Overview of **Capacity Building Projects and Track 4: Noyce Research** of Robert Noyce Teacher Scholarship Program

**NSF 16-559**

QEM Proposal Development Workshop
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*Sponsored by the National Science Foundation*

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Outline for Session

• Overview and Examples of Capacity Building Projects

• Overview and Examples of Track 4: Noyce Research

• Q & A/Discussion
Proposal Due Dates for NSF 16-559

• Tuesday, September 6, 2016 for FY17 funds

• First Tuesday of September, Annually Thereafter
Track 1: S&S
Scholarships & Stipends
Undergraduate STEM majors and/or STEM professionals

Track 2: TF
NSF Teaching Fellowships
STEM professionals

Track 3 (MTF)
NSF Master Teaching Fellowships
Exemplary, experienced STEM teachers

Robert Noyce Teacher Scholarship Program
Solicitation NSF 16-559

Track 4: Noyce Research
Research related to STEM teacher effectiveness, persistence, and retention in high-need LEAs

*Capacity Building projects, which may lead to the development of full proposals for Tracks 1, 2, or 3, are also supported.
Look at what has been funded

Search Awards
Advanced Search
Look at what has been funded
Capacity Building Projects
Robert Noyce Teacher Scholarship Program
Capacity Building Projects

- **Purpose:**
  - Establish the infrastructure and partnerships for implementing a future Track 1: S & S, Track 2: TF, or Track 3: MTF project;
  - Develop evidence-based innovative models and strategies for recruiting, preparing, and supporting STEM teachers;
  - Develop the capacity of the teacher preparation community to expand efforts to document, disseminate, and implement evidence-based practices for preparing effective STEM teachers and teacher leaders.

- **Note:** Carefully consider if you should submit a full Track 1, 2 Track 2, or Track 3 proposal or a Capacity Building proposal?
Capacity Building Proposals

• Capacity Building projects do not award scholarships, stipends, fellowships, or internships.

• Budget: Up to $75,000 over one year
  – Up to an additional $50,000 for collaboration of a community college

• Project ideas and outcomes must contribute to knowledge base.

• Proposals must have an evaluation plan.
Capacity Building Projects Must Describe (when applicable):

- Entities to be engaged and processes to be employed in designing a plan for recruiting, preparing, or supporting new or current STEM teachers in a high-need district;

- Plans for collecting data to determine need, interest, and/or capacity;

- Institution’s current available infrastructure and aspects that will be taken into account in designing a credible, effective STEM teacher prep program for candidates who will serve in high-need districts;

- Process and plan for developing strategies, model, infrastructure, etc. … How? Why? Who? When?
Capacity Building Projects

Examples of possible project activities include:

- Development of new teacher preparation programs or courses for STEM majors and STEM professionals;
- Development of new programs for developing Master STEM Teachers;
- Enhancing Noyce project evaluation;
- Conducting needs assessment to determine areas of STEM teacher shortages in local high-need school districts;
- Identifying/studying challenges or effective practices in recruiting and preparing STEM teachers for high-need school districts;
- Knowledge syntheses, identification/dissemination of resources and evidence-based practices.

See solicitation (p. 4) for other examples of possible project activities.
Examples of Funded CB Projects

• **1540805 (Metropolitan State Univ of Denver)** - Cultivated strong partnerships with local high-needs school districts; developed an undergraduate teacher licensure program for physics majors that incorporates engineering coursework; created a Learning Assistant Program embedded with cultural responsiveness; and developed and tested effective recruitment and retention strategies that focus on increasing % of URM students majoring in STEM fields who successfully enter the K-12 teaching profession.

• **1439757 (Spelman College)** - Created an "Exposure, Exploration, Engagement, and Educator-preparation" avenue for incoming freshman and rising sophomores at Spelman College to follow a recruitment pathway that exposes interested students to STEM education.

• **1439758 (Morgan State University)** - Established a university-community network and redesigning its five-year teacher education programs in biology and mathematics leading to secondary teacher certification.
Track 4: Noyce Research
Robert Noyce Teacher Scholarship Program
Eligibility for a Grant in NSF16-559

Proposals for Track 4 may be submitted by:

• One or more universities, four-year colleges, and/or two-year colleges accredited in, and having a campus located in, the United States, or consortia of such institutions, or U.S. nonprofit entities that have established consortia among such institutions of higher education.

• Professional societies and similar organizations that are directly associated with educational or research activities.
NSF 16-559: Changes from NSF 15-530 (specific to Track 4: Noyce Research)

- Track 4 now emphasizes the specific issue of:
  - **Teacher effectiveness** in high-need local education agencies
  - **Persistence** in high-need local education agencies
  - **Retention** in high-need local education agencies.
Range from research synthesis to experimental investigations in order to show relationships between teacher preparation and learning.

Up to $800k over 5 years

Up to $100k additional per Noyce project substantively engaged, max $2.3M

Track 4 (Noyce Research)

Research related to teacher effectiveness, persistence, or retention in high-need local education agencies
Track 4 (Noyce Research)

Research related to teacher effectiveness, persistence, and retention in high-need local education agencies

Additional Requirements

Must include substantive collaboration among STEM faculty, STEM education faculty, and education researchers

Proposals must include the theory which underlies the research design and provide appropriate methodologies

Should involve more than one teacher preparation program or be generalizable to the larger community
Project Description - 15 pages
(Track 4: Noyce Research)

Include descriptions of the proposed:

• Linkages to the literature base
• Well-focused research questions/hypotheses
• Methods aligned with the theory & questions/hypotheses
• Contribution to/implications for implementation
• Contribution to knowledge and theory
• Strategies for dissemination
• Plans for objective external feedback

See Section V of the solicitation for additional details.
Track 4: Noyce Research
Additional Comments

• Consideration of research priority areas from the National Research Council report, Preparing Teachers: Building Evidence for Sound Policy (2010).


• The program would like to have a portfolio that includes a wide range of methodological approaches.

• There are other programs that accept education research proposals related to STEM teacher preparation (e.g., DRK-12, ECR, IUSE, STEM+C).
Noyce Research Proposals Funded 2015-16
Pre-service STEM Teacher Preparation

Funded under solicitation 15-530 (things
in solicitation 16-559)

1540678—Windschitl/U. of Washington—An exploratory study of collegial networks and opportunities to learn trajectories for pre-service science teachers in clinical teaching experiences


Noyce Research Proposals Funded 2015-16 cont.

- 1557283—Stoddard/U. of California-Santa Cruz—A comparative study of CalTeach students to non-CalTeach students in the same programs at five universities in California, with an emphasis in examining preparation to implement the NGSS and CSSSM, as well as integrating the teaching of academic language and literacy into the teaching of STEM subjects for English Language Learners.

- 1557292, 285—Rushton/SUNY at Stony Brook, Ray/Kennesaw St. U.—A comparative study assessing the longitudinal impact of Noyce awards on the subject matter knowledge of beginning STEM teachers in the US through disaggregation of Praxis II test scores over the past fifteen years.

Funded under solicitation 15-530 (things in Solicitation 16-559 = focus on the issue of STEM Teacher effectiveness, persistence, or retention in high-need school districts)
Questions?

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