. citizen, national, or permanent resident
- Bachelor's degree before Fall 2017
- No more than 12 months full-time or 24 hours part-time graduate study by 8-1-17

GRFP fellowship cannot be accepted concurrently with another Federal fellowship*

Eligibility (cont'd)

- Exceptions
 - >12 months graduate study, no graduate degree,
 - an interruption in graduate study of at least two consecutive years before Nov. 2017, AND no additional graduate study by August 1, 2017
 - Explain these in the Personal Statement if applicable



NSF Dear Colleague Letter 16-050

Change in Eligibility to the NSF Graduate Research Fellowship Program (GRFP)

- Starting Fall 2016 – graduate students may only submit ONE application



Three (3) Application Windows

- During your Senior Year
- After your BS and before entering graduate school
- During your first year OR before completing the first term of your second year of graduate school (not both)

If unsuccessful, you CAN submit more than once.



Deadlines- FastLane Application (8pm EST)

Oct. 23, 2017 (Mon)

- Life Sciences
- Geosciences;

Oct. 24, 2017 (Tues)

- Engineering
- Computer and Information Sciences & Engineering;
- Materials Research;

Oct. 26, 2017 (Thurs)

- Psychology;
- Social Sciences;
- STEM Education and Learning

Oct. 27, 2017 (Fri)

- Chemistry;
- Mathematical Sciences;
- Physics and Astronomy

Nov. 2, 2017 (Thurs)

Reference letters due

On-line Access

- NSF FastLane
 - <https://www.fastlane.nsf.gov/grfp/>
 - Program Announcement (NSF I6-588)
 - Applicant Help
 - Register to begin a Fellowship Application
 - Log-in
- Graduate Research Fellowship Program Operations Office
 - <http://www.nsfgrfp.org/>

<http://www.fastlane.nsf.gov/grfp/>

[Proposals, Awards and Status](#) | [Proposal Review](#) | [Panelist Functions](#) | [Research Administration](#) | [Financial Functions](#)

[Honorary Awards](#) | [Graduate Research Fellowship Program](#) | [Postdoctoral Fellowships and Other Programs](#)

Graduate Research Fellowship Program

Welcome to the FastLane Graduate Research Fellowship Program (GRFP).

GRFP Award Recipients

▶ [Award Offers and Honorable Mentions List](#)

Applicant Deadlines

Applications Must Be Received by 8:00 pm Eastern Time

October 26, 2015 (Monday): Geosciences

October 26, 2015 (Monday): Life Sciences

October 27, 2015 (Tuesday): Computer and Information Science and Engineering

October 27, 2015 (Tuesday): Engineering

October 27, 2015 (Tuesday): Materials Research

October 29, 2015 (Thursday): Psychology

October 29, 2015 (Thursday): Social Sciences

October 29, 2015 (Thursday): STEM Education and Learning

October 30, 2015 (Friday): Chemistry

October 30, 2015 (Friday): Mathematical Sciences

October 30, 2015 (Friday): Physics and Astronomy

Reference Submission Deadline

Reference Letters Must Be Submitted by 8:00 pm (ET) on November 5, 2015 (Thursday)

Reference Writers, please note: You will be provided a new login in order to submit a reference letter

November 5, 2015 (Thursday): [Submit Reference Letter](#)

Applicant and Reference Writer Assistance

Questions about the Application and Reference Writer Process for the Graduate Research Fellowship Program should be directed to:

GRF Operations Center
1818 N Street NW
Suite 600
Washington, DC 20036
Phone: 866-NSF-GRFP (866-673-4737)
E-mail: info@nsfgrfp.org

Hours of Operation: 8:30 am - 5:30 pm Eastern Time

Current Fellows and GRFP Officials Assistance

If you have TECHNICAL problems accessing your fellowship information or Coordinating Official functions please contact [FastLane User Support](#)

Quick Links

- ▶ [Program Solicitation](#)
- ▶ [Administrative Guide](#)
- ▶ [GRFP General Help](#)
- ▶ [Applicant Help](#)
- ▶ [Institution Directory](#)

Begin a Fellowship
Application

[Register
Here](#)

Log In Applicants and Fellows

User Name:

[Privacy Act](#)

[Notice](#)

Password:

[Forgot Password?](#)

[Forgot Username?](#)

Log In GRFP Officials

Last Name:

NSF ID:

[Privacy Act](#)

[Notice](#)

Password:

[Forgot Password?](#)

[Lookup NSF ID](#)



As a security measure, your GRFP session will expire after remaining idle for 30 minutes.

