NSF Funding Opportunities
&
Tips on Crafting Your Proposal

Presented by: Dr. Celeste Carter
National Science Foundation

January 21, 2016

The Webinar Begins At 3 PM Eastern

Webinar Details

- For this webinar you will be in listen only mode using your computer or phone
- Please ask questions via the question window
- This webinar is being recorded – you will be sent a recording link

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CCTA | CENTERS COLLABORATIVE FOR TECHNICAL ASSISTANCE

With Additional Support by the ATE Collaborative Impact Project

ATE CENTERS

Disclaimer: This material is based upon work supported by the National Science Foundation under Grants # 1205077 and # 1261893. Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

The CCTA IS Led By

- **National Center for Convergence Technology (CTC)** based at Collin College in Frisco, TX (lead)
- **South Carolina ATE National Resource Center (SCATE)** based at Florence Darlington Technical College in Florence, SC
- **Florida ATE Center (FLATE)** based at Hillsborough Community College in Tampa, FL
- **Bio-Link Next Generation National ATE Center for Biotechnology and Life Sciences (Bio-Link)** based at City College of San Francisco in San Francisco, CA
- **Networks Resource Center** based at the Maricopa Community College District in Phoenix, AZ

CCTA Purpose

- Respond to a request from the Department of Labor (DOL) to the NSF to have ATE Centers provide technical assistance services to DOL TAACCCT grantees
  - Success coaching
  - In-person convenings
  - Knowledge management /best practices
  - Peer-to-peer learning

CCTA Activities are Relevant for

- Department of Labor grants
- National Science Foundation Projects and Centers
- Workforce-oriented programs of all kinds

Deliverables

- Topical Webinars and Teleconferences On
  - Existing and new solutions
  - Live/recorded with attendee Q&A
  - Archived on www.atecentral.net
- Other online media including videos and transcripts

Deliverables Continued

- Invitations to regional discipline-specific conferences
- Identify and document best practices
- Host convenings

Poll #1: Your Affiliation

A. I am involved with an NSF grant
B. I am involved with a TAACCCT grant
C. Both
D. Neither

Presenter

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NSF at a Glance

$7.2 billion
FY 2014 Appropriations

24 percent
NSF's share of total federal support for basic research conducted at academic institutions

10,800
Competitive awards funded by NSF

22 percent
Funding rate of proposals submitted to NSF

50,000
Proposals evaluated through competitive merit review

233,000
Number of proposal reviews

36,500
Number of experts who participate in the merit review process

1,922
Colleges,
universities and other institutions in all U.S. states and territories that receive NSF funding

299,000
Number of people NSF supports directly (researchers, postdoctoral fellows, trainees, teachers and students)

200 plus
Number of Nobel Laureates supported by NSF

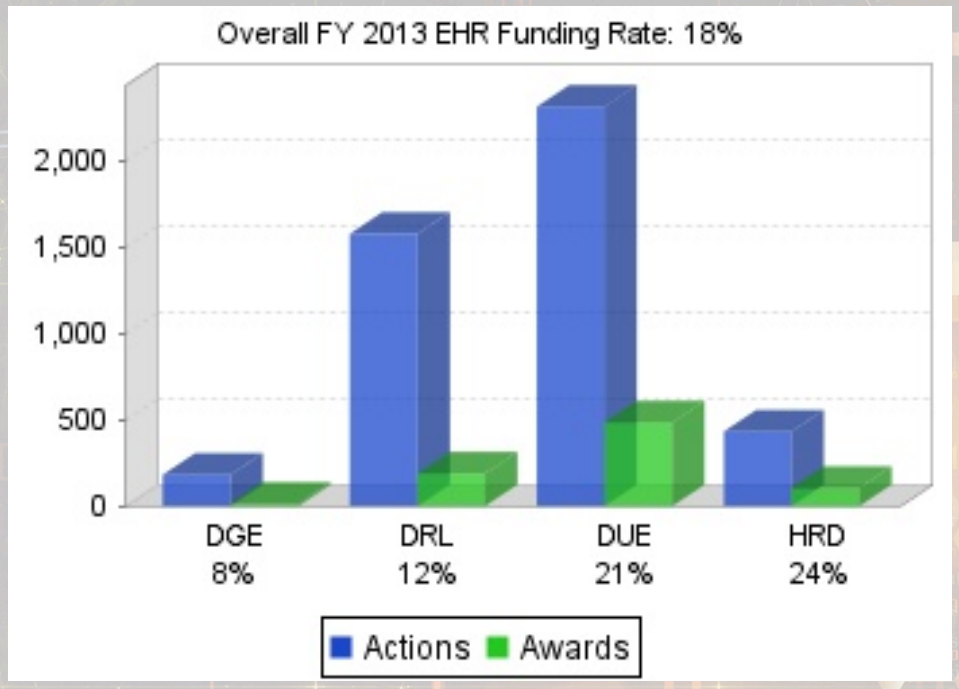
90 percent
Proportion of NSF funding allocated through grants and cooperative agreements

