

EHR Core Research (ECR)

Overview of Solicitation and Proposal Submission

FY 19 - Solicitation NSF 19-508 (Replacing NSF 15-509)

National Science Foundation
Directorate for Education and Human Resources



ECR Solicitation: NSF 19-508

EHR Core Research (ECR)

STEM Learning and Learning Environments, Broadening Participation, and Workforce Development

PROGRAM SOLICITATION

NSF 19-508

REPLACES DOCUMENT(S):

NSF 15-509



National Science Foundation

Directorate for Education & Human Resources

Division of Graduate Education

Division of Undergraduate Education

Division of Human Resource Development

Research on Learning in Formal and Informal Settings



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

January 24, 2019

October 03, 2019

First Thursday in October, Annually Thereafter



Fundamental Research: What do we mean?

- ▶ Curiosity driven research that expands knowledge in a specific research area.
- ▶ In the case of ECR, fundamental research addresses important research questions related to education, learning, broadening participation, or workforce development in and across STEM fields.
- ▶ While the research may have implications for policy or practice, ECR research doesn't necessarily generate findings with immediate applications at the practical level.



Fundamental Research:

- ▶ Is grounded in theoretical or empirical frameworks that inform research questions;
- ▶ Identifies and explores important new constructs in education, learning, broadening participation, or workforce development in STEM fields;
- ▶ Extends understanding of current constructs;
- ▶ Increases understanding of relationships among the constructs under investigation;
- ▶ Extends research or evaluation methodologies for advancing the evidence base to support improved policy or practice



Research Supported:

- ▶ Topics in: STEM learning and learning environments, broadening participation in STEM, and STEM professional workforce development
- ▶ Proposals may include/involve:
 - all learners, across the life course
 - all levels of education
 - all settings (e.g., formal, informal, technological)
 - assessments of learning
 - career pathways & transitions
 - emerging practices, changing contexts & workforce needs
 - learning, persistence of groups, and underrepresentation in STEM fields
 - theory, techniques, perspectives from wide range of disciplines & contexts



ECR Research Tracks

- ▶ Track I – Research on STEM Learning and Learning Environments
- ▶ Track II – Research on Broadening Participation in STEM
- ▶ Track III – Research on STEM Workforce Development



Track I – Research on STEM Learning and Learning Environments

- ▶ ECR supports rigorous research projects that seek to advance the fundamental knowledge necessary to improve STEM learning in the many environments and contexts in which such learning takes place.
- ▶ Examples of topics of ECR Track I awards include:
 - ▶ Teacher training and learning
 - ▶ Causal reasoning and science literacy
 - ▶ The impact of social ties on college student retention
 - ▶ Among many other topics...
- ▶ For more examples see: [What Has Been Funded \(Recent Awards Made Through This Program, with Abstracts\)](#) on our web site.



Track II – Research on Broadening Participation in STEM

- ▶ ECR supports fundamental research investigating issues related to the learning and participation of groups underrepresented in STEM fields, at both the individual and institutional levels.
- ▶ Examples of topics of ECR Track II awards include:
 - ▶ Innovative and culturally responsive pedagogy
 - ▶ Motivation, academic achievement and sense of belonging
 - ▶ Intersectionality and the experiences of women of color faculty in engineering
 - ▶ Among many other topics...
- ▶ For more examples see: [What Has Been Funded \(Recent Awards Made Through This Program, with Abstracts\)](#) on our web site.



Track III – Research on STEM Workforce Development

- ▶ ECR supports fundamental research on STEM workforce development at all levels of education, from K-12 through higher education and the workplace.
- ▶ Examples of topics of ECR Track III awards include:
 - ▶ Understanding PhD career pathways
 - ▶ The Role of peers, networks and demand on STEM career pathways
 - ▶ STEM training, employment in industry, and entrepreneurship
 - ▶ Among many other topics...
 - ▶ For more examples see: [What Has Been Funded \(Recent Awards Made Through This Program, with Abstracts\)](#) on our web site.



Funding Levels and Duration

► Amounts and duration

- **Level I:** maximum of \$500,000 over 3 years
- **Level II:** maximum of \$1,500,000 over 3 years
- **Level III:** maximum of \$2,500,000 over 5 years

► Other types of funding:

- CAREER
- Synthesis
- Conference & workshop
- EAGER
- RAPID



Current ECR Dear Colleague Letters

- ▶ NSF 19-044 Dear Colleague Letter: Fundamental Discipline-Based Education Research (DBER) Focused on Undergraduate and Graduate STEM Education within the EHR Core Research (ECR) Program
- ▶ NSF 19-036 Dear Colleague Letter: Developing and Testing New Methodologies for STEM Learning Research, Research Syntheses, and Evaluation
- ▶ NSF 19-035 Dear Colleague Letter: Fundamental Research on Equity, Inclusion, and Ethics in Postsecondary Academic Workplaces and the Academic Profession within the EHR Core Research Program
- ▶ NSF 19-033 Dear Colleague Letter: Research to Improve STEM Teaching and Learning, and Workforce Development for Persons with Disabilities
- ▶ NSF 19-025 Dear Colleague Letter: STEM Workforce Development Using Flexible Personal Learning Environments
- ▶ NSF 17-127 Dear Colleague Letter: Life STEM

Questions?

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Or visit the NSF EHR Core Research website:

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504924&org=EHR&from=home

