



School of Teacher Education
College of Education
San Diego State University
San Diego, CA 92182-1153

Spring/Summer 2020

Dear Applicant,

Thank you for requesting an application to become part of the community of *SDSU Noyce Master Teaching Fellows* in the NSF-funded project, *ATLUS: Advancing Teacher Leadership in Urban Schools Through the Noyce Mathematics and Science Master Teaching Fellowship Program*. We are delighted that you are interested in applying to the program.

The goals of this prestigious fellowship are for the classroom teachers who are selected as Master Teaching Fellows (MTFs) to enhance their teaching practices and develop as teacher leaders who design and implement robust plans to improve the math or science learning experiences of students at their school. In addition, we expect that MTFs will serve as guide teachers for SDSU's teacher credential program, and have opportunities to present at local and state conferences.

This five-year fellowship (Fall 2020 – Spring 2025) not only provides MTFs with a stipend of \$15,200 per year, but exceptional opportunities to improve their practice and to become teacher leaders, all within a community of similarly-committed teachers. MTFs will develop as teacher leaders through several rich experiences.

- From Fall 2020 – Spring 2022, MTFs will work with SDSU's National Center for Urban School Transformation (NCUST). Each MTF will develop and implement a robust plan related to mathematics or science teaching and learning at their school site.
 - MTFs will visit two NCUST award-winning, high-performing schools (one visit each academic year);
 - On approximately six evenings (primarily Tuesdays) each academic year 2020-21 and 2021-22, MTFs will meet with NCUST coaches or other project leaders to learn about how MTFs might develop a plan to achieve excellent and equitable outcomes for students in math or science at their school site; MTFs will also spend time deeply examining the CCSSM or NGSS standards.
 - On approximately three days during each academic year 2020-21 and 2021-22, MTFs and NCUST coaches will engage in instructional rounds at MTFs' school sites, visiting schools and classrooms around math or science teaching and learning, discussing each MTF's content-specific plan, and providing feedback to provide opportunities to improve. One goal is for MTFs to continually assess and revise the plan in response to students' needs around mathematics or science learning.
 - MTFs will work with their content-alike or grade-alike school team to improve the learning outcomes in mathematics or science for students at their school; this engagement will include examining different forms of data related to math or science learning to aid in the development of a plan to achieve excellent and equitable outcomes for students in math or science;

- From Summer 2022 – Spring 2025, MTFs will engage in intensive coursework in an EdD (Education Doctorate) program in PK-12 Educational Leadership with a focus on mathematics and science leadership.
 - MTFs will engage in robust doctoral-level coursework focused on issues centered on grades PK-12 educational leadership in mathematics and science. In general, coursework is offered on Tuesday evenings and many Saturdays (all day) throughout the EdD Program (days of the week subject to change).
 - MTFs have two options for engaging in this coursework:
 - MTFs have the option to apply to the EdD program to earn an EdD. For MTFs who are admitted to and enroll in the EdD program, MTFs pay tuition and fees for the program (For details about the cost of the program, see <https://bfa.sdsu.edu/financial/student/money> Click on a semester and view the column, *Ed Doctoral*.)
 - MTFs may also engage in the EdD coursework for the three years without earning an EdD. MTFs who choose this option will be expected to attend all classes, and fully engage in and complete coursework, but will not pay tuition and fees. MTFs who choose this option will complete a robust action research project in lieu of a dissertation. (Note: MTFs who select this option will not be allowed to retroactively earn an EdD or earn university credit for coursework.)
 - For more information about the EdD program, see <https://education.sdsu.edu/academics/how-to-apply/graduate-admissions/edd-edl-pk12-math-science> and to see coursework, see <https://education.sdsu.edu/edl/programs-of-study/dr-edd-edl-pk-12/course-sequence>
- In Summer 2021, MTFs will apprentice with university faculty in research labs for six weeks, and
- During Fall 2021, MTFs will engage in lesson study in a university course designed for teacher candidates for 6 weeks. MTFs will co-plan and co-teach a small number of sessions in one course: elementary math methods, elementary science methods, secondary mathematics methods, or secondary science methods.