$169,107
Average annual size of NSF research grant

2.9 years
Average duration of NSF research grant

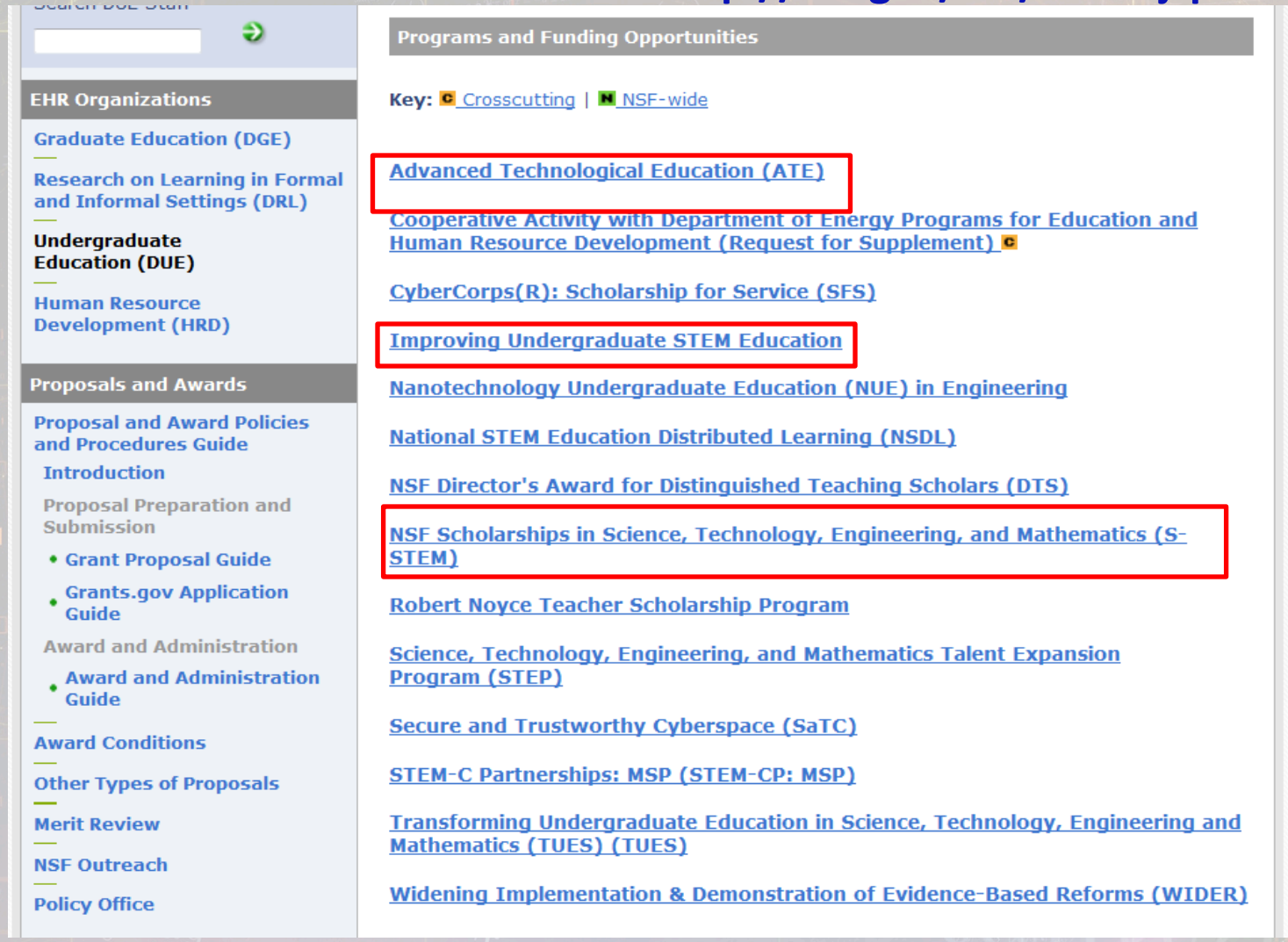
Figures represent FY 2013 actuals except where noted.