Download [Adobe Acrobat Reader](#) for viewing PDF files

See http://www.nsfgrfp.org/cms_assets/File/2016_grfp_application_screenshots.pdf for screenshots of entire GRFP application process.



Choosing a Research Theme


- Talk to an advisor:
 - Departmental faculty graduate coordinator
 - Your research advisor
 - Dr. Enjeti, Assoc. Dean Academic Affairs
 - Dr. Hurtado, Assoc. Dean Academic Affairs
 - Dr. Amato, Sr. Dir. Engr. Honors Program
- Eligible fields of study in GRFP Appendix
 - 150+ topics
 - Interdisciplinary Studies
 - Potential 2017 panel groupings

https://www.nsfgrfp.org/applicants/application_components/choosing_primary_field



GRFP FastLane Application

- Personal Information and Certifications (FastLane form)
- Open Researcher and Contributor ID (ORCID) registration (optional)
- Education & Work Experience (FastLane form)
 - Load transcripts here
- Proposed Field of Study & Grad School Info (FastLane form)
- References (list 3 - 5)
- Personal, Relevant Background, and Future Goals Statement (3 pp)
- Graduate Research Plan Statement (2 pp)
- NSF GRF Program Information (FastLane form)



Formatting Requirements for both Written Statements

- Page limits incl. reference citations and figures
- 8.5" x 11" paper size
- 1" margins, all sides
- 12-pt Times New Roman or Computer Modern font
 - References, footnotes, and Figure captions may be down to 10pt
- Single-spaced (~5 lines per inch) or greater
- Will be uploaded as a pdf – so make sure pdf is compliant

Requirements are binding!

NSF Merit Review Criteria

- **Intellectual Merit**

- potential to advance knowledge and understanding within its own field and across different fields

- **Broader Impacts**

- potential to benefit society and contribute to the achievement of specific, desired societal outcomes

See Sec.VI.A. in program announcement



Holistic Review

- flexible, individualized way of assessing an applicant's interests and competencies
- balanced consideration is given to:
 - experiences,
 - attributes, and
 - academic achievements
- considered in combination to show how the applicant has demonstrated potential for significant research achievements in STEM and STEM education.



Review Criteria - Intellectual Merit - potential to advance knowledge

- Personal, Relevant Background, & Future Goals
- Graduate Research Statement
 - scientifically sound,
 - reflects knowledge of existing work,
 - contributes to the field
- Strength of academic record –
 - transcripts
- Previous research experiences –
 - REU, internships, volunteer, military service
- Publications/presentations
- References



Review Criteria - Broader Impacts benefit society

- Potential to benefit society
- Potential to contribute to the achievement of specific, desired societal outcomes
- Based on holistic analysis of complete application
- Items to consider:
 - Personal experiences
 - Professional experiences
 - Educational experiences
 - Future plans

Some Broader Impacts Activities

- Presenting your research to the general public
- Tutoring K-12 students
- Volunteering at museums, aquariums, zoos, etc.
- Participating in science fairs
- Involving members of the public in assisting with your research



The Review

- **Intellectual Merit** and **Broader Impacts** –

This is all the reviewers are asked to consider in rating your application!

So keep these in mind throughout the entire development process for all essays.



