

# 2021 Webinar for Noyce Tracks 1, 2, & 3 and Capacity Building Projects

Sandra Richardson, Noyce Program Lead

Tom Kim, Noyce Program Director

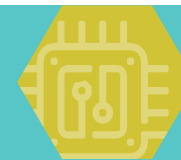


National Science Foundation  
WHERE DISCOVERIES BEGIN

Robert Noyce  
Teacher  
Scholarship  
Program (Noyce)  
[NSF 21-578](#)

# POLL – Getting to Know You!

1. How familiar are you with the Noyce program?
  - Very familiar, Somewhat familiar, Not very familiar (only select one)
2. Which Noyce track are you most interested in learning more about?
  - Capacity Building, Track 1: Scholarships and Stipends, Track 2: Teaching Fellowships, Track 3: Master Teaching Fellowships, Track 4: Noyce Research (can select more than one)
3. Do you currently serve on the leadership team for a Noyce funded project?
  - YES or NO (only select one)
4. Do you currently serve (or have served in the last 5 years) on the leadership team for a non-Noyce NSF funded project?
  - YES or NO (only select one)
5. What is your area of expertise?
  - STEM faculty member, Education faculty member, Researcher, Not at Institution of Higher Ed, Other (can select more than one)



## General Info on NSF 21-578

- Grantee Eligibility
- Program Background and Overview
- Descriptions of Program Pathways (e.g., Tracks 1, 2, & 3 and CB)

### Q & A #1

Preparing the Proposal

Merit Review

Proposal Writing Tips

### Q & A #2

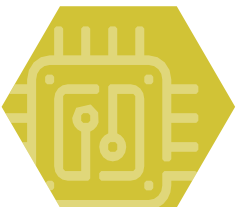
Additional Conversation



# Proposal Deadline for [NSF 21-578](#)

**Tuesday, August 31, 2021**

Last Tuesday of August,  
Thereafter



See the [Noyce Program webpage](#) for additional program information.

# Noyce Program Director Team



Kathleen Bergin



Sue Carson



Michelle Camacho



Michael Ferrara



Bonnie Green



John Haddock



Jennifer Lewis



Tom Kim



Robert Mayes



Sandra Richardson



# Noyce Program Goals

Address the critical need for recruiting, preparing, and retaining K-12 STEM teachers and teacher leaders in high-need school districts

Support talented STEM undergraduate majors and professionals to become K-12 STEM teachers in high-need school districts

Support experienced, exemplary K-12 STEM teachers to become teacher leaders in high-need school districts

Support research on the effectiveness and retention of K-12 STEM teachers in high-need school districts



## To qualify as a High-Need School District, the school district must have at least one school that:

1

- Serves at least 20% students from low-income families;
  - Serves at least 10,000 students from low-income families;
- OR*
- Qualifies for funding under the *Small, Rural School Achievement Program* or the *Rural and Low-Income School Program*

**AND**

2

- Has at least 34% of teachers not teaching in the academic subject area or grade level for which they were trained to teach;
  - Has a teacher attrition rate of at least 15% over the last three school years;
- OR*
- Has at least 34% of teachers teaching with emergency, provisional, or temporary certification/licensure

**What is a  
High-Need  
School  
District?**



Noyce

Tracks



# Noyce Tracks

## Track 1: Scholarships and Stipends (S&S)

- Noyce-eligible undergraduate STEM majors and/or STEM professionals
- Up to \$1.2M with a project duration of up to 5 years\*

## Track 2: NSF Teaching Fellowships (TF)

- STEM professionals
- Up to \$3M with a project duration of up to 6 years\*

## Track 3: NSF Master Teaching Fellowships (MTF)

- Exemplary, experienced STEM teachers
- Up to \$3M with a project duration of up to 6 years\*

## Track 4: Noyce Research

- Research on STEM teacher effectiveness and retention in high-need school districts
- Up to \$1M with a project duration of up to 5 years\*

## Capacity Building (CB)

- Team building, need analysis, and other activities required to develop and submit a proposal to any other track
- Up to \$75K with a project duration of up to 1 year\*

\*Awards may exceed the budget maximums through Collaboration Incentives for engagement of community colleges in Capacity Building or Track 1 projects, engagement with Noyce awards in Track 4 projects, or engagement with minority-serving institutions in any Noyce submission.

