NSF Graduate Research Fellowship Program
	nsf.gov/grfp

www.nsfgrfp.org

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Michigan Tech
For a comprehensive list of graduate funding opportunities in all fields:

https://www.grad.Illinois.edu/fellowship/
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:
  INTERN: Non-academic research internships
  GRIP: Internships

• Career-Life Balance Initiative (family leave)

• Supercomputer access: XSEDE
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 - 2016:** 2,000 Fellowships each year
  - 2017: ~12,450 Applications - ~16% success rate
GRFP Solicitation (NSF 18-573)*

Contains the following information:

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

*New Solicitation will be published in July/August every year (NSF 18-573)
GRFP Eligibility

• U.S. citizens and permanent residents
• Early-career: undergrad & grad students
• Pursuing research-based MS and PhD
• STEM fields
• 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 (may have MS degree)
When to apply?

- During the senior year of college (Level 1)
- After graduating from college and prior to entering graduate school (Level 1): no time limit
- Once in graduate school:
  - During the first year of graduate school
  - Prior to completing the Fall term of the second year of graduate school
- Accelerated MS students: one application

Must have completed no more than 12 months of full-time graduate study or its equivalent as of August 1, 2019.

Part-time graduate study, or a combination of part-time and full-time graduate study, no more than 24 semester hours or 36 quarter hours or their equivalent as of August 1, 2018.
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

Michigan Tech
Areas NOT Supported by GRFP

- 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 disease-related goals
- Clinical study
  - patient-oriented research
  - epidemiological and behavioral studies
  - outcomes research
  - health services research
GRFP Application Timeline
5 pm local time

July

Solicitation Posted

Oct - early Nov

Applications Due

Early November

Reference Letters Due

March - April

Recipients Announced

May 1

Acceptance of Award and Declaration of Tenure/Reserve

June 1 or Sept. 1

Fellowship Year Begins
Complete Application Package (NSF FastLane):

- Personal, Relevant Background and Future Goals Statement (3 pages)
- Graduate Research Statement (2 pages)
- Transcripts (uploaded electronically)
- Three (two) letters of reference (received by 1 Nov 2019, 5 pm ET)

DEADLINES: October/November 2017 (received by 5 pm local time)

Please see 2018 Solicitation for application details and requirements
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.
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.
Preparing a GRFP application

• **Demonstrate potential to discover new knowledge**
  – Experiences, personal and professional, that contributed to your motivation to pursue a STEM career and your preparation for it
  – Career aspirations, goals and passion
  – Previous research/industrial/professional experiences

• **Research Plan**
  – Demonstrate understanding of research plan and methodology
  – Communicate research idea and approach

• Address NSF’s review criteria: intellectual merit and broader impact
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

• Select the Primary Field of Study that is most closely **aligned** with the proposed graduate program of study

• **Holistic evaluation:**
  a flexible, individualized assessment of interests and competencies;
  consider experiences, attributes, and academic achievements and assess **potential** for significant achievements in science and engineering.
NSF Review Criteria

Two National Science Board-approved review criteria:

- Intellectual Merit
- Broader Impacts

NSB is the governing board of the National Science Foundation
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

– Address in both Statements
Demonstrated intellectual ability and other accepted requisites for scholarly scientific study, such as the ability to:

– Demonstrate understanding of subject matter
– Plan and conduct research
– Work as a member of a team as well as independently
– Interpret and communicate research
– Take initiatives, solve problems, persist
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, blogs, 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 (2 required for review)
Reference writers

• Select your reference writers carefully
  – person who can provide important information about your potential as a leader, researcher, and educator – familiarity with you as a person is important

• Provide them all necessary information well in advance of deadline

• You may request up to 5 references
  – three letters of references must be received by the published deadline
  – If only one or two letters arrive, your application will still be 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
Thank you!

Questions?