Fiscal Year 2013 Funding Rates



Education and Human Resources (EHR) Directorate
- Division of Graduate Education (DGE)
- Division on Research & Learning (DRL)
- Division of Undergraduate Edu. (DUE)
- Human Resource Development (HRD)

http://nsf.gov/div/index.jsp?div=DUE



EHR Organizations

- Graduate Education (DGE)
- Research on Learning in Formal and Informal Settings (DRL)
- **Undergraduate Education (DUE)**
- Human Resource Development (HRD)

Proposals and Awards

- Proposal and Award Policies and Procedures Guide
  - Introduction
  - Proposal Preparation and Submission
    - Grant Proposal Guide
    - Grants.gov Application Guide
  - Award and Administration
    - Award and Administration Guide
- Award Conditions
- Other Types of Proposals
- Merit Review
- NSF Outreach
- Policy Office

Programs and Funding Opportunities

Key: C Crosscutting | N NSF-wide

- Advanced Technological Education (ATE)
- Cooperative Activity with Department of Energy Programs for Education and Human Resource Development (Request for Supplement) C
- CyberCorps(R): Scholarship for Service (SFS)
- Improving Undergraduate STEM Education
- Nanotechnology Undergraduate Education (NUE) in Engineering
- National STEM Education Distributed Learning (NSDL)
- NSF Director's Award for Distinguished Teaching Scholars (DTS)
- NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)
- Robert Noyce Teacher Scholarship Program
- Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP)
- Secure and Trustworthy Cyberspace (SaTC)
- STEM-C Partnerships: MSP (STEM-CP: MSP)
- Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (TUES) (TUES)
- Widening Implementation & Demonstration of Evidence-Based Reforms (WIDER)

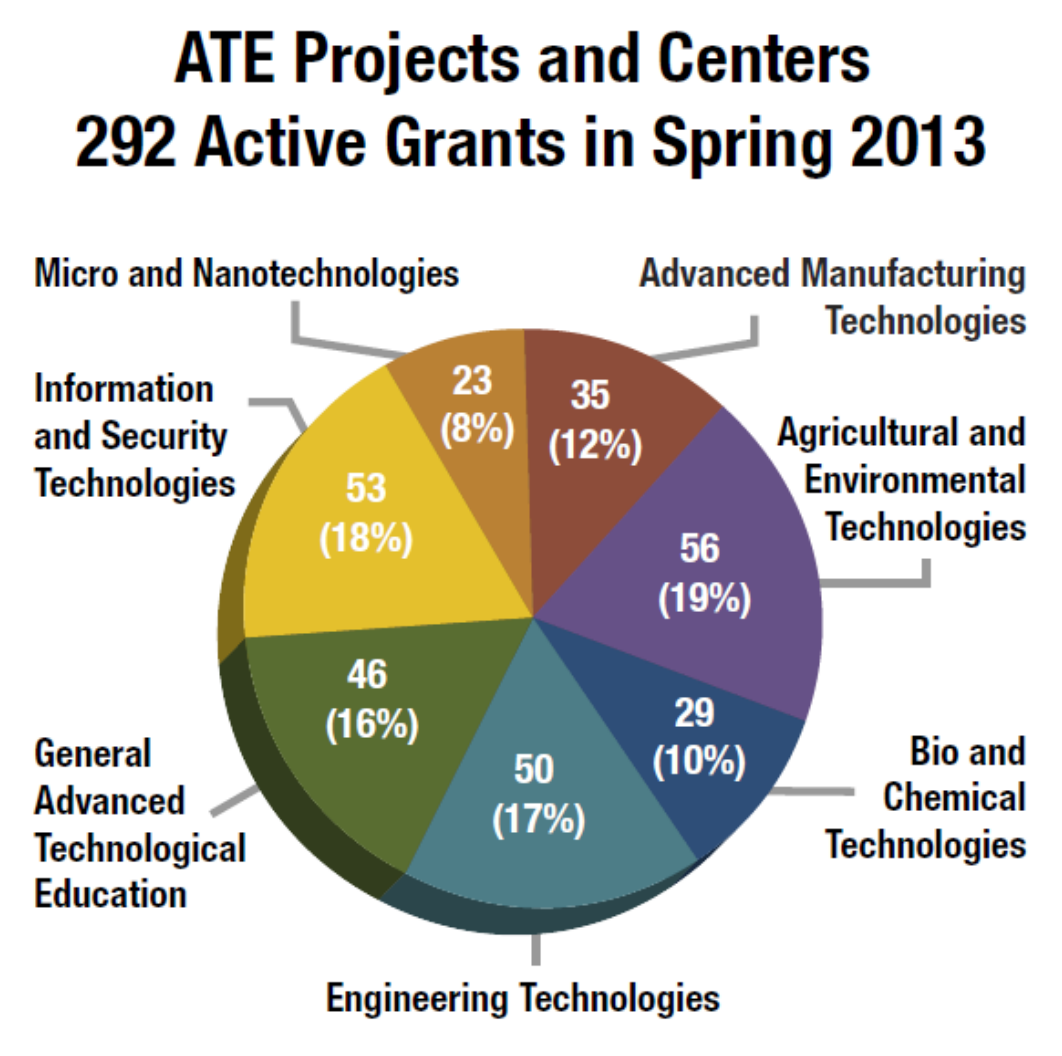
Advanced Technological Education (ATE) Program