## Scholarships for Undergraduate STEM Majors

- Supports undergraduate Noyce-eligible STEM majors
- \$10,000+ per year (not to exceed cost of attendance) for up to 3 years (**NEW**), beginning in junior year

## Stipends for STEM Professionals

- STEM professionals (with Noyce-eligible STEM baccalaureate degree) enrolled in a teacher certification/licensure program
- \$10,000+ per year (not to exceed cost of attendance) for 1 year

# Track 1: Scholarships & Stipends and Stipends (S&S)

## Fellowship and Salary Supplement

- Supports STEM professional enrolled in a master's degree leading to teacher certification (no requirement on length of degree program but support can only be in final year of degree) --- **NEW**
- \$10,000+ (not to exceed cost of attendance) while enrolled in the **final year of the** master's degree program
- \$10,000+/yr for 4 yrs while teaching in a high-need district
- Take on leadership role(s) within the school or district
  - ✓ Participation in preservice teacher education
  - ✓ Develop curriculum
  - ✓ Plan or implement professional development

**Track 2: NSF  
Teaching  
Fellowships  
(TF)**

## Fellowship and Salary Supplement

- Supports exemplary K-12 STEM teachers with a bachelor's or master's degree in their field to become teacher leaders within school or district
- \$10,000+ per year for 5 years while teaching in a high-need school district
  - for teachers without a master's degree, first year of support will be for cost of attendance to complete master's degree
  - no requirement on length of master's degree program but support can only be in final year of degree --- **NEW**

### Track 3: Master Teaching Fellowships (MTF)

# Project Features

- Support preparation of future Noyce submission in any track.
- Develop strategies, models, infrastructure, etc.
  - How? Why? Who? When?
- Use evidence-based innovative models and strategies.
- Collect data to determine need, interest, or capacity.

Capacity  
Building

# Examples of CB Project Activities

- Identify or develop models, research designs, or collaborative partnerships to study STEM teacher effectiveness and retention.
- Conduct needs assessments to determine areas of teacher shortages and interest among STEM professionals.
- Re-imagine teacher preparation, education, and retention efforts to reflect current school needs.
- Establish partnerships or methods for recruiting a diverse pool of Noyce recipients, including those from talent pools that have not yet been fully tapped (e.g., African Americans, Alaska Natives, American Indians, Hispanics, Native Hawaiians, Native Pacific Islanders, and persons with disabilities).

*See solicitation NSF 21-578 for other examples of possible project activities.*



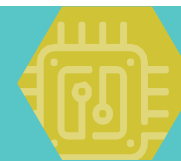
# Partnership, Cost Sharing, and PI Requirements

	Track 1 (S&S)	Track 2 (TF)	Track 3 (MTF)	Capacity Building
<b>High-Need District Partner</b>	REQUIRED	REQUIRED	REQUIRED	NOT REQUIRED
<b>Institution of Higher Education Partner</b>	REQUIRED	REQUIRED	REQUIRED	NOT REQUIRED
<b>Nonprofit Partner</b>	NOT REQUIRED	REQUIRED	REQUIRED	NOT REQUIRED
<b>Cost Sharing</b>	NOT ALLOWED	REQUIRED	REQUIRED	NOT ALLOWED
<b>PI Team Requirements</b>	STEM Faculty and Education Faculty			No Requirements