On the next several pages you will find instructions and materials needed for applying to the program. Please be sure to review the entire application and, in particular, Section B: Eligibility Requirements, prior to working on the application.

**Please save your application as <Last Name> <First Name> Noyce MTF App 2020.
For example, Alba Zed would save her application as *Zed Alba Noyce MTF App 2020*. Then, submit online on or before July 15, 2020, using the link
<https://forms.gle/YLR2cVZf4pGG4hfF6>**

We will make Fellowship decisions by August 31, 2020. We are looking forward to working with a thoughtful group of teachers. For additional information, please see the Frequently Asked Questions at the end of this document, and check the project website at noyce.sdsu.edu. We hope that you will join us for **an Information Session on May 18 from 4:30 pm – 6:00 pm**. Register for the Information Session at <https://forms.gle/C6NnckR7iRQcFGe6A>

We look forward to receiving your application!

Sincerely,

Lisa Lamb, Lisa.Lamb@sdsu.edu
Susan Nickerson
Randolph Philipp

David Pullman
Donna Ross
Meredith Vaughn

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***ATLUS: Advancing Teacher Leadership in Urban Schools
Through
SDSU's Noyce Mathematics and Science Master Teaching Fellowship Program***

Application is due on or before July 15, 2020.

Application Checklist

To apply for this fellowship, submit items A-H listed below.

- A. SDSU Noyce Fellows: ATLUS Application;
- B. Confirmation of Eligibility;
- C. **Online Principal Support and Acknowledgement** Form. Contact your principal soon to be sure that your principal supports the professional learning that will occur at the school site. Your principal will complete an acknowledgment page using the link provided in Part C.
- D. One Letter of Recommendation from a colleague at your school site. Your colleague will upload a letter using the link provided in Part D.
- E. 10-minute video clip with responses to reflection questions;
- F. Your response to one Mathematics OR Science Student Thinking Item;
- G. Your response to two essays; and
- H. One set of transcripts reflecting all of your coursework at the undergraduate level and above. Unofficial transcripts will suffice.

Once your application is complete, be sure to use the file name

<Last Name> <First Name> Noyce MTF App 2020

For example, save Alba Zed's application as *Zed Alba Noyce MTF App 2020*

To submit, click [here](#), or go to

<https://forms.gle/YLR2cVZf4pGG4hfF6>

Item A. Application, SDSU Noyce Master Teaching Fellows: ATLUSName _____
(Last) _____ (First) _____ (MI) _____

Email Address _____

What type of teaching credential(s) do you hold? If you hold a single subject credential, be sure to identify the content area and whether it is Foundational.

Are you currently a full-time teacher as a teacher of record? Yes _____ No _____
If you answered No, explain why you think that you will be a classroom teacher next year and thus eligible for this Fellowship: _____

_____What grade(s) do you teach?
_____What subject(s) do you teach?

Current School Site _____ District _____

(School Site Street Address) _____ (City, State, Zip) _____

Colleges or Universities you have attended

- 1) _____ 3) _____
2) _____ 4) _____
- _____

Professional Timeline of the Past Five Years

Please include not only your teaching assignments and/or informal educational experience, but also your leadership responsibilities (Extend this table if necessary).

YEAR(S)	DISTRICT/SCHOOL	ASSIGNMENT/ROLES (include grade level)

Item B. Confirmation of Eligibility

Noyce Fellows must

- work full time as a teacher in a K-12 public school;
- teach mathematics or science grades K-12 in a public school;
- work in a high-need district in SDSU's geographic service area where SDSU places or could place student teachers (such as Sweetwater, Grossmont, La Mesa Spring Valley, and Santee);¹
- have a Master's degree OR earn one within the next year;
- provide evidence of strong content knowledge in mathematics or science relative to the grade level taught; and
- be a United States citizen, national, or permanent resident alien.