Personal, Relevant Background, and Future Goals Statement

Purpose: to **demonstrate** your **potential** to become a globally-engaged knowledge expert and leader who can contribute significantly to research, education, and innovations in science and engineering

3 pages allowed



Personal Statement... (cont'd)

Sample Outline

- Introduction – 3-5 sentences – why STEM?
- Body
 - educational & professional development plans and career goals
 - personal, professional or educational experiences that motivated you to pursue advanced studies
 - examples of your previous research or professional activities
 - extenuating circumstances (if applicable)
- Intellectual Merit (required) – contribute to expand scientific knowledge
- Broader Impacts (required) – broadly benefit society
- Conclusion – 3-5 sentences



Personal Statement... (cont'd)

Some details to include

- Specific examples of any research and/or professional activities
 - Concise description of activities
 - Highlight the results and discuss how these have prepared you to seek graduate degree
 - Specify your role in the activity – extent of independent work and/or part of a team
- Contributions to advancing knowledge in STEM
- Potential for broader societal impacts

Personal Statement... (cont'd)

Eligibility Exceptions

- Explain the reason for the interruption of studies (extenuating circumstances)
- Part of the allowed 3 pages
- Extenuating Circumstances:
 - >12 months of graduate study
 - no graduate degree
 - 2+ consecutive years break in graduate education before Nov. 2015 and no graduate courses before August 2015



Graduate Research Plan Statement

- Original research **topic**
 - Must be in a field listed in the solicitation
 - Biomedical research with Clinical/medical disease-related goals not eligible

2 pages allowed



Graduate Research Plan (cont'd)

- **Describe idea**
- **General approach** –
 - demonstrate research design/methodology
 - explain relationship to previous research
- Unique **resources** needed
- Important **literature** citations
- Potential to advance knowledge & understanding within science (**Intellectual Merit**)
- Potential for **broader impacts** on society
- Proposed **Research Title** and key words –
≤255 characters

Graduate Research Plan (cont'd)

APPROACH

- Talk with your mentors
- Literature Review (3-4 seminal articles)
- Summarize Preliminary Work
- Problem Statement
- General Approach (Research Methods)
- Identify Unique Resources
- Intellectual Merit
- Broader Impacts

See Missouri site:

[http://grfpessayinsights.missouri.edu/
Grad-Research-Worksheet.pdf](http://grfpessayinsights.missouri.edu/Grad-Research-Worksheet.pdf)



Written Statements - Summary

- Reviewers will read **both** statements – so prepare them as a complete package
- Avoid repeating information, but they should relate to each other and tell your complete story

Collectively and explicitly address Intellectual Merit and Broader Impacts



Reference Letters (3)

- Someone familiar with your research activities and you personally
 - professors, advisor, employers
- Ask up to 5, only 3 allowed, you choose rank
- Give them information to write the letter
- Up to YOU to give NSF the correct e-mail to match with references submitted
- Recommended: 2 from TAMU, 1 from outside
- **Due: November 2, 2017**



Reference Letters (cont'd)

Information you might provide to your references:

- Resumé
- Research plan
- Summary of what you did in class or on the job
- Research results
- Achievements (don't be shy)
- Information on letter requirements per NSF 16-588
 - Due date, log in instructions
 - Required format details (letterhead, 2 pages, 12pt New Times Roman font, name/title/dept./univ.)
 - http://www.nsfgrfp.org/reference_writers/tips

Overall Advice from NSF

- Start early
- Read Solicitation, and read it again
- Read NSF GRFP websites
- Select and confirm reference letter writers
- Pay attention to merit review criteria
- Share your application materials and the merit review criteria with reference writers
- Monitor receipt of reference letters (3 req'd for review)

TAMU Assistance Resources

- Engage your Research Advisor
- Engineering Academic & Student Affairs (EASA)
 - Dr. Prasad Enjeti, Assoc. Dean, enjeti@tamu.edu
 - Dr. John Hurtado, Assc. Dean, jehurtado@tamu.edu
 - Dr. Nancy Amado, Sr. Dir., Engr. Honors Program, amato@cse.tamu.edu
- University Writing Center
 - <http://writingcenter.tamu.edu/>
 - help with writing technique, not content
 - can review your essays
 - set up an appointment



