



ED.M. IN MATHEMATICS EDUCATION WITH INITIAL CERTIFICATION: MATHEMATICS K-12 TEACHING (TWO-YEAR MASTER'S)

Revised Summer, 2024

*Students who complete this program successfully will receive an Ed.M. in Mathematics Education from the GSE as well as a nomination to the New Jersey Department of Education for a **Certificate of Eligibility with Advanced Standing (CEAS) in Mathematics (K-12)***

I. PROGRAM DESCRIPTION: The Ed.M. in Mathematics Education with initial certification program is designed for individuals who have completed a bachelor's degree, 30 credits in mathematics or a closely related discipline, and wish to become highly qualified mathematics teachers. Students in this program must complete the required general education and mathematics coursework. Once admitted to the program, students enter a professional education sequence to prepare them as teachers of mathematics.

Upon completion of program requirements, students earn an Ed.M. in Mathematics Education and the GSE will make a nomination to the New Jersey Department of Education on behalf of the student to receive a Certificate of Eligibility with Advanced Standing (CEAS) in Teacher of Mathematics (K-12).

The Ed.M. in Mathematics Education with initial certification program offers a range of foundational and specialized topics in mathematics education using a cohort model. Research-driven curriculum includes courses focused on the learning and teaching of mathematics, techniques and strategies for studying children's mathematical thinking, the uses of technology in mathematics teaching, and topics within mathematics itself.

In alignment with the GSE's mission, all teacher preparation programs and courses are designed to prepare teacher candidates to be culturally responsive practitioners and effectively teach diverse learners by fostering a deep understanding of students from historically underserved linguistic, economic, and cultural backgrounds and communities. Pedagogy courses aimed at meeting the specific learning needs of middle and high school students, along with carefully crafted internships under the guidance of experienced teachers and expert faculty providing feedback, ensure that candidates are well-prepared as teachers to advance equity and excellence in their content area.

II. SUBJECT MATTER SPECIALIZATION: Every candidate for certification in Mathematics Education must complete at least 30 credits in mathematics, computer science, and statistics. A minimum of twelve credits must be at the 300 or 400 level.

III. APPLICATION REQUIREMENTS: To be considered for admission to the program, applicants must provide the following before the application deadline:

1. Personal statement
2. One letter of recommendation
3. Official undergraduate transcripts - the New Jersey Department of Education requires a minimum GPA of 2.75 to be admitted to a teacher education program.

(NOTE: Praxis Core, SAT, GRE, ACT or other basic skills exams are no longer required as of January 1, 2025. Admission to the GSE Teacher Education Programs is competitive. Meeting the minimum requirements above does not guarantee admission.)

IV. HOW TO APPLY: Applications are submitted online at the Graduate Admissions website:

<https://newbrunswickgrad.rutgers.edu/>

1. Click on "Create Account or Login" and follow the instructions given.
2. Under "Start an application today!", click **Apply Now**
Application Selection
3. For "Level of Application", select **Graduate**
4. For "Applicant Type", select **Degree**
5. Continue filling out the application, following the on-screen instructions.
Program of Study
6. Under "Program Information", make sure **Degree** is selected for "Applicant Type"
7. For "Degree Type", select **Master's (e.g. MA, MS, EdM, MFA)**
8. For "Area of Study", select **Education**
9. For "Location/Instructional Method", select **New Brunswick**
10. For "Program Selection", select **Education - Mathematics - Certification (EDM) New Brunswick**
11. For "Term", select the summer semester after your May undergraduate graduation date.
12. Complete the rest of the application by providing the requested information.
13. Enter payment information for the non-refundable application fee.
14. Submit your application.

V. GENERAL EDUCATION REQUIREMENTS: Students must complete coursework in each of the following areas by completion of the program; fulfillment of these courses is not required for admission into the program.

<u>General Education Requirements</u>	
1. Educational Technology:	
15:254:548	Technology in Mathematics Teaching (taken in Phase 2)
2. Human Development: one course	
05:300:306	Educational Psychology: Principles of Classroom Learning or
05:300:307	Human Development: Birth Through the Transition to Adulthood

VI. ADDITIONAL PROGRAM REQUIREMENTS (3 credits, take in Phase 1 or 2)

Course Number	Course Name	Credits
15:255:568 ¹	Introduction to Teaching in Urban Schools & Communities ¹	3.0

VII. PROFESSIONAL EDUCATION REQUIREMENTS

Course Number	Course Name	Credits
Phase 1 Summer (0 credits)		
n/a	Working with Minors	0
n/a	School Law	0
Phase 1 Fall 1 (10 credits)		
15:255:530	Clinical Experience Phase 1	1.0
15:253:512	Teaching Emerging Bilinguals in PK-12 Classrooms	3.0
15:254:550 or 05:300:442 ^G	Problem Solving Processes in Mathematics or Mathematical Practices: Doing and Teaching Mathematics	3.0
05:300:341 ^G	High School Mathematics Content: Teaching and Assessment	3.0
Phase 2 Spring 1 (12 credits)		
15:255:531	Clinical Practice Phase 2	3.0
15:293:534	Classroom Organization for Inclusive and Special Classrooms	3.0
15:254:533	Methods of Teaching and Assessing in Secondary Mathematics	3.0
15:254:548	Technology in Mathematics Teaching	3.0
Phase 3 Summer 2 (0 credits)		
	N/A	
Phase 3 Fall 2 (12 credits)		
15:255:535	Clinical Practice Phase 3	9.0
15:255:532	Clinical Practice Phase 3 Seminar	3.0
Phase 4 Spring 2 (12 credits)		
15:255:539 or 15:253:522 or 15:253:523 or 15:253:539 or 15:293:539 or 05:300:406 ^G	Students, Communities, and Social Justice or Bilingual-Bicultural Education or Language and Culture or Methods of Teaching and Assessing English Language Learners (TELL) or Students with Disabilities, Schools, and Social Justice or Community-Based Language Learning (CBLL)	3.0
15:293:523	Inclusive Teaching in Education	3.0
15:254:540 or Elective	Understanding School-Aged Students Mathematical Learning or <i>Substitute with an elective course to be determined by program faculty</i>	3.0
15:254:551 or Elective	Critical Thinking and Reasoning in Mathematics or <i>Substitute with an elective course to be determined by program faculty</i>	3.0
TOTAL CREDITS:		49.0

¹ Students who completed 05:300:368 as an undergraduate do not need to repeat the course, but a 300-level course is required to replace the required 3 graduate credits.