Requirement	Your Response
I teach mathematics &/or science (grades K-12) in a public school.	<input type="checkbox"/> Mathematics <input type="checkbox"/> Science Name of Public School _____
I teach in a high-need district in SDSU's geographic service area where SDSU places (or could place) student teachers. ¹	<input type="checkbox"/> YES <input type="checkbox"/> NO Name of District _____
I either <ul style="list-style-type: none"> a) already earned a Master's Degree, OR b) I will earn one within the next year. 	<input type="checkbox"/> I have already earned a Master's degree OR <input type="checkbox"/> I am enrolled in this Master's degree program: _____
I am a United States citizen, national, or permanent resident alien.	Select <u>one</u> of the following three choices: <input type="checkbox"/> United States citizen <input type="checkbox"/> national <input type="checkbox"/> permanent resident alien

List evidence of strong content knowledge in math or science relative to grade level you teach. For example, you may have

- a) earned an undergraduate or graduate degree in a STEM field or a STEM Education field,
- b) passed CSET exams (or have strong GRE/Praxis scores) in your content area,
- c) offered or engaged in a variety of different professional development programs around math or science teaching and learning, and/or
- d) taken coursework related to the math or science you teach.

Include all relevant experiences/exams passed:

By typing my name below, I am indicating that the information provided above is accurate.

Name (Please Print) _____ **Date** _____

¹ A high-need district has characteristics such as having at least *one* of its schools with a high percentage of students from families with incomes below the poverty line. See FAQ #3 for more details.

Item C. Principal Support and Acknowledgement

Please ask your principal to complete the online form, [*Principal Support and Acknowledgement*](#). Email your principal the contents of this page and the link to the form soon so that your principal understands the features of the grant and has time to ask any questions about the commitment to the project. Link

<https://forms.gle/f3xeNewv6mN53REy5>

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Dear Principal,

A teacher at your school site is applying for the five-year program (2020-2025), *ATLUS: Advancing Teacher Leadership in Urban Schools Through SDSU's Noyce Mathematics and Science Master Teaching Fellowship Program*. The goals of this prestigious fellowship are

- to support effective teachers of mathematics and science to enrich their practice so that they can emerge into extraordinary teachers, and
- to support these teachers in becoming teacher leaders who support student teachers, teachers at their school site, and teachers in the broader community.

If the teacher at your site is selected as a Master Teaching Fellow (MTF), from Fall 2020 – Spring 2022, the MTF will work with SDSU’s National Center for Urban School Transformation (NCUST). Each MTF will develop and implement a robust plan related to mathematics or science teaching and learning at their school site.

- MTFs will visit two NCUST award-winning, high-performing schools (one visit each academic year);
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- On three days during each academic year 2020-21 and 2021-22, MTFs and NCUST coaches will engage in instructional rounds at MTFs’ school sites, visiting schools and classrooms around math or science teaching and learning, discussing the content-specific plans, and providing feedback to provide opportunities to improve. One goal is for MTFs to continually assess and revise the plan in response to students’ needs around mathematics or science learning.
- MTFs will work with their content-alike or grade-alike school team to improve the learning outcomes in mathematics or science for students at their school; this engagement will include examining different forms of data related to math or science learning to aid in the development of a plan to achieve excellent and equitable outcomes for students in math or science;

You are welcome to contact the project leader, Dr. Lisa Lamb, Lisa.Lamb@sdsu.edu with any questions. MTFs will receive an annual stipend for their participation, supported by a grant from the National Science Foundation.

When completing the form at <https://forms.gle/f3xeNewv6mN53REy5>, you will acknowledge that you understand the following:

- (a) If selected, the above-named teacher will be out of the classroom for three days of professional development each year for two years (with substitute teachers paid for by the grant) so that they can engage in significant opportunities to become a more effective teacher and teacher leader;
- (b) If selected, the above-named teacher will lead the development and implementation of a plan to improve the mathematics or science learning of students at your school through a two-year improvement cycle; and
- (c) If selected, other MTFs will visit your school and classrooms 1-2 times during the two-year period.
- (d) Additionally, you will indicate that teachers at your site have regular opportunities to collaborate in grade-level teams or content-alike teams.

Item D. Request for a Letter of Recommendation from a Colleague

Please ask one colleague from your school site to submit a letter of recommendation. Email your colleague the contents of this page and the [link to the recommendation form](#) soon so that your colleague understands the features of the grant and has time to complete and upload the letter.