Application Completion

- Check FastLane GRFP Application Module for indication all materials are submitted (Essays, References, Transcripts)
 - If all materials not received application will not be reviewed
- Print or view pdf of application
- THEN “Submit”



Sample Essays

- https://www.education.psu.edu/writingpersonalstatementsonline/p5_p3.html
2 sets of 3 essays, ENG and CS
- <http://www.alexhunterlang.com/nsf-fellowship>
52+ examples, some with reviewer comments; physics, Environmental science, CS, economics, synthetic engineering, materials engineering, astronomy, biomedical engineering, chemistry, STEM Education, life sciences, math
 - Eight (8) 2017 awardees/honorable mentions



Some Other Fellowship Programs

- Hertz Fellowship
 - Last due: **Oct. 27, 2017**
 - <http://www.hertzfoundation.org/>
 - Option 1: \$32,000/9 month + tuition, up to 5 year renewal
 - Option 2: \$38,000/9 month + tuition, 2 year
 - U.S. Citizen or permanent resident

Some Other Fellowship Programs

- GEM Fellowship, National Consortium for Graduate Degrees for Minorities in Engineering and Science
 - Due: July 1 - **Nov. 15, 2017**
 - <http://www.gemfellowship.org/>
 - \$16,000 + tuition/fees each year for up to 5 years
 - Underrepresented groups only
 - Commit to summer internships and post-graduate with GEM employers
 - U.S. Citizen or permanent resident

Some Other Fellowship Programs

- National Physical Science Consortium Fellowship
 - Due: **Dec. 5, 2017**
 - <http://www.npsc.org/>
 - 2 – 6 years; \$20,000/yr expense allowance + tuition
 - 1-2 paid federal lab summer internships with a mentor
 - U.S. citizens only

Some Other Fellowship Programs

- Science, Mathematics & Research for Transformation (SMART) Defense Scholarship for Service Program
 - Last due: **Dec. 1, 2016**
 - <http://www.asee.org/smart/>
 - \$25,000-\$38,000/yr+ tuition/fees + health insurance
 - 1 – 5 years
 - Summers at a Department of Defense Lab
 - Post-graduation work requirement
 - U.S. citizens only
 - TAMU awardees every year since 2006, 38 total



Some Other Fellowship Programs

- Department of Energy Office of Science Graduate Student Research (SCGSR)
 - Due: **November 2017**
 - <http://science.energy.gov/wdts/scgsr/>
 - Thesis research at DoE lab with DoE mentor
 - 3-12 consecutive months
 - Up to \$3000/month + \$2000 travel/award
 - U.S. citizen or Permanent Resident

Some Other Fellowship Programs

- National Defense Science & Engineering Graduate Fellowship Program (NDSEG)
 - Last due: **Dec. 9, 2016**
 - <http://ndseg.asee.org/>
 - 3 year award
 - \$102,000 over 36 months + tuition
 - Health Insurance up to \$1,000/year
 - Overall very similar to NSF GRFP
 - Research must be of interest to Dept. of Defense
 - 2 awards at TAMU in 2015 competition
 - U.S. Citizens only

Some Other Fellowship Programs

- One Stop Shopping Initiative (OSSI) Recruiting NASA Interns, Fellows, and Scholars (NIFS)
 - Fellowship Appl. Due: **Sept. 30, 2017**
 - Internship Appl. Last Due: **March 1, 2017**
 - <https://intern.nasa.gov/ossi/web/public/main/>
 - Go to a NASA Facility to do research
 - Summer, Fall, Spring, or year long available
 - Work with a NASA mentor
 - U.S. Citizens only

Some Other Fellowship Programs

- Texas Space Grant Consortium (TSGC)
 - Last Due: **April 28, 2017**
 - http://www.tsgc.utexas.edu/grants/2015/fellows_announcement.html
 - \$5,000 for 1 year, renewal up to 3 years possible
 - Supplement to half-time graduate support by the College
 - Several each year from TAMU
 - U.S. Citizens only

Thank you!