^G Course must be 300-level or above to count towards graduate credits. 300- and 400-level courses must be registered with a **G-prefix**.

Additional Program Completion Requirements

VIII. PRAXIS II TESTS: Students seeking certification in mathematics must achieve a passing score on the Mathematics: Content Knowledge Praxis II examination (code 5165). **Students must pass the Praxis II prior to the start of full-time Clinical Practice Phase 3.**

IX. PERFORMANCE-BASED ASSESSMENT (PBA): All candidates must pass a designated performance-based assessment during Clinical Practice Phase 3.

X. PHYSIOLOGY, HYGIENE, AND SUBSTANCE ABUSE ISSUES: The Office of Student and Academic Services administers this New Jersey Department of Education exam during the final semester of the program.

New Jersey Certification Options

Bilingual/Bicultural Teacher	English as a Second Language	Bilingual/Bicultural & ESL	Teacher of Students with Disabilities
12 credits - ONLINE	15 credits - ONLINE	18 credits - ONLINE	21 credits - ONLINE
15:253:522 Bilingual-Bicultural Ed		15:253:522 Bilingual-Bicultural Ed	15:293:533 Assessment and Measurement for Special Education
15:253:520 Principles of Language Learning: Second and World Language Acquisition	15:253:520 Principles of Language Learning: Second and World Language Acquisition	15:253:520 Principles of Language Learning: Second and World Language Acquisition	15:293:523 Inclusive Teaching in Education OR 05:300:304 Art Across the Curriculum in Inclusive Classrooms (FALL 2025 & AFTER)
15:253:530 (or 15:299:535) Foundations of Language	15:253:530 (or 15:299:535) Foundations of Language	15:253:530 (or 15:299:535) Foundations of Language	15:251:558 Reading & Teaching in the Social Studies with Diverse Literature or 15:299:516 Language Across Content Areas: Upper Elementary and Middle School
15:253:512 AND 15:253:513 Teaching Emerging Bilinguals	15:253:512 AND 15:253:513 Teaching Emerging Bilinguals	15:253:512 AND 15:253:513 Teaching Emerging Bilinguals	15:293:580 Literacy for Students with Disabilities
	15:253:539 Methods for Teaching and Assessing English Language Learners	15:253:539 Methods for Teaching and Assessing English Language Learners	15:293:522 Learning Disabilities OR 15:293:545 Characteristics & Methods for High Incidence Disabilities
	15:253:523 Language and Culture	15:253:523 Language and Culture	15:293:534 Classroom Organization for Inclusive and Special Classrooms
<i>Demonstrated proficiency in an additional language required</i>	<i>Demonstrated proficiency in English required</i>	<i>Demonstrated proficiency in English and an additional language required</i>	05:300:383/15:293:583 Introduction to Special Education OR 15:293:539 Students with Disabilities, Schools & Social Justice

Rutgers Professional Certificate Options

Educational Technology	Gifted Education	Maker Education	Consider starting an additional state licensure program and/or a Rutgers certificate program while working on your master's degree requirements. In consultation with your advisor, you may consider taking courses from these areas in place of your graduate-level elective(s). *
9 credits - ONLINE	12 credits - ONLINE	15 credits - ONLINE	
15:255:503 Introduction to Teaching with Digital Tools	15:294:531 (OR 05:300:320) The Gifted Child	15:290:553 Developing a Maker Mindset	
15:255:504 Web-Based Multimedia Design for Educators	15:294:532 (or 05:300:322) The Social & Emotional Development of Gifted Children	15:290:554 Designing/Facilitating Maker-Centered Learning Environments	
15:255:506 Developing Digital e-Learning Environments	15:294:533 Curriculum & Instruction for the Gifted	15:290:556 Introduction to Design Thinking	
	15:294:534 Gifted Program Development	15:290:555 Makerspace Safety and Emergency Lab	
		15:290:559 Maker Education Capstone	

You must complete an application form and obtain a signature from your faculty advisor prior to the final semester of the program. The application forms are available in the Office of Student and Academic Services or by emailing Colleen McDermott at: colleen.mcdermott@gse.rutgers.edu. Some programs require licensure exams for admission and/or certification recommendation.

These programs do not lead to a degree of any kind.

It is your responsibility to enroll in all of the required courses through Rutgers University. No program requirements may be met at any other institution. You are expected to maintain a "B" or better average in the non-degree coursework.

After completing all program requirements, students should contact Ken Tufo at: ken.tufo@gse.rutgers.edu. Students will be provided instructions on how to apply for their license(s). Please note that you cannot obtain an advanced certification until you complete the initial teacher certification. After completing all of the required courses in a GSE graduate certificate program, please contact Colleen McDermott to obtain your completion certificate.

*Not all courses are available to students enrolled in a 4+1 program during their senior year.

It may not be possible to complete these programs until after you earn your master's degree. Please email ken.tufo@gse.rutgers.edu for specifics.