RUTGERS–NEW BRUNSWICK
Graduate School of Education
Advancing Excellence and Equity in Education

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ED.M. IN SCIENCE EDUCATION WITH INITIAL CERTIFICATION: AGRICULTURAL SCIENCE K-12 TEACHING (4+1)

Revised Summer, 2024 -- For students earning a bachelor's degree in May, 2026 or later

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 Agriculture (K-12)***

For students enrolled in the School of Environmental and Biological Sciences (SEBS)

I. PROGRAM DESCRIPTION: The Ed.M. in Science Education with Initial Certification in Agricultural Science K-12 Teaching (4+1), offered jointly by the GSE and Rutgers' School of Environmental and Biological Sciences (SEBS), is designed for Rutgers undergraduate students who wish to teach agriculture science in grades K-12. This program provides undergraduates with an opportunity to earn their bachelor's degree, a master's degree, and an initial teacher certification with just one additional year of study. Rutgers undergraduates do preliminary coursework as advised during the first three undergraduate years, including undergraduate coursework in agricultural science or a closely related field. They are admitted to the program during the spring semester of junior year and enter the professional education sequence during senior year. After students are awarded a bachelor's degree by the undergraduate college, they continue with the professional sequence for a fifth year of full-time graduate study at the GSE.

Upon completion of all 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 Agricultural Science (K-12).

The Ed.M. in Science Education with Initial Certification in Agricultural Science K-12 Teaching (4+1) program offers a range of foundational and specialized topics in agricultural science education using a cohort model. Through a comprehensive, empirically driven curriculum, students deepen their understanding and knowledge surrounding agricultural sciences while developing content-specific teaching methods appropriate for the discipline. Students become familiar with current standards surrounding agricultural science education including the delivery of supervised agricultural experiences, as well as possess the ability to successfully integrate technology into their instruction to promote student learning.

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.

The program has four major goals:

1. To help students develop a view of science as a knowledge building enterprise and understand the scientific practices associated with scientific inquiry.
2. To help students learn pedagogical content knowledge of agricultural sciences, i.e., content specific teaching methods in this discipline.
3. To familiarize students with current state and national standards in life science education.
4. To provide students with the knowledge and skills of integrating technology into agricultural science instruction.

II. MAJOR: Every candidate for certification in agricultural sciences education must complete a full major in agriculture and food systems, animal science, biology, plant science, etc. (Note: Not all SEBS majors are eligible for the 4+1 program.)

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 - 5 Year (EDM) New Brunswick**

    Program Details
11. For “First Preference Concentration”, select **Agricultural 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. It is highly recommended that you coordinate the elements of this list with those of the general distribution requirements of your undergraduate college to make the most efficient use of your time. Courses should be selected in conjunction with the undergraduate program advisor.

Some of these requirements may be taken during the fifth year as a graduate elective as noted below.

General Education Requirements
1. Math: two courses (Follow SAS/SEBS Core Quantitative and Formal Reasoning requirement (QQ, QR)
2. Science: two courses (Follow SAS/SEBS Core Natural Sciences requirement)
3. Educational Technology 15:256:561 Demonstrations and Technology in Life Science (take in Phase 4)
4. Human Development: one course (Course may be used to fulfill one elective requirement if taken in the fifth year) 05:300:306 Educational Psychology: Principles of Classroom Learning **or** 05:300:307 Human Development: Birth Through the Transition to Adulthood

VI. PRE-ADMISSION REQUIREMENTS

Course Number	Course Name
SEBS Requirements	
11:374:416 **or** 11:067:415	Environmental Education Inside & Outside the Classroom **or** Leadership in Animal Science (Recommended for Animal Science majors; spring semester)
GSE Requirements (May be taken during Phase 1 or Phase 2 with advisor's permission)	
05:300:368	Introduction to Teaching in Urban Schools & Communities

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)		
05:300:498	Clinical Experience Phase 1	1.0
15:253:512	Teaching Emerging Bilinguals in PK-12 Classrooms	3.0
11:020:425	Developing Ideas in Agricultural and Food Systems Education	3.0
Phase 2 Spring 1 (9 credits)		
05:300:499	Clinical Practice Phase 2	3.0
15:293:534	Classroom Organization for Inclusive and Special Classrooms	3.0
11:020:426	Teaching and Assessment in Agriculture and Food Systems Education	3.0
	Undergraduate Total:	**16.0**

Course Number	Course Name	Credits
Phase 3 Summer 2 (3 credits)		
	Elective (Consider the summer CASE courses to fulfill this requirement. Speak with program faculty for details.)	3.0
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 (15 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
	Elective	3.0
	Elective	3.0
	Graduate Total:	**30.0**
	TOTAL CREDITS:	**46.0**

[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: There are currently no Praxis II exams for agricultural education.

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.