- Focus: education of science and engineering technicians for high-technology fields that drive the nation's economy.
- ATE Projects, ATE Centers &Targeted Research on Technician Ed.
  - Funding from $150,000-$4 million over all 3 tracks
- Grades 7-12, two-year and four-year institutions (**Pathways**).
- **Community and technical colleges *must be* in leadership roles.**
- **Education / Industry Partnerships are a hallmark of ATE.**
- ***Proposal Deadline: October 6, 2016.***

ATE Projects

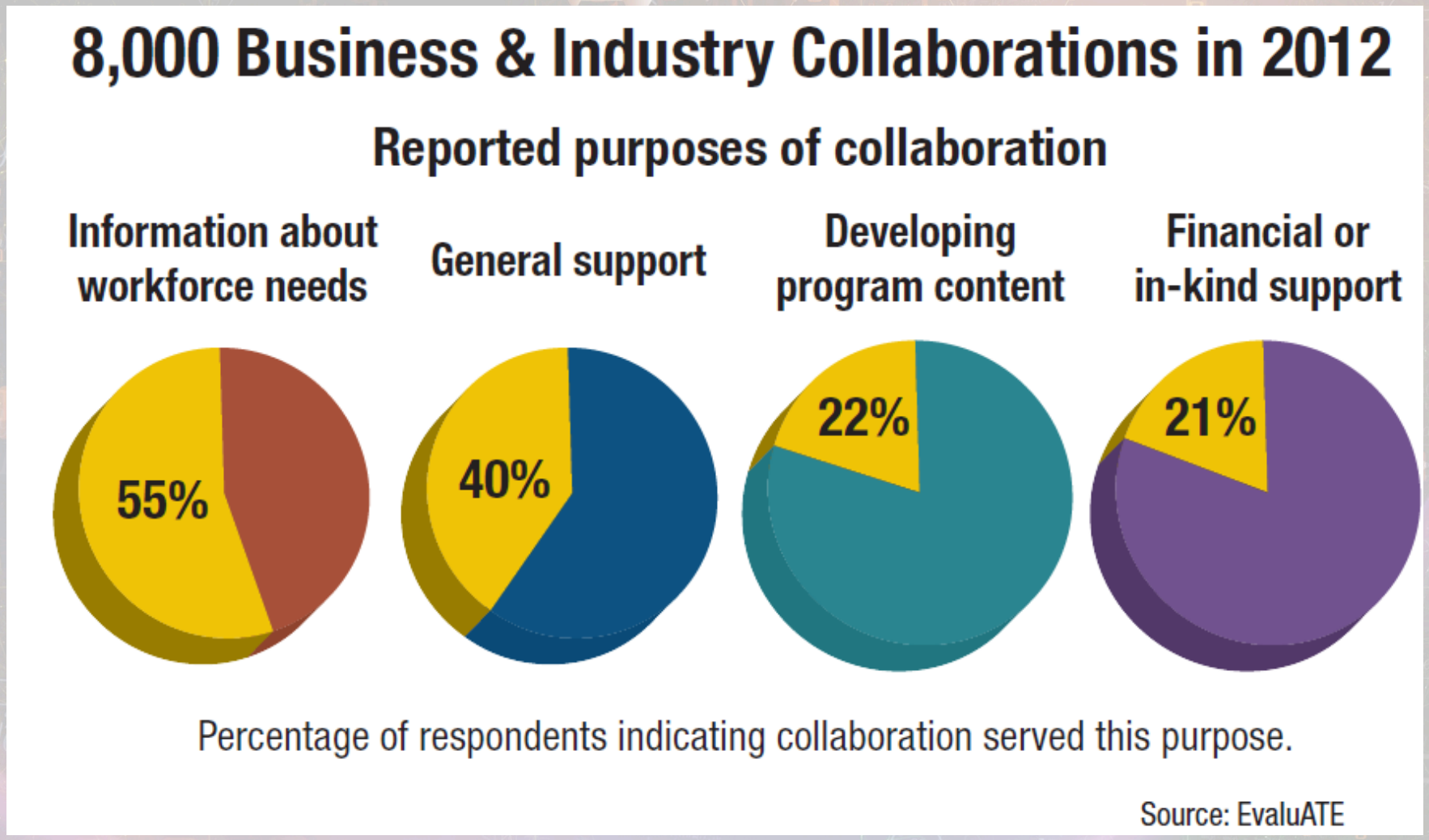
- Projects: up to $300,000/yr for 3-yrs ($900,000 max. total)
- Small, New to ATE: up to $200,000 total over 2-3-yrs
  - Mentor Connect (www.mentor-connect.org)
- ATE Coordination Networks: up to $200,000/yr for 4-yrs