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Dear Colleague,

A teacher at your school is applying to become a Noyce Master Teaching Fellow in Mathematics and Science at San Diego State University. We have provided a short description of the program below. In your letter, please include

- how you know the applicant and for how long you have known the applicant
- experiences and/or commitment that the applicant has working with other teachers at your school site around math OR science teaching and learning.
- how you and the other teachers at the school site might benefit from this applicant's participation
- any interpersonal or leadership qualities of the applicant
- your assessment of the applicant's teaching

Please submit your recommendation on or **before July 15, 2020** to

<https://forms.gle/LBztF6rkM8P9eMuw9>

You will be able to upload a pdf, word document, or google doc.

***** Thank you for your time and effort! *****

The goals of this prestigious fellowship are

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- to support these teachers to become teacher leaders who support student teachers, teachers at their school site, and teachers in the broader community.

If the teacher at your site is selected as a Master Teaching Fellow (MTF), from Fall 2020 – Spring 2022, the MTF will work with SDSU's National Center for Urban School Transformation (NCUST). Each MTF will develop and implement a robust plan related to mathematics or science teaching and learning at their school site.

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You are welcome to contact the project leader, Dr. Lisa Lamb, Lisa.Lamb@sdsu.edu with any questions. MTFs will receive an annual stipend for their participation, supported by a grant from the National Science Foundation.

Item E. 10-minute video clip with responses to reflection questions

Please provide an unedited 10-minute video clip of your whole-class teaching, small-group work, or individual interactions with one student.* See directions below about submitting the video.**

Place the link to the video here:

Then, in relation to the video clip, respond to the following five questions. Your response to all five questions should be, in total across the five questions, approximately 500 to 750 words. **Respond to either 1a or 1b, and then 2-5.**

- 1a. *For 10-minute video clips recorded pre-Covid-19 in a face-to-face classroom:* In what ways do you consider this clip to be typical of your experiences with students?
- 1b. *For 10-minute video clips recorded over Zoom or similar platforms with a whole class, small group or individual students:* Under the circumstances, this video clip may be different from your typical teaching. Please describe aspects of this clip that are similar to how you think about teaching and aspects that are different.
2. Describe the mathematics/science your students were engaged with during the clip.
3. Describe what stands out for you in this clip.
4. What do you see as the strengths of the teaching and learning experiences shown in this clip?
5. We all know that there is no perfect lesson. If you could change one aspect of the classroom experiences shown in the clip, what would it be and why? (The one aspect can be related to you, your students, your questioning, their engagement, and so on).

* The video you submit may be whole-class, small-group, or one-on-one. *Be sure that the content is around mathematics or science.* You may have video from lessons that you conducted prior to the school closures. You may use an unedited portion of that clip, or you may (with parent permission), submit a session you record during online teaching. If you submit video from a lesson conducted prior to the school closures, it needs to have been filmed within the past 3 years.

**You will need to upload your video to YouTube (directions at <https://www.youtube.com/watch?v=kIVWGHtRTuE>) or you can add the video to your Google Drive and use the shareable link. Please make sure the link you provide is *shareable* so that the faculty will be able to view this video when reviewing your application.

Item F.	Response to ONE Student-Thinking Item
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Mathematics Teacher Applicants. Below, we have provided links to TWO items, but you will respond to ONLY ONE item.

Science Teacher Applicants. On page 8, we provided THREE items, but you will respond to ONLY ONE item. **Select ONE of the three items that best reflects your expertise.**

Teachers who teach both mathematics and science: You will apply to the Fellowship in only one content area. For your response, select ONLY ONE item from the content area for which you are applying.

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Mathematics Teacher Applicants. Response to ONE Student-Thinking Item

Following are two items, each of which is associated with a video of a student engaged in mathematics with a teacher. Please select **either Question 1 or Question 2, but not both**, and answer the questions associated with the video.

