Towards Creating a Successful Noyce Proposal

Noyce Program Officers
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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 17-541

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.
<table>
<thead>
<tr>
<th>Requirements/Features</th>
<th>Track 1 (S&amp;S)</th>
<th>Track 2 (TF)</th>
<th>Track 3 (MTF)</th>
<th>Track 4 (Research)</th>
<th>Capacity Building</th>
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</thead>
<tbody>
<tr>
<td>STEM Major</td>
<td>✓</td>
<td>✓</td>
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<td>Degree in field</td>
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<tr>
<td>Scholarships/Fellowships</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>High-Need District Partner</td>
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<td>Non-Profit Partner</td>
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<td>Research</td>
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<td>PI/co-PI Team of STEM &amp; ED Faculty</td>
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<td>Evaluation/External Feedback</td>
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<td>Cost Sharing</td>
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<tr>
<td>Funding Amount</td>
<td>Up to $1.2M*</td>
<td>Up to $3M*</td>
<td>Up to $3M*</td>
<td>Up to $800K***</td>
<td>Up to $75K**</td>
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</table>

*$250K Community College Incentive
**$50K Community College Incentive
***$100K per Noyce project substantively engaged up to max total $2.3M
By show of hands, what track (up to 2) interests you?

Capacity building
  Track 1
  Track 2
  Track 3
  Track 4
All Proposals Must Include

1. One page Project Summary (Overview, Intellectual Merit, and Broader Impact)
2. Project description (15 pages) w. IM and BI headings
3. Budget forms and narrative for each year
4. Biosketches (correctly formatted)
5. Current & Pending Forms
6. Facilities, Equipment, and Other Resources document
7. References Cited*
8. Mentoring Plan for Postdoctoral Researchers (if in budget)
9. Data Management Plan Indicate Human Subjects status on cover sheet (pending, approved, or exempt)
10. Letters of Commitment (for Tracks 1 – 3 and often CB/Track 4)

Note: Consult PAAPG (NSF 19-1) for specific guidance not specifically addressed in solicitation.
Additional Solicitation Specific Review Criteria

Reviewers will be asked to consider the evidence of the following central issues (including results of prior Noyce awards, if applicable):

- The extent to which the proposed work attends to the expectations and requirements discussed in Section II Program Description.

- The potential of the project to recruit, prepare, and retain STEM majors and/or STEM professionals (for S&S and TF) or develop and retain NSF Master Teaching Fellows (for MTF), in teaching careers in high-need local educational agencies.

- The quality of the academic requirements and other components of the program, the extent to which the proposed preparation, recruitment, and retention strategies reflect effective practices based on research.

- That the institution is committed to sustaining the program beyond the period of NSF funding (with the possible exception of funds for scholarships/stipends/fellowships).
Robert Noyce Teacher Scholarship Program

Proposals must provide evidence of exemplary teacher preparation and development efforts.

Proposals must provide evidence of genuine collaboration between faculty in STEM and faculty in education.

Every project is expected to be grounded in research literature and employ mechanisms for external feedback.

Proposal Due Dates
August 27, 2019
(On or before the Last Tuesday in August thereafter)

August 27, 2019
Eligibility for a Grant in NSF17-541

- Proposals may be submitted by:
  - One or more universities, four-year colleges, and/or two-year colleges; or
  - U.S. nonprofit entities that have established consortia among such institutions of higher education (IHE); or
  - Professional societies and similar organizations that are directly associated with educational or research activities (for Track 4: Noyce Research only)

- PI/Co-PI team must include at least one faculty member from a science, technology, engineering, or mathematics department and at least one education faculty member (and researchers in Education for Track 4: Noyce Research only).