ATE Investments



https://atecentral.net/ate20

Academic-Industry Partnerships



NSF Scholarships in STEM (S-STEM) Program

- Supports institutional scholarship programs for full-time, academically-talented students with financial need. Funds are provided through H1B visa fees.

- Strong proposals develop programs for cohorts of students that address local needs, and effectively mentor and support students to enable them to enter the STEM workforce or graduate school.

Proposal Deadline: May 16, 2016

http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=5257&ods_key=nsf15581

S-STEM Strands

- Strand 1: S-STEM Institutional Capacity Building
  - $650,000 over 5-yr, 60% funds go to scholarships
  - work with offices of institutional research or researchers. Findings from these types of projects shall be used to improve local implementation of academic and student supports, provide an understanding of student success and inform any future proposals for S-STEM Design and Development Strand.
- Strand 2: S-STEM Design and Development
  - Single Institution, $1 million over 5-yr, 60% scholarships
  - Multi-Institutional Consortia, $5 million over 5-yr, 60% scholarships
    - 2-yr – 4-yr, or any combination in consortium

IUSE Program [NSF 15-585]

http://www.nsf.gov/pubs/2015/nsf15585/nsf15585.pdf

IUSE emphasizes knowledge-based & knowledge-generating approaches.

Two program tracks

Engaged Student Learning

Two tiers

Exploration (Smaller Scope)

Up to $300k, 3 yrs.
Nov 2, 2016

Design and Implementation (Larger Scope)

Level I: Up to $600k, 3 yrs.
Level II: $601k to $2M, 5 yrs.
Jan. 11, 2017

Focus on design, development, implementation of and research on STEM learning models, approaches, and tools

Institutional and Community Transformation

Two tiers

Exploration (Smaller Scope)

