WHERE DISCOVERIES BEGIN

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National Science Foundation
Mission: To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense.
Types of Funding Opportunities

• **Program Description**
  ◦ Published only on the NSF website.
  ◦ Proposals must follow PAPPG instructions.

• **Program Announcement**
  ◦ Published NSF document describing the program.
  ◦ Proposals must follow PAPPG instructions.

• **Program Solicitation**
  ◦ Published document with additional restrictions and/or requirements.
  ◦ Proposals must follow both the solicitation and the PAPPG instructions.

**Dear Colleague Letter**
◦ Notifications of opportunities or special competitions for supplements to existing NSF awards.
Suggestions for Working with NSF

- Finding the right NSF programs for your research:
  - [https://nsf.gov/awardsearch/](https://nsf.gov/awardsearch/)
  - Use key words to find grants funded by NSF in your area to find potential programs
  - Then read the program description etc. to determine if a fit

- Subscribe to National Science Foundation Email Updates

- Read the solicitation (or program announcement etc.) and then email to set up a time to talk by phone if you have questions and/or ideas for proposals you want to discuss

- Volunteer to be a peer reviewer for a panel or an ad hoc reviewer for the programs you may want to apply to in the future
  - Send a short email highlighting your relevant expertise for reviewing that program with a short CV attached
NSF Merit Review Criteria

All proposals submitted to NSF must address the following merit review criteria:

The **Intellectual Merit** criterion encompasses the potential to advance knowledge; and

The **Broader Impacts** criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

Always review the call for proposals and NSF PAPPG for official information on proposal preparation, eligibility, etc.
Faculty Early Career Development (CAREER)

- Research and education grant for junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research
- Note: Each discipline has different deadlines and different program officer contacts
  https://www.nsf.gov/crssprgm/career/contacts.jsp
- Check eligibility (before tenure) and make plans to submit more than once up to the maximum

- Presidential Early Career Awards for Scientists and Engineers (PECASE) nominated from recent CAREER awardees. Criteria: 1) innovative research at the frontiers of science and technology that is relevant to the mission of NSF, and 2) community service demonstrated through scientific leadership, education, or community outreach.

Improving Undergraduate STEM Education (IUSE)

**IUSE Program Goals:**
- increasing student retention in STEM;
- preparing students to participate in science for tomorrow; and
- improving students' STEM learning outcomes.

IUSE has two tracks with two tiers each *[Exploration and Design and Development and Implementation]*
- (1) Engaged Student Learning
- (2) Institutional and Community Transformation.

IUSE: EHR funding opportunity is offered in alignment with the NSF-wide undergraduate STEM education initiative, Improving Undergraduate STEM Education (NSF-IUSE) described in the solicitation.

EHR Core Research (ECR)

We invite researchers to identify and conduct research on questions or issues in order to advance the improvement of STEM learning in general, or to address specific challenges of great importance.

Three levels of funding based on the maturity of the proposed work and the size and scope of the empirical effort:

- **ECR Level I Research**
  - Maximum award size: $500K
  - Maximum duration: 3 years

- **ECR Level II Research**
  - Maximum award size: $1.5M
  - Maximum duration: 3 years

- **ECR Level III Research**
  - Maximum award size: $2.5M
  - Maximum duration: 5 years

ECR projects can include the:

- Collection of new data and/or secondary analyses of databases
- Development of innovative research methods, metrics, and conceptual models
- Implementation of educational or other interventions that are necessary to answer the research questions

A report from the Institute of Education Sciences at the U.S. Department of Education and the National Science Foundation, August 2013

- Recommended reading for anyone proposing education research to NSF
- Describes six research types:
  - Foundational
  - early-stage or exploratory
  - design and development
  - efficacy
  - effectiveness
  - scale-up

Partner with colleagues in social and behavioral sciences to:
- Enhance the design of the education research components of your project at the proposal stage
- Act as a co-PI with needed expertise to the project when needed

Policy Opportunities for Faculty in STEM

Visiting Program Officer at the National Science Foundation
  ◦ http://www.nsf.gov/careers/rotator/

American Association for the Advancement of Science (AAAS) Science & Technology Policy Fellowships http://fellowships.aaas.org
  ◦ For those who have already earned a Ph.D.
  ◦ Up to two-year policy experience in the Federal government
Useful Links on NSF Proposal Development

- Guide to Programs: [www.nsf.gov/funding/browse_all_funding.jsp](http://www.nsf.gov/funding/browse_all_funding.jsp)
- Award Information: [www.nsf.gov/awardsearch](http://www.nsf.gov/awardsearch)
- FastLane: [www.fastlane.nsf.gov](http://www.fastlane.nsf.gov)
- Funding Opportunities: [www.nsf.gov/funding](http://www.nsf.gov/funding)
Proposal & Award Policies & Procedures Guide

PAPPG: contains documents relating to NSF's proposal and award process.

- Grant Proposal Guide (GPG)
- Award Administration Guide (AAG)

It is used by potential grantees, current grantees, and NSF staff.

Make sure you have the most up to date version.

NSF Policy office web site:
NSF Research Experiences for Undergraduate Students (REU)

Search for an REU site by discipline/research area: http://www.nsf.gov/crssprgm/reu/reu_search.cfm

- Listed by institution and title of research
- Contact the REU site for application information (not the NSF)
- REU sites have to recruit half of their summer students from other institutions

Faculty with a NSF research grant may be able to get supplemental funds to support an undergraduate student:

- They should contact their NSF program officer before submitting the supplement
NSF Graduate Research Fellowship

NSF GRF Solicitation and links:
  ◦  http://www.nsf.gov/grfp/

GRFP Website:  www.nsfgrfp.org

Online Application, User Guides, Official Announcements:
  ◦  http://www.fastlane.nsf.gov/grfp/