



Lehman College - The City University of New York  
Micro-Credential “Algebra for All” (A4A)  
Fall 2022-Summer 2024



Lehman College offers 5-courses, 15-credit sequence **CUNY Micro-Credential for Algebra for All (A4A)**, to support teachers teaching Grades 3 to 9.

As a participant, you will:

- Deepen your content knowledge of critical areas that relate to algebra.
- Learn, apply and reflect on best and promising pedagogical practices for mathematics.
- Learn, apply and reflect on strategies for supporting students’ socio-emotional needs to open mathematical potential.

### Benefits of the Program

- Course credits associated with a grade of B or better will be accepted for transfer into Lehman’s Graduate Mathematics Education Program. Teachers may apply to have the course credits transferred once they have been accepted into the Mathematics Education Program and have matriculation status.
- Tuition and fees for 9-credits will be paid for by CUNY. *Please note: required textbooks for courses are not covered. Participants will be responsible for purchasing books and materials for each course.*
- Possibility for teachers to apply the credits to their 30+

### Application Eligibility

NYC DOE teachers teaching Grades 3 to 9, including Special Education and Bilingual Education teachers with completed applications will be considered for participation. A completed application includes timely submission of required health/vaccination documents, transcript of records and proof of certifications. For additional information on New York State Public Health Law and CUNY Corona Virus Guidelines pertaining to vaccinations, [CLICK HERE](#) and [HERE](#).

### How to Apply

- Create an account for **ApplyYourself** by clicking: [https://app.applyyourself.com/AYApplicantLogin/fl\\_ApplicantConnectLogin.asp?id=lehmangrad](https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=lehmangrad)
- Once you are registered with **ApplyYourself**, then click “Begin Application Here” and choose:

**Application Type:** Non-Degree

**Applying For:** Algebra for All (A4A)

**For Term:** Fall

**For Year:** 2022

- You are required to submit a copy of your **bachelor’s degree transcript** (unofficial copies acceptable for non-degree applications)
- The \$250 fee will be waived. **Application Deadline:** **June 17, 2022**

**Note:** *Acceptance of qualified applicants is on a first come first serve basis until limited seats are filled.*

**“CUNY Algebra for All” Course Schedule**

<b>(Note: Courses are fully online synchronous)</b>	Fa2022	Sp2023	Su2023	Fa2023	Sp2024- Su2024
*ESC 532 <i>Teaching Mathematics in MS &amp; HS</i> Designed to address the teaching of pre-algebra and algebra concepts, including ratios and proportional relationships, expressions, equations, functions, statistics, and geometry using student-centered, hands-on teaching approaches and technology	6pm – 8:40pm Mon				
*ESC 748 <i>Teaching Problem Solving in Mathematics in Middle and High School Introduction and application</i> of heuristic techniques to facilitate mathematical problem solving; use of technology as a problem- solving tool; assessment. Problems will be analyzed on both teacher and pupil levels.		6pm – 8:40pm Tue			
*MAT 602 <i>Introduction to Number Theory and Modern Algebra I</i> This course covers the basic ideas, techniques, and concepts of number theory pertinent to elementary, middle, and high school math teachers. Topics include unique prime factorization, divisibility, the Euclidean Algorithm, Diophantine equations, modular arithmetic, and the axioms of a group. <b>This course will emphasize conceptual understanding</b> and the importance and role of productive struggle, creativity and flexibility in thinking mathematically. In addition, identifying high-quality tasks and exploring issues of equity in mathematics classrooms will be discussed. Students will be expected to work together as a community of learners to solve problems and ask questions. Connections to the content in the New York State Next Generation Mathematics Learning Standards (2017) will be made.		5pm – 7:40pm Wed	5pm – 7:40pm Wed		
<b>ESC 742: Research in Mathematics Education.</b> Review of the research literature; theories of learning mathematics; alternative assessment; technology in mathematics instruction. An action research paper is required. The paper involves the process of inquiry through action research in the 5-9 mathematics classroom. Intertwining pedagogy and research will lead to develop better structured assessments, address the needs of all students experiencing difficulty in learning mathematics including English language Learners and students with special needs.				TBA	
<b>MAT 601: Secondary School Mathematics from an Advanced Standpoint</b> <b>An in-depth study of functions</b> to illustrate, explain, and explore mathematical objects encountered in grades 5-9 from an advanced perspective. Will connect <i>algebra, geometry, fractions, equations, and inequalities through function graphs. Mathematical topics covered will include: Equations, Functions, and Their Graphs; Families of Functions: Their Algebra and Their Geometry; Linear, Quadratic, Exponential, and Logarithmic Modeling; Systems of Equations;</i> and additional topics as time permits. <b>Many prospective teachers</b> have learned mathematics through a procedural, rule-based perspective. This course is designed to emphasize conceptual understanding of the content areas listed above as well as the connections between those content areas. <b>Teachers</b> will be expected to work together as a community of learners to solve problems and ask questions. Connections to the content in the New York State Next Generation Mathematics Learning Standards (2017) will be made.					TBA

*\*Tuition fees for these courses (9 credits) will be sponsored by CUNY. Candidates have the option of continuing the program after Summer 2023 but tuition may not be sponsored.*