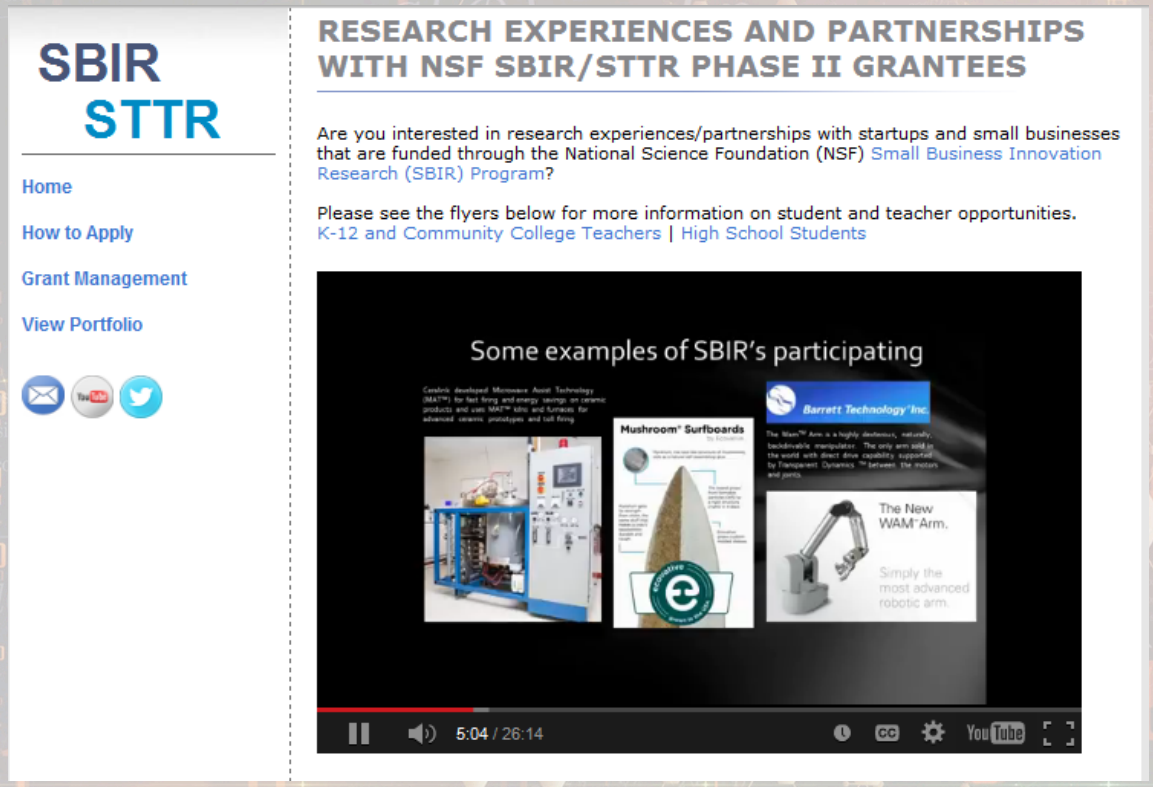
Up to $300k, 3 yrs.
Nov 2, 2016

Design and Implementation (Larger Scope)

Up to $3M, 5 yrs.
Jan. 11, 2017

Focus on approaches to increase the propagation of highly effective methods of STEM teaching and learning

Research Collaborations with SBIR/STTR Phase II Grantees



http://www.nsf.gov/eng/iip/sbir/portfolio/researchexp.jsp

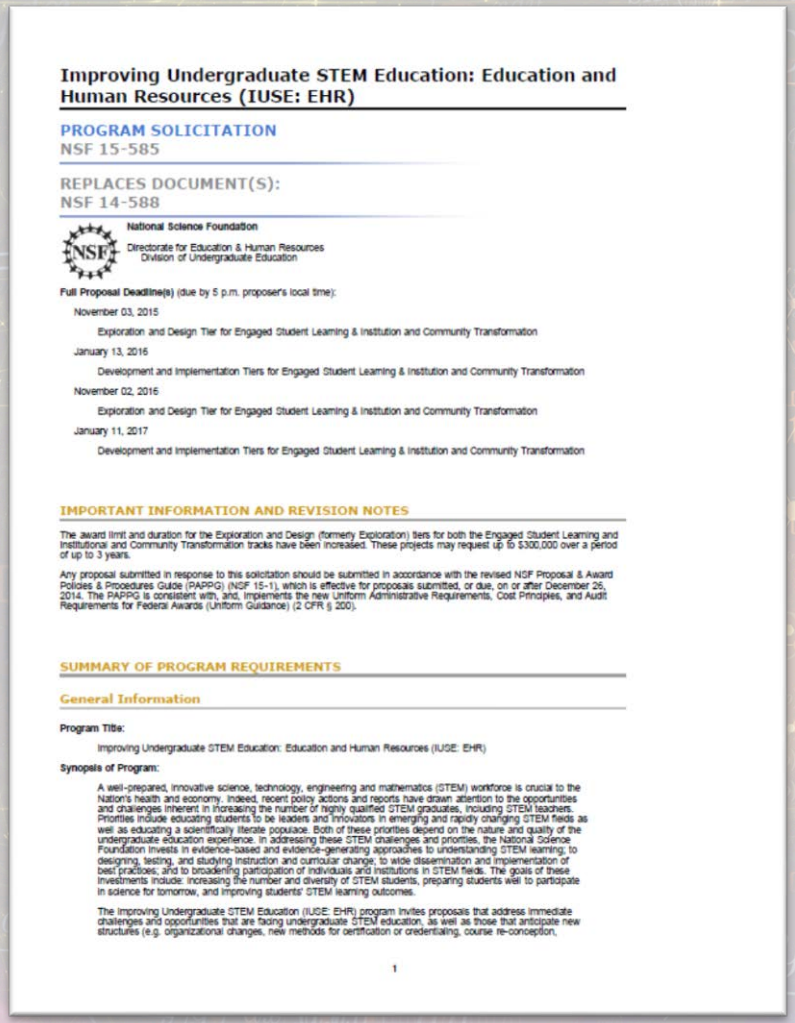
Community College Students and Teams Partnership funding between small businesses and community college researchers and students.