# Highlight of Other New Noyce Program Features in NSF 21-578

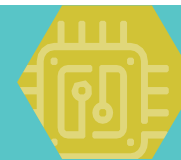
- ❑ See Definition of Terms section in NSF 21-578.
- ❑ Collaboration Incentives are available for engagement with MSIs for any submission (up to \$250K) and available for engagement with two-year colleges in Track 1 and CB submissions (up to \$250K).
- ❑ Noyce-eligible STEM majors are defined using CIP codes.
- ❑ STEM teachers (as used in the solicitation) do not include teachers w/o teacher certification or licensure, vocational or career technical education teachers, substitute teachers, paraprofessionals, or teaching assistants.
- ❑ Individuals who have previously served (including concurrent service) as a K-12 teacher are not eligible for support in Track 1 or Track 2.
- ❑ MTFs with elementary certification or licensure should teach mathematics and/or science for at least 50% of their classroom teaching responsibilities.
- ❑ As funding permits, proposals for teacher research experiences in STEM settings may be submitted after consultation with (and approval of) a Noyce Program Director.



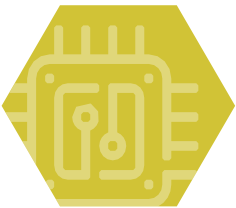


# Poll – True or False Quiz

- Education majors are eligible to receive a Noyce scholarship in Track 1: S&S projects.
- Track 1: S&S, Track 2: TF, and Track 3: MTF projects all require a non-profit partner.
- Cost sharing is allowable for any Track but only required for Track 2: TF and Track 3: MTF.
- Teachers without a master's degree may receive fellowship support for Track 3: MTF projects.
- Capacity Building projects are required to have a PI/co-PI from both a STEM and Ed department.



# Q & A # 1





**Proposal**

**Preparation**

# Project Summary

**Must address in no more than 1 page:**

## **Overview**

### **The first sentence MUST:**

- Indicate the specific Track of the proposal (i.e., Track 1: Scholarships and Stipends)
- Name all institutions and partners, including high-need school districts and non-profit organizations, as appropriate, that are involved in the project.

## **Intellectual Merit**

How important is this work & how well designed is the project?

## **Broader Impacts**

What is the benefit of this work to STEM Education, to society?

# Project Description (Tracks 1, 2, & 3)

See Section V of solicitation NSF 21-578 for supporting details.

**Must be clearly identified, in any order, in no more than 15 pages:**

**Broader Impacts**

**Scope**

**Recruitment & Selection**

**Project Administration**

**Teacher Induction & Development**

**Degree, Preparation, or Leadership Program**

**Cost Sharing (TF & MTF Only)**

**Project Activities & Supports**

**Monitoring & Compliance**

**Evaluation**

**Dissemination**

**Collaborations**

**Prior Support (if applicable)**

Note: NSF no longer requires a section entitled

## **Intellectual Merit**

However, Intellectual Merit remains one of NSF's two core merit review criteria and must be evident from the content of your proposal.

# Project Description (Capacity Building)

See Section V of solicitation NSF 21-578 for supporting details.

**Must be clearly identified, in any order, in no more than 10 pages:**

**Broader Impacts**

**Rationale**

**Project Plan**

**Partnerships**

**Assessment of Project Outcomes**

**Prior Support (if applicable)**

**Project Management**

Note: NSF no longer requires a section entitled

**Intellectual Merit**

However, Intellectual Merit remains one of NSF's two core merit review criteria and must be evident from the content of your proposal.

# Additional Requirement for All Submissions

- Letters of Collaboration
  - Tracks 1, 2, and 3 require at least 4 letters, including letters from:
    - deans of **both** the participating STEM college/school and Education college/school,
    - superintendent of partnering school district (or comparable school district administrator),  
**and**
    - principal of partnering school (or comparable school administrator)
  - Tracks 2 and 3 require an additional letter from nonprofit partner
  - Capacity Building
    - allowed but only required if requesting collaboration incentive(s)
- Supplementary Documents Section must only include:
  - letters of collaboration (if applicable), biosketch of the project's independent evaluator (if applicable), postdoctoral research mentoring plan (if applicable), and data management plan





**Merit**

**Review**



## **Intellectual Merit**

- What is the potential for the proposed activity to advance knowledge and understanding within its own field or across different fields?