- No restrictions on the number of proposals per organization or on the number of proposals per PI or Co-PI.
Definitions of Terms

**Scholarship**
Funds awarded (in S&S Track) to:
- An undergraduate STEM major (≥ junior status)
- A post-bac (when the program requires a fifth year)

**Stipend**
Funds awarded (in S&S Track) to:
- A STEM professional who enrolls in a teacher certification program

**Fellowship**
Funds awarded (in TF and MTF Tracks) to:
- A STEM professional (TF Track)
- A STEM teacher (MTF Track)
Definitions of Terms

High-Need Local Educational Agency (LEA)  
(e.g., a high-need school district)

<table>
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<tr>
<th>High percentage of individuals from families with incomes below the poverty line;</th>
<th>A high percentage of secondary school teachers not teaching in the content area in which they were trained to teach;</th>
<th>A high teacher turnover rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>high = at least 50%</td>
<td>high = at least 35%</td>
<td>high = at least 15%</td>
</tr>
</tbody>
</table>

By show of hands, what characteristics define your partner high-need LEA?

abstain (i.e. IDK or NA)

families below the poverty line

teaching out of content area

high teacher turnover
Track 1 (S&S)
Scholarships & Stipends

Undergraduate STEM majors and/or STEM professionals

Major in STEM, participate in project program, and teach in a high-need school district for 2 years for each year of support.

Up to $1.2M for up to 5 years

Up to an additional $250K for engagement of a community college
Track 1 (S&S)
Scholarships & Stipends

Undergraduate STEM majors and/or STEM professionals

Scholarships for Undergraduate STEM Majors
- Junior and Senior STEM majors [and post-bacs]
- $10,000 per year not to exceed cost of attendance

Stipends for STEM Professionals
- STEM Professionals enroll in a teacher certification program
- $10,000 for one year not to exceed cost of attendance
Track 1 (S&S)  
Scholarships & Stipends

Undergraduate STEM majors and/or STEM professionals

Some Additional Considerations

- Internships for freshman and sophomores to attract STEM majors into K-12 STEM teaching careers.
- Recruit STEM majors who may not have previously considered a career in K-12 STEM teaching.
- Involvement of master teachers.
Track 2 (TF)
NSF Teaching Fellowships

STEM professionals

Recipients earn teacher certification through a master’s degree program and teach in a high-need school district for 4 years.

up to $3M for up to 5 years for 1 cohort or 6 years for 2 cohorts
Cost-sharing required

Up to an additional $250K for engagement of a community college
Track 2 (TF)
NSF Teaching Fellowships

STEM professionals

Required Partners
Per America Competes Act (P.L. 110 – 69)

- An IHE department that provides an advanced program within a specific STEM discipline
- An IHE department that provides a teacher preparation program
  OR
  2-year IHE with dual enrollment program with an IHE
- At least one high-need LEA and at least one public school served by the LEA
- At least one nonprofit organization

and

and

and
Track 2 (TF) NSF Teaching Fellowships

STEM professionals

Fellowship and Salary Supplement

≥ $10,000 while enrolled in the 1-year master’s degree program

≥ $10,000 per year for 4 years while teaching in a high-need school district

Take on leadership role within the school or LEA

- Mentoring
- Curriculum development
- Plan/implement PD
- Participate in pre-service education
Track 3 (MTF)  
NSF Master Teaching Fellowships  

Exemplary, experienced STEM teachers  

Recipients
- already have a master’s degree in their field OR have a bachelor’s degree in their field and are enrolled in a master’s degree program;
- participate in project program to develop master teachers; and
- teach in a high-need school district for 5 years

up to $3M for up to 5 (or 6) years  
Cost-sharing required

Up to an additional $250K for engagement of a community college
Track 3 (MTF)
NSF Master Teaching Fellowships
Exemplary, experienced STEM teachers

Per America Competes Act (P.L. 110 – 69)
Track 3 (MTF)

NSF Master Teaching Fellowships

Exemplary, experienced STEM teachers

Fellowship and Salary Supplement

≥ $10,000 per year for 5 years while teaching in a high-need school district

For Bachelors:
1-year fellowship support while in Master’s program, up to 4 years while teaching

Take on leadership role within the school or LEA

- Mentoring
- Curriculum development
- Plan/implement PD
- Participate in pre-service education
TF and MTF proposals

True/False

• Require Fellows supported by Noyce funds to have a STEM degree
• Salary supplements of no more than $10,000/yr
• 50% Cost Share
• Partnership among a high-need school district and an IHE STEM department
Scholar/Fellow Obligations for Tracks 1, 2, and 3

- Provide the institution with annual certification of employment.

- Participate in activities (including surveys) conducted as part of institution project-level and NSF program-level evaluation.