Max Funding: $40,000 per year

Deadline: Rolling submission; submission 3 months before target start date is suggested

Proposal Writing Tips

- Read the Program Solicitation
- Read the Proposal and Award Policies and Procedures Guide (PAPPG)



Improving Undergraduate STEM Education: Education and Human Resources (IUSE: EHR)

PROGRAM SOLICITATION
NSF 15-585

REPLACES DOCUMENT(S):
NSF 14-588

National Science Foundation
Directorate for Education & Human Resources
Division of Undergraduate Education

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

November 03, 2015
Exploration and Design Tier for Engaged Student Learning & Institution and Community Transformation
January 13, 2016
Development and Implementation Tiers for Engaged Student Learning & Institution and Community Transformation
November 02, 2016
Exploration and Design Tier for Engaged Student Learning & Institution and Community Transformation
January 11, 2017
Development and Implementation Tiers for Engaged Student Learning & Institution and Community Transformation

IMPORTANT INFORMATION AND REVISION NOTES

The award limit and duration for the Exploration and Design (formerly Exploration) tiers for both the Engaged Student Learning and Institutional and Community Transformation tracks have been increased. These projects may request up to $300,000 over a period of up to 3 years.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 15-1), which is effective for proposals submitted, or due, on or after December 26, 2014. The PAPPG is consistent with, and, implements the new Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) (2 CFR § 200).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Improving Undergraduate STEM Education: Education and Human Resources (IUSE: EHR)

Synopsis of Program:

A well-prepared, innovative science, technology, engineering and mathematics (STEM) workforce is crucial to the Nation's health and economy. Indeed, recent policy actions and reports have drawn attention to the opportunities and challenges inherent in increasing the number of highly qualified STEM graduates, including STEM teachers. Priorities include educating students to be leaders and innovators in emerging and rapidly changing STEM fields as well as educating a scientifically literate populace. Both of these priorities depend on the nature and quality of the undergraduate education experience. In addressing these STEM challenges and priorities, the National Science Foundation invests in evidence-based and evidence-generating approaches to understanding STEM learning, to designing, testing, and studying instruction and curricular change; to wide dissemination and implementation of best practices; and to broadening participation of individuals and institutions in STEM fields. The goals of these investments include: increasing the number and diversity of STEM students, preparing students well to participate in science for tomorrow, and improving students' STEM learning outcomes.

The Improving Undergraduate STEM Education (IUSE: EHR) program invites proposals that address immediate challenges and opportunities that are facing undergraduate STEM education, as well as those that anticipate new structures (e.g. organizational changes, new methods for certification or credentialing, course re-conception,

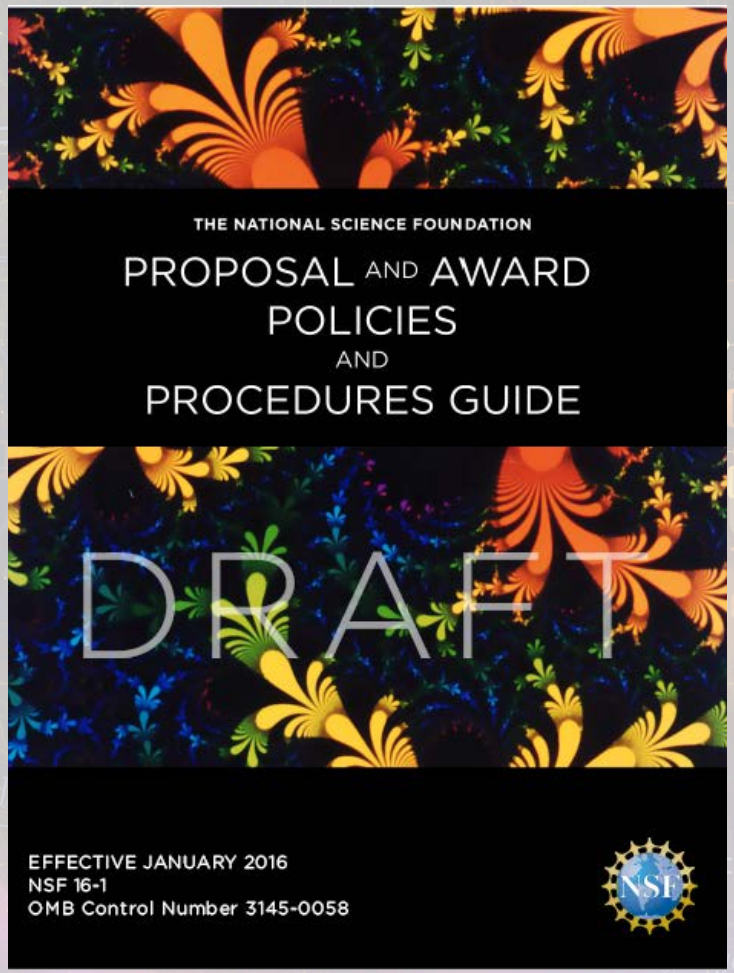
1

The Program Solicitation

- Program Description
- Program-specific considerations & restrictions
  - Institutional Eligibility & Limitations
  - PI Eligibility & Limitations
  - Budgetary Limitations
- Submission Deadlines & Target Dates
- Resources for proposal preparation
- Program Director Contact Information