Question 1: This video is of a student in kindergarten working with a teacher on the task: *There are 20 kids going on a field trip. Four children fit in each car. How many cars do we need to take all 20 kids on the field trip?* To respond to the items associated with this video, click on this link

<https://forms.gle/RatLtQLaN3dxH8N66>

Question 2: The second video is of an intermediate grade student working with a teacher on the tasks

$$4 \div \frac{1}{3} \text{ and } 4 \div \frac{1}{4}$$

To respond to the items associated with this video, click on this link

<https://forms.gle/fDFoMiV2vFZn8EEQ9>

Science Teacher Applicants. Response to ONE Student-Thinking Item

Select ONE of the three following items that best reflects your expertise. Each of these three items includes partial students' responses to scientific phenomena. Imagine you are the teacher of these students.

For the item you select, complete the following four parts:

- (a) indicate which partial response is most correct and describe why it is correct;**
- (b) for the remaining responses, describe why they are less correct;**
- (c) briefly describe your next lesson;**
- (d) explain how it would support growth of all the students' understanding.**

Your response for the ONE item you select should be at most 500 words.

ITEM 1. A teacher asks her students what happens when an apple falls on the ground, rots and disappears.

- Sam: I think small organisms use it for energy and building.
Jess: I think it is just something that happens over time. It just goes away.
Taylor: I think wind and water soften it and over time it just dissolves in pieces.
Terry: I think the atoms and molecules in the apples just break apart.

ITEM 2. A teacher places a glass tea kettle with boiling water at the front of the classroom. A student notices bubbles forming on the bottom of the kettle that rise to the top and wonders what is in the bubbles. She asks her classmates what they think, and this is what they say:

- Marcus: They are bubbles of heat.
Calvin: The bubbles are filled with air.
Mikayla: The bubbles are an invisible form of water.
Brea: The bubbles are empty—there is nothing inside them.
Lucy: The bubbles contain oxygen and hydrogen that separated from the water.

ITEM 3. A teacher asked her students to imagine that it was possible to drill a hole all the way through the Earth from the North Pole to the South Pole. The hole is lined with super-strong steel so that it does not collapse or melt. There is air inside the hole. She asked the students to discuss what would happen to a rock that is dropped into the hole. Here is what they said:

- Alana: It would fall into the hole and would just keep going until it hit something.
Tess: I bet it would come out the bottom of the Earth and just keep falling forever into space.
Tim: It will go to the center of the hole and stop.
Jean: It will pass through the center, slow down, and fall back toward the center again.
Frank: It's probably just going to stick to the side somewhere.

Item G.	Essay Responses
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To help the selection committee get to know you better, please respond to the following questions. Each response should be approximately 500 words.

- a) In approximately 500 words, describe your ability and commitment to working in a district with a high percentage of students from families with incomes below the poverty line. In your response, be sure to discuss your experiences with issues associated with social justice and equity in educational settings.
- b) In approximately 500 words, write a statement of your philosophy about science or mathematics leadership addressing your beliefs and values about leadership, curriculum and instruction, students, teachers, parents, and other stakeholders. Please make your statement specific to leadership in science or mathematics education.

Item H. Transcripts

Please submit one set of transcripts (unofficial transcripts are acceptable) reflecting all of your coursework at the undergraduate level and above. You will need to add your transcripts to this document.

One way to do this is to (a) save this completed application as a pdf, (b) save your transcripts as a pdf (if not already in that format), and then (c) combine them together into one single document. See directions for combining pdfs using [Acrobat DC here](#) or

<https://acrobat.adobe.com/us/en/acrobat/how-to/merge-combine-pdf-files-online.html>

See directions for combining pdfs using [Preview here](#) or
<https://www.howtogeek.com/469641/how-to-merge-pdfs-on-mac/>

Preview is available for Macs. Or, you may be able to use an app to scan these pages and your transcripts into one single pdf.

**Save this document as <Last Name> <First Name> Noyce MTF App 2020
For example, save Alba Zed's application as Zed Alba Noyce MTF App 2020**

Ready to submit? Click [here](#), or on

<https://forms.gle/YLR2cVZf4pGG4hfF6>

Frequently Asked Questions

1. I teach at a charter school in the SDSU's geographic service area. Do I meet the eligibility requirement that fellows must teach in a public school?

