



**Summer 2024, Queens College, CUNY**  
**Courses 1 and 2 – SEYS 792 and 793 of the**  
***Developing Algebraic Thinking in the Middle Grades Program***  
**\*Fully Remote & Tuition-Free\***  
**Open to NYC DOE teachers of middle or elementary school mathematics**  
**Deadline to apply is May 15, 2024**

This fully-online, five course post-master's program in *Developing Algebraic Thinking in the Middle Grades* at Queens College is designed to deepen and enhance elementary and middle school mathematics teachers' knowledge of mathematics and its pedagogy. CUNY will pay the tuition of NYC Public School teachers taking the first two courses, offered summer 2024. These courses set the groundwork for the larger 15 credit program and participants may elect to take the additional coursework during later semesters. Approaches are grounded in a philosophy of student-centered learning, deep mathematical understanding, and developing a growth mindset in participants and their students. With this mission in mind, the goals of this new program include outcomes for participants related to mathematics content, pedagogy, and attitudes.

**Increase your salary & earn a certification extension**

New York State certified teachers who already hold master's degrees desire incremental raises for a master's plus additional credits. Most teacher contracts, including the New York City Department of Education (NYCDOE) contract, reward teachers financially for attaining 15 credits and 30 credits beyond their master's. It is never too soon to begin thinking about how to increase your salary, while also continuing to improve your teaching practice! Queens College is currently offering the first two courses of the streamlined 15-credit Post-Master's (Advanced Certificate) Program in *Developing Algebraic Thinking in the Middle Grades* during summer 2024.

SEYS 792 (course 1) summer session 1, June 3-27, MTWR 4:40-7:10pm.

SEYS 793 (course 2) summer session 3, July 1- Aug 12, MTW 10am-12:15.

Fully online.

SEYS 792 and 793 meet NYS requirements for (1) a 5-6 extension for those already holding 7-12 certification in teaching mathematics in NYS, or (2) a 7-9 extension for those already holding 1-6 certification plus 30 credits in mathematics and the math CST.

**Summer 2024 Coursework, fully online**

SEYS 792: Developing Algebraic Thinking for Middle Childhood Education (3 cr)  
Developing algebraic thinking is more than simply practicing how to "solve for x." It involves recognizing patterns, modeling relationships between and among quantities, comparing and analyzing quantitative relationships, variables and functions, and nontraditional, non-routine problem solving. This course will build on these ideas and

provide suggestions and methods for developing algebraic thinking in the middle grades.

**SEYS 793: Mathematical Initiatives and Methods in The Middle Grades (3 cr)**

The course will start by developing teaching ideas and methods in a math classroom in the middle grades to reach, challenge, and engage all learners. Students' mindsets, cultures, and experiences will be brought out and developed to create stronger problem solvers who persevere and are not afraid to try other strategies. The second part of the course will help teachers plan and facilitate cross-content lessons and units throughout the middle grades through the lens of the STEAM initiative. Students will be expected to share ideas both synchronously and asynchronously.

**Coursework offered in later semesters, fully online**

**SEYS 794: Mathematical Foundations of the Secondary School Curriculum (3 cr)**

The purpose of this course is to engage students in experiences that will enable them to gain a deeper conceptual understanding and enjoyment of the mathematics they are teaching, particularly those underlying algebraic concepts and procedures. There will be an emphasis on student misconceptions, which include misconceptions that are related to or caused by students' cultural backgrounds, languages (ELLs), identities and special needs.

**SEYS 795: Issues and Applications in Secondary School Algebra (3 cr)**

The purpose of this course is to take an advanced perspective on the teaching of secondary school mathematics with the aim of helping students become more informed, more effective, and more reflective mathematics teachers. While it is agreed that there is no one best way to teach mathematics, research has indicated that learning occurs best when students are placed at the center of instruction and are actively engaged in constructing their own understandings. In this course we will examine the many issues concerning mathematics instruction and the latest applications associated with curriculum, instructional strategies, manipulatives, and technologies that can be used to enhance the learning of mathematics for all students.

**SEYS 796: Mathematics Content, Pedagogy, and Mindset: A Capstone Course (3 cr)**

This is the fifth and final course in the program. This course features a capstone project intended to synthesize knowledge and experiences gained through the program's preceding four courses. Over the course of the semester, students will be designing, implementing, and reflecting upon a unit plan which addresses all of the key themes discussed in prior courses. These plans will be refined through readings, data, and frequent feedback and collaboration from peers. There will be a culminating presentation to showcase the final results and to celebrate the conclusion of this course and the program as a whole.

**Application instructions**

Admission open to teachers who are currently teaching elementary or middle school mathematics that hold master's degrees in some area of teaching.

How to Apply:

1) Create an application account: Follow this link to the application and create an account: <https://www.qc.cuny.edu/ga/applying/>

2) Indicate your eligibility for this program by completing this form: [https://nycmenteach.formstack.com/forms/cuny\\_math\\_micro\\_credential](https://nycmenteach.formstack.com/forms/cuny_math_micro_credential)

3) Complete and submit the application:

When prompted, choose the program "Developing Algebraic Thinking in the Middle Grades", applying as "Non Matriculant" for summer 2024

- You will be required to pay an application fee of \$75. You may pay on-line by credit card or mail in your payment voucher with a check or money order.

- At the end of this process, it is necessary to click the "Submit Application" link at the bottom right-hand side of the page.

Step 1: Confirmation

Step 2 (Final Step): Signature and click the "Submit Application" button. A confirmation message will appear.

**In order to be considered for the Summer 2024 Developing Algebraic Thinking cohort, you must submit a cover letter** indicating:

(a) your interest in the summer 2024 courses in the Developing Algebraic Thinking in the Middle Grades program;

(b) grade level(s) and school in which you teach; and

(c) reason for wanting to attend the courses.

This is in addition to the regular non-matriculated requirements of submission of transcripts from all post-secondary institutions attended.

**These documents must be emailed to [gradappdocs@qc.cuny.edu](mailto:gradappdocs@qc.cuny.edu), with subject line ALGEBRA FOR ALL.**

Please note that applications will not be processed without these documents.

Missing items will cause unnecessary delays in the processing of your application.

**The deadline to apply is May 15, 2024.** All applications must be complete by this date. Only open to NYC DOE teachers currently teaching some area of mathematics.

Thank you!