NSF PAPPG

Part I: Grant Proposal Guide (GPG) and Part II: Award & Administration Guide (AAG)



Grant Proposal Guide (GPG)

- Chapter I: Pre-submission Information
- Chapter II: Proposal Preparation Instructions
- Chapter III: NSF Proposal Processing and Review
- Chapter IV: Non-Award Decisions and Transactions
- Chapter V: Renewal Proposals

Award & Administration Guide (AAG)

- Chapter I: NSF Awards
- Chapter II: Grant Administration
- Chapter III: Financial Requirements and Payments
- Chapter IV: Grantee Standards
- Chapter V: Allowability of Costs
- Chapter VI: Other Post Award Requirements
- Chapter VII: Grant Admin. Disputes and Misconduct

Advice from a Program Officer

1. Identify a specific need that you will address
2. Provide detail on how you plan to address the need: measureable goals and objectives
3. Present a project team that has the expertise to carry out your plan
4. Describe how you will know if you are successful (evaluation and assessment)
5. Describe how you will tell others about your project (dissemination)

More Advice….

- Do your homework! References are critical and you should know what the program award portfolio looks like with respect to your project.
- Contact other PIs and don't reinvent the wheel!
- Mentor Connect www.mentor-connect.org
- SCATE: www.teachingtechnicians.org
- ATE Central www.atecentral.net
- ATE Centers www.atecenters.org
- EvaluATE Center www.evalu-ate.org
- www.nsf.gov Awards database

*Never received an award OR no award within 5-yrs OR never reviewed by CAAR

New Performers* Submit proposal

Merit Review → Ratings and Program Officer review

Program Officer (PO) then does 2 things

Begins negotiation with PI to resolve questions and concerns (intends to recommend for award)

Sends proposal to Division of Grants and Agreements (DGA)

DGA sends New Performer Package to Institution

Institution completes package → DGA

Cost Analysis & Audit Resolution (CAAR)

DGA notifies PO recommend award ←

→ DGA Declines & De-briefs Institution

10 Ways to Write a Proposal that won't get funded…

1. Assume deadlines are NOT enforced.
2. Assume page limits and font size restrictions are NOT enforced.
3. Substitute flowery rhetoric for good examples.
4. Don't check your speeling or grammir.
5. Assume the program guidelines have NOT changed; or just ignore them.
6. Assert: "Evaluation will be ongoing and consist of a variety of methods."
7. Assume a project website is sufficient for dissemination.
8. Assume your past accomplishments are well known; after all NSF may have funded them. If you have funding from another entity that informs the proposal your writing – include results and outcomes (TAACCCT)!
9. Provide a template letter of commitment for your partners to use.
10. Inflate the budget to allow for negotiations.
    - ✓ Check out Mentor Connect for help on preparing your budget and budget justification

Questions?

Join Us – All Webinars 3 pm Eastern

February 10, 2016 — NSF Guidance on Financial Management of ATE Grants: What You Don't Know Can Hurt You!

Co-sponsored by Mentor-Connect: Leadership Development and Outreach for ATE (SC ATE Center, Florence-Darlington Technical College, Florence, SC)

Experts from the National Science Foundation will address important information concerning financial management and grant management for ATE grant recipients and who to contact about what. The focus will be on financial accounting issues and problems often seen in monitoring visits such as participant support, time and effort accounting, sub-awardees, record keeping, changes in scope, overload, and use of consultants. Participants will have an opportunity to pose questions and get answers directly from NSF personnel.

Presenters:

- **Mr. L. Rashawn Farrior**, NSF Grants & Agreements Specialist, National Science Foundation
  Dr. V. Celeste Carter, Lead Program Officer, ATE Program, National Science Foundation

For Other Upcoming Webinars See: http://www.atecenters.org/ccta

Join us in Pittsburgh, PA!

July 25-28, 2016

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www.highimpact-tec.org

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Register for HI-TEC and TAACCCT Convening

HI-TEC Conference July 27-28 in Pittsburgh, PA

Register at http://www.highimpact-tec.org/registration.php.

Free follow-up **TAACCCT technical assistance convening** for all TAACCCT grantees and others who can benefit on **Friday, July 29**.

Q&A and Contacts

V. Celeste Carter, vccarter@nsf.gov

Thanks for joining today