Enhancing STEM Teacher Leadership through Equity and Advocacy Development (LEAD) in Houston

The LEAD Houston Fellowship

lead your classroom, lead Houston, lead the world!

February, 2018

Webinar

Please turn off your microphone and webcam.

If you haven't already, please complete the interest form to receive updates:

www.tinyurl.com/LHinterestform
Introductions

- Dr. Paige Evans (PI), Clinical Professor

- Dr. Jennifer Chauvot, (Co-PI) Associate Professor; Chair, Dept of Curriculum and Instruction

- Dr. Leah McAlister-Shields, Academic Program Manager and Professional Development Coordinator

- Ms. Mariam Manuel (Co-PI), M.A., Engineering Education Instructional Assistant Professor, Math, teachHOUSTON (tH) program; Engineering Education Instructor
What is this program about?

- Supporting more children of color in being successful in STEM disciplines
  - Through developing/strengthening STEM teacher culturally responsive teaching skills
  - Through developing/strengthening STEM teacher leadership skills

- 5 years of work
  - M.Ed. in Curriculum and Instruction with a specialization in STEM Education (14 months)
  - 4 years of subsequent professional development and instructional coaching
How is this being paid for?

- Pending funding .... (should here in the next week or so)
- The agency is the National Science Foundation (NSF), *Noyce Track 3*
- Scholarship funding will cover the costs of the M.Ed.
- Salary supplement, $10,000 for each of the four years.
What are my commitments?

- Full participation in a rigorous 30-hour M.Ed. program in Curriculum and Instruction that emphasizes
  - STEM integration
  - Culturally Responsive Teaching in STEM
  - Teacher Leadership in STEM

- Full participation in four years of professional development

- Leading professional development at your school
What are my school district’s commitment?

- Support Master Teacher Fellows (MTFs) to develop and integrate the use of Culturally Responsive Teaching in their math and science classrooms.
- Provide opportunities for leadership development of MTFs
  - serving as mentor teachers and cooperating teachers for preservice teachers at University of Houston.
- Support the efforts of MTFs in providing professional development at their campus and in the district.
- Ensure that MTFs do not receive a lower base salary due to the salary supplements provided as part of the grant.
What happens if I drop out?

- Before the completion of one year of the teaching service commitment, the total amount of scholarship or stipend received by the individual must be repaid.

- After the completion of one year of the teaching service commitment, one-half of the total amount of salary supplements received by the individual must be repaid.
## Tell me about the M.Ed. Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Big Ideas</th>
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<tbody>
<tr>
<td><strong>Summer 1</strong> (9 hours)</td>
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<tr>
<td>Issues in Science &amp; Math Education</td>
<td>Culturally responsive teaching (CRT), STEM integration, equity, social justice, teacher leadership</td>
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<tr>
<td>Fundamentals of Engineering Design</td>
<td>History of engineering education, standards, issues; engineering design methods</td>
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<tr>
<td>CUIN Capstone Seminar</td>
<td>Initial development of Capstone Project</td>
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<tr>
<td><strong>Fall 1</strong> (9 hours)</td>
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<td>Teaching Science/Math with Technology</td>
<td>Role of technology in teaching STEM concepts; practical application of theories in technology; inquiry-based instruction of STEM concepts; reflection on learning outcomes with chosen instructional practices; Professional seminar focus on research in education, community education, and technology.</td>
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<tr>
<td>Science &amp; Math Instruction in the Secondary School</td>
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<tr>
<td>CUIN Professional Seminar I</td>
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<td><strong>Winter Mini</strong> (3 hours)</td>
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<tr>
<td>Education in a Multicultural Society</td>
<td>CRT, equity, social justice, theories of multicultural education and application to lesson development</td>
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<td><strong>Spring 1</strong> (6 hours)</td>
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<tr>
<td>Curriculum and Development in Science &amp; Math</td>
<td>Social &amp; political factors in curriculum development in STEM</td>
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<tr>
<td>CUIN Professional Seminar II</td>
<td>Teachers as leaders, best practices, equity &amp; social justice</td>
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<td><strong>Summer 2</strong> (3 hours)</td>
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<tr>
<td>Project-Based Learning in STEM</td>
<td>Project-based learning infused with engineering education; finalize capstone project and presentation; August graduation</td>
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Program Delivery

- Face to face
- Hybrid
- Online
  - Synchronous
    - Log in every other Tuesday (*for example*), 5:30 - 8:30, w/webcam
    - Alternate Tuesdays - responsible for asynchronous assignments/activities
  - Asynchronous
    - Log in (on your own schedule) keeping up with weekly assignments/discussions
<table>
<thead>
<tr>
<th>14-month 30-hour STEM M.Ed (NOYCE)</th>
<th>Delivery</th>
<th>Comments</th>
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<tr>
<td>Issues in Science and Math Ed</td>
<td>Online with synchronous, coordinated, hybrid, sessions</td>
<td>STEM integration, equity, social justice, and teacher change &amp; leadership.</td>
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<tr>
<td>Fundamentals of Engineering Design</td>
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<tr>
<td>CUIN Capstone Seminar</td>
<td>Online, asynchronous</td>
<td>Initial Capstone Project development.</td>
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<tr>
<td>Teaching Science and Math with Technology</td>
<td>Online with synchronous, coordinated, hybrid, sessions</td>
<td>Attention to inquiry-based/problem-based instruction in science and mathematics classrooms.</td>
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<td>Science &amp; Math Instruction in the Secondary School</td>
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<td>Research in Ed, Community Ed, Technology</td>
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<td>Online, asynchronous</td>
<td>Attends to equity &amp; social justice</td>
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<tr>
<td>Curriculum Dev in Science &amp; Math</td>
<td>Hybrid</td>
<td>Social &amp; political factors in curriculum development Ongoing Capstone Project support</td>
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<tr>
<td>CUIN Professional Seminar II</td>
<td>Online, asynchronous</td>
<td>Teachers as Leaders, Best Practices, Equity &amp; Social Justice</td>
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<td>Project-Based Learning in STEM</td>
<td>Face to face</td>
<td>Finalize Capstone Project August graduation</td>
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Tentatively
What are the CUIN Professional Seminars?