## **Broader Impacts**

- What is the potential for the proposed activity to benefit society or advance specific, desired societal outcomes?

# Intellectual Merit and Broader Impacts

- To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
  - Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
  - How well qualified is the individual, team, or organization to conduct the proposed activities?
  - Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

# General Tips for Success

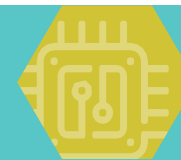
1. Be aware of prior and ongoing projects and advances in the field (and discuss the results).
2. Cite the literature.
3. Include timelines and benchmarks in your plan for independent feedback.
4. Propose a cost-effective but high-impact project.
5. Make sure you have included all required details and sections.
6. If resubmitting a previously declined proposal, consider reviewers' feedback and do not resubmit the declined proposal without making substantive changes.
7. Put yourself in the reviewers' places. Have someone else read the proposal.
8. Provide supporting details to substantiate identified partnerships.
9. Align the requested budget with the scale and scope of work.
10. Call or email cognizant Noyce Program Officers.



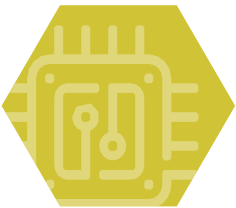
# Poll – One Question Quiz

Which of these are required in the Project Description for a Track 1, 2, or 3 proposal?

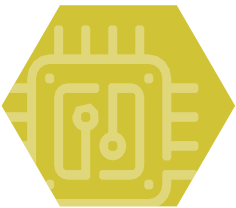
- Recruitment strategies
- Monitoring and compliance plans
- Dissemination plan
- Partners
- Names of students/teachers participating
- Names of partnering schools/districts
- Journal (or conference) medium for disseminating results
- Identification of knowledge generation in the project
- Intellectual Merit and Broader Impact explicitly stated



# Q & A # 2



# Additional Conversation



# Critical Resources

Solicitation [NSF 21-578](#)

[Noyce Program webpage](#)

[www.nsfnoyce.org](http://www.nsfnoyce.org)

<https://aaas-arise.org/>

NSF Proposal and Award Policies and Procedures Guide (PAPPG), [NSF 20-1](#)

## Other EHR Programs of Possible Interest

### Improving Undergraduate STEM Education (IUSE: EHR): [NSF 21-579](#)

Seeks to improve the quality and effectiveness of the education of undergraduates in all STEM fields, including preservice teachers.

### Scholarships in STEM (S-STEM): [NSF 21-550](#)

Seeks to increase the number of low-income academically talented students with demonstrated financial need obtaining degrees in S-STEM eligible disciplines and entering the US workforce or graduate programs in STEM.

### Discovery Research PreK-12 (DRK12): [NSF 20-572](#)

Seeks to enhance the learning and teaching of STEM by preK-12 students and teachers through research and development of STEM education innovations and approaches.



# Cognizant Noyce Program Directors

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Dr. Robert Mayes	<a href="mailto:rmayes@nsf.gov">rmayes@nsf.gov</a>

Contact Program Director in August of the submission year if you are not submitting a proposal and interested in serving as a program reviewer.



# Upcoming Noyce Events

- Webinar for Track 4: Noyce Research
  - May 6<sup>th</sup> (4 – 5:30 pm ET)
  - [Register](#)
- Live Q & A Sessions with Noyce Program Directors
  - May 11<sup>th</sup> (2 – 3:30 pm ET)
  - May 12<sup>th</sup> (4 – 5:30 pm ET)
  - May 17<sup>th</sup> (10 – 11:30 am ET)
  - May 21<sup>st</sup> (12 – 1:30 pm ET)
- Visit the [Noyce Program webpage](#) and [www.nsfnoyce.org](http://www.nsfnoyce.org) for additional updates and upcoming events