As long as your school is a public school (and almost all charter schools are public schools) and students (usually) attend daily in a fairly traditional setting (that is, the school is *not* designed for home-school students or those engaged primarily in independent online study), you meet the requirements. Also, your school must operate within a high-need district (see FAQ #3).

2. I teach at a private school in San Diego. Do I meet the eligibility requirements?

Unfortunately, no. You must teach in a public school in a high-need district in SDSU's geographic service area. The goal of the fellowship is to support teachers who will in turn support traditionally underserved students.

3. From what districts are teachers eligible to apply?

Teachers are eligible for the fellowship if they work in a high-need *district* in SDSU's geographic service where SDSU places (or could place) student teachers.* These districts include (but may *not* be limited to)

- Cajon Valley Union School District
- Chula Vista Elementary School District
- Grossmont Union High School District
- La Mesa-Spring Valley School District
- Lakeside Union Elementary District
- Lemon Grove School District
- San Diego Unified School District
- Santee School District
- South Bay Union Elementary School District
- Sweetwater Union High School District

Unfortunately, teachers from districts outside of SDSU's geographic service area are not eligible to apply. Teachers from **ineligible districts include those located north of the 56 (such as Oceanside or Escondido)**. We wish that we could accommodate all of the amazing teachers from around San Diego County, but this grant is designed for teachers in SDSU's geographic service area.

4. I teach in a high-need district, but SDSU does not place student teachers in my district. Do I meet the eligibility requirement that I must teach in a high-need district where SDSU places student teachers?

Maybe. You must teach in a school district in SDSU's geographic student teaching service area. In some cases, SDSU may not *currently* place student teachers in your district, but may, in the future, be able to place student teachers in your district. If you are not sure whether your district is eligible for placing SDSU's student teachers, see the list of eligible and ineligible districts in FAQ 3. If your school district is not on that list but you think that your district qualifies as both high-need and is in SDSU's local service area, email Lisa Lamb at Lisa.Lamb@sdsu.edu.

5. Do I need to submit official transcripts?

No. We will accept unofficial transcripts. Be sure to submit transcripts from all colleges and universities attended beginning with your undergraduate degree.

6. For how many years does the fellowship last?

Five years. The Fellowship will begin September 2020 and run through June 2025.

7. What types of experiences will Fellows have during sessions?

Fellows will become part of a community that supports their teaching by exploring content, analyzing and learning how to build on students' thinking, and promoting classroom discussions; Fellows will also deepen their understanding and experiences as teacher leaders at their school site, within and outside their district, and with SDSU's student teachers. See the cover letter for details. Fellows will

- work with SDSU's National Center for Urban School Transformation for two years,
- engage in coursework in an EdD program in PK-12 Educational Leadership with a focus on mathematics and science leadership for three years,
- apprentice with university faculty in research labs for one summer, and
- engage in lesson study in a university course designed for prospective teachers of mathematics or science for approximately six weeks during one semester.

8. What kinds of teachers do you seek?

We seek teachers who are committed to teaching mathematics/science to *every* child who comes into their classrooms, who are genuinely curious about teaching and how children learn, who have a strong desire to improve their teaching practice, and who are interested in supporting other teachers by becoming teacher leaders at their school site and in the community.

9. If I am selected as a Fellow, how much is the stipend and for how many years will I receive the stipend?

The annual stipend for Fellows is \$15,200. Fellows will receive the stipend every year for five years. In return, Fellows must teach in a high-need district for five years, and they must commit to improving their practice, serving as guide teachers for SDSU's teacher candidates, and becoming teacher leaders who develop and implement a plan for improving the mathematics or science teaching and learning at their school site. They also need to commit to engaging deeply in all parts of the grant. Additionally, if a fellow ends participation or classroom teaching before the five-commitment, they must pay back one-half of all stipends received.

* As part of the SDSU Noyce Fellowship, all applicants must be currently teaching in a designated high-need district (the school itself may or may not be identified as a high-need school). For purposes of this fellowship, we define a high-need district as one that has *at least one school* in which 50 percent or more of the enrolled students are eligible for participation in the free and reduced-price lunch program.