- Three, 5-week mini-courses over the 15-week semester; asynchronous

- CUIN Professional Seminar I
  - Introduction to Educational Research
  - Community Education
  - Technology

- CUIN Professional Seminar II:
  - Educational Leadership and Professionalism
  - Study of Practice
  - Social Justice and Equity
So What is a Capstone Project?

- Required component of the CUIN M.Ed Program
- A systematic investigation of a problem or issue related to the student’s main area of study (STEM) within Curriculum & Instruction.
- The project must include connections to three of the six themes of the CUIN Professional Seminars
  - Trends and Issues in CUIN: Professional Seminar I
    - Introduction to Educational Research
    - Community Education
    - Technology
  - Trends and Issues in CUIN: Professional Seminar II:
    - Educational Leadership and Professionalism
    - Study of Practice
    - Social Justice and Equity
Overarching Goals of the CUIN Capstone Project

- To investigate a problem within Curriculum & Instruction that intersects with STEM that is meaningful to you and your professional goals

- We want you to demonstrate professional knowledge and skills
  - Knowledge of the research/professional literature
  - Skills in systematically understanding/solving a problem supported by empirical data
  - Skills in leadership
  - Skills in effective communication of ideas
  - Skills in effective use of technology in communicating ideas
What is submitted by the end of the program

- Paper
  - APA formatting
  - Free of grammatical/spelling errors!
  - Reference list of at least 15 peer-reviewed sources
  - Literature Review
  - The problem that was addressed
  - How you systematically examined the problem
  - What happened
  - Your findings and the evidence you are using to claim these findings
  - Recommendations/Implications for your field
  - Connections to three themes
  - Your personal reflections (what you’ve learned)

- Voice-over presentation/video (no more than 20 minutes)
What about the 4 years after the M.Ed. program?

- Summer NMSI Laying the Foundation Courses (4 days) for years 3 and 4
- Summer week-long PD with various topics including Culturally Relevant Teaching; Instructional Coaching; and Policy Advocacy
- Becoming and Mentor or Cooperating Teacher for preservice teachers
- Virtual and face to face meetings (one per semester
- Conference opportunities
- Overall leadership development
National Math and Science Initiative (NMSI) Partnership

- NMSI’s Laying the Foundation (LTF). LTF courses are teacher-to-teacher STEM education modules aimed at building the capacity of students, schools and districts.

- MTFs will partake in the NMSI LTF program during Years 1-3 after which they will consult on the LTF curriculum with regards to aspects of culturally responsive teaching as part of the NMSI Train-the-Trainer workshop during Year 4
Tell me more about the Fellowship...

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<tr>
<th></th>
<th>Year 1</th>
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<th>Year 2</th>
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<th>Year 5</th>
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<td>Summer NMSI LTF Courses (Years 1-3)</td>
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<td>Summer NMSI LTF Train the Trainer (Years 4)</td>
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<td>Virtual and Face to Face Fall and Spring Meetings (Years 1-5)</td>
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<td>Summer PD on Coaching (Years 3)</td>
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<td>MTFs serve as Mentor teachers to Preservice Teachers (Years 3-5)</td>
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<td>CRT Self-Reflection Analysis (Year 1)</td>
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<td>Summer PD on CRT (Year 2)</td>
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<td>CRT infused lessons taught by MTFs STEM classes (Years 2-5)</td>
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<td>Summer PD on Policy Advocacy (Years 4-5)</td>
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<td>MTFs lead PD (local effort) (Years 4 and 5)</td>
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What is the application process?

- Submit all materials by March 1, 2018
- 3/12 - 3/31/18: Selection committee will review application materials
- If selected, participate in a Skype interview by 4/13/18
- Applicants notified by 4/20/18
- Signed commitment letters due 4/27/18
What materials need to be submitted for the application?

- Online application
- Reference letter from their district supervisor (template will be provided)
- 2 additional reference letters
- A personal statement
- Resume
- Official transcripts
- A skype interview
Additionally

- Must have at least 3 years teaching secondary science or math in a high-need public school district
- There will be a follow-up phone interview with the district supervisor
How many teachers will be selected?

- 15 will be chosen to start Summer, 2018
  - August 2019 graduation
  - Professional development activities through May 2023

- 15 will be chosen to start Summer, 2019
  - August 2020 graduation
  - Professional development activities through May 2024
I want to be notified as you know more!

- And I want this powerpoint ...
- Please complete this form: https://tinyurl.com/LHInterestForm
Contacts

- Admissions: Ms. Britney Ikner: baikner@central.uh.edu
- The M.Ed. program: Dr. Jennifer Chauvot: jchauvot@uh.edu
- The professional development: Mariam Manuel, mammauel@uh.edu; Dr. Leah McAlister-Shields, lmcalister@uh.edu
Thank you for your interest in the LEAD Houston Fellowship!