- Complete the teaching commitment or repay the scholarship/stipend/fellowship as a loan.

See solicitation 17-541 for additional details.
Institutional Obligations for Tracks 1, 2, and 3

- Ensure the scholarship/stipend/fellowship recipients accept the terms.
- Supply relevant statistical and demographic data as requested.
- Monitor (including tracking) and report on the compliance of recipients (including repayment if necessary).
- Cooperate with NSF third-party project monitoring.

See the solicitation for additional details.
Track 4 (Noyce Research)
Research on teacher effectiveness, persistence, or retention in a high-need school district

No Previously Funded Noyce Projects Required
Researchers + STEM faculty + STEM education faculty
Up to $800K for up to 5 years

Noyce Projects Substantively Involved
Researchers + Noyce projects + STEM faculty + STEM education faculty
Up to $800K + $100K for each Noyce project not to exceed $2.3M for up to 5 years
COMMON STRENGTHS & WEAKNESSES IN NOYCE PROPOSAL SUBMISSIONS
Common Strengths of Successful Noyce Proposals

• Significant impact (potential to address identified need)
• Detailed (and realistic) recruitment, selection, monitoring, and compliance plans
• Sufficient project detail and clear plans
• Sensible timeline of activities
• Strong and defined collaborative partnerships
• Strong evaluation plan, linked to project goals and objectives
• Potential for involving URM
• Efforts for preparing participants to be successful in teaching in high-need school districts
• Strong leadership team
Common Errors Related to Solicitation

- Failure to indicate students will complete or already possess a STEM major.
- Lack of involvement of STEM faculty (or education faculty).
- Propose 3 years of support for baccalaureate certification
- Lacking appropriate partners
- Lacks plans for monitoring compliance with teaching requirement
- Underspecified evaluation plan or lacks objective evaluator
Common Weaknesses in Unsuccessful Noyce Proposals (Track 1: S & S)

- Unrealistic or unsupported projections/recruitment goals/pool
- Weak connections to high-need LEAs
- Deliberate linkages to teacher preparation or other aspects of the project are not clear
- Weak community college ties but seeking community college supplement
- No or few references to relevant and recent literature
- Little information about teacher preparation program
- Recruitment and selection strategies not well described
- Lack of support for new teachers
- Insufficient detail about preparing participants for high-need LEA
Common Weaknesses in Unsuccessful Noyce Proposals (Track 2: TF and Track 3: MTF)

1. Insufficient details for preservice, induction, or professional development program
2. Vague/unrealistic recruitment plans
3. Selection plans do not follow guidelines
4. Master Teacher roles and responsibilities not discussed
5. Matching funds not identified
6. Role of non-profit organization not clear
7. School district partnership not strong
8. Underspecified evaluation plan or lacks objective evaluator
Project Activities

• Recruitment/Selection
• Program for Prep (T1&T2) or Dev (T3)
  – Cultural competence
  – Pedagogical knowledge
  – Disposition for success in high-need school district
• Monitoring and Tracking
• Induction
• Evaluation & Dissemination
Possible Knowledge Generation Opportunities to Include in Submission

- What parts of your planned project are expected to be challenging?
- What theoretical frameworks suggest ‘constructs’ that could be investigated?
- What insights can you provide from understudied populations?
- What types of data will be relatively easy to generate? Will you be in a position to:
  - Gather validity evidence associated with a common survey instrument?
  - Create prompts for journal entries &/or interviews aligned with a theoretical framework?
General Tips for Success

1. Put yourself in the reviewers’ place.
2. Be aware of other projects and advances in the field.
3. Cite the literature.
4. Provide details.
5. Discuss prior NSF results (see solicitation).
6. Include evaluation plan with timelines and benchmarks.
7. Consider reviewers’ comments if resubmitting proposal.
8. Have someone else read the proposal.
9. Spell check; grammar check.
10. Call or email cognizant NSF Program Officers.
Additional Resources

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

  - includes the *NSF Grant Proposal Guide*
  - includes detailed instructions on items such as required biosketches, required Data Management Plan, IRB approval, allowable budget items, etc.

- **NSF 13-126: Common Guidelines for Education Research and Development (ED and NSF)**
Questions?