



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

Revised Summer, 2024

*Students who complete this program successfully will receive an Ed.M. in Science 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 Teacher of Biological Science (K-12)***

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

Upon completion of program requirements, students earn an Ed.M. in Science 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 Biological Science (K-12).

The Ed.M. in Science Education with Biological Science initial certification program offers a range of foundational and specialized topics in biological science education using a cohort model. Students deepen their understanding of the learning and teaching of biological sciences with a focus on inquiry-based teaching aligned with the Next Generation Science Standards (NGSS). The program curriculum provides students with exposure to fundamental courses related to education including the Urban Social Justice Core classes, as well as program-specific coursework related to teaching biology at the middle and high school levels.

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: Before students can be nominated for teacher certification, they must complete a major or its equivalent (at least 30 credits) in a life science (biology, zoology, botany, physiology, or others). The coursework should be distributed among zoology, botany, physiology, microbiology, and genetics. At least 12 credits must be taken at the 300 or 400 level. Students must consult with their advisor to determine if additional coursework in science is required.

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 - Science - Certification (EDM) New Brunswick**
Program Details
11. For "First Preference Concentration", select **Biological Science Certification**. (2nd and 3rd preferences can be left blank.)
12. For "Term", select the summer semester after your May undergraduate graduation date.
13. Complete the rest of the application by providing the requested information.
14. Enter payment information for the non-refundable application fee.
15. 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	
15:256:561	Demonstrations and Technology in Life Science (take in Phase 4)
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 (7 credits)		
15:255:530	Clinical Experience Phase 1	1.0
15:253:512	Teaching Emerging Bilinguals in PK-12 Classrooms	3.0
15:256:550	Biology and Society	3.0
Phase 2 Spring 1 (9 credits)		
15:255:531	Clinical Practice Phase 2	3.0
15:293:534	Classroom Organization for Inclusive and Special Classrooms	3.0
15:256:553	Teaching and Assessment in Life Science	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 (9 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
15:256:561	Demonstrations and Technology in Life Science	3.0
TOTAL CREDITS:		40.0

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 biological sciences must achieve passing scores on the Biology: Content Knowledge (test code 0235/5235) and General Science: Content Knowledge (test code 0435/5435) Praxis II examinations. **Students must pass both tests 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.