

**STEM EDUCATION-ACCELERATED
MATH & EDUCATION
(G845 & C027)**

**ACCOMPANYING PROGRAM GUIDE
TO MA STEM HANDBOOK
FOR
BA MATH MAJORS**

**ELIGIBILITY FOR ADMISSION
AND COMPLETION OF PROGRAM
2026-2027**

INTRODUCTION

The purpose of this program guide is to provide all native and transfer students interested in pursuing K- 12 Math certification in the STEM -Education Accelerated program, the requirements needed to accomplish a certification in the teaching of Math. The following pages provide the candidate with benchmarks for program entry and completion along with general College of Education policies regarding this program.

Candidates are also provided with a sample Table (Table 1) that demonstrates possible program course sequence that can be targeted to help develop their content background for teaching middle and/ or high school Math. ***Please note that Table 1 is merely a sample for demonstrative purposes. Choice and sequence of Math courses and general education courses need to be confirmed with the undergraduate math advisor. Candidates can choose to target any math content core courses throughout their Math program only with the consent and approval of their math education advisor.***

Education based courses, in particular, that are to be taken prior to any graduate level course belonging to the MA STEM sequence, must be approved by the STEM-Education Accelerated undergraduate math and education advisor.

NOTE: Please be aware that any disciplinary or academic sanctions will/may result in extended time for program completion and will prolong graduation.

Benchmark Exemptions:

On June 4, 2014, the State Board of Education adopted new regulations for teacher preparation program entry and teacher certification. These rules include a new basic skills requirement:

- Candidates starting a traditional teacher preparation program in or after the 2015-16 academic year must pass a basic skills assessment prior to starting coursework in a program.
- Alternate route candidates seeking a Certificate of Eligibility (CE) must pass a basic skills assessment to obtain the CE as of September 1, 2015.

Candidates seeking Limited CEAS (see: [Limited Instructional Certification of Eligibility \(CE\) and Certification of Eligibility with Advanced Standing \(CEAS\) Candidate Guidance](#)) can have either GPA waived or a praxis core score waived upon application of the MA STEM program. Please indicate this if you seek a Limited CEAS to your undergraduate **education** advisor (*please also see the MA STEM Program handbook for more information on alternate pathways requirements to certification*)

See <https://www.nj.gov/education/certification/testing/req/> for required cut scores per subject area

PROGRAM TRANSITION POINTS AND REQUIREMENTS

Entry requirements into BA Math

- Meet entry requirements for the BA in Math Program please see:
<https://csm.rowan.edu/departments/math/academic-programs/accelerated-degrees/>

Transition Point 1: Entry Requirements for Education Coursework in Senior Year (Deadline: March 31 during Junior Year)

- *Achieve and maintain Overall/ Cumulative GPA of 3.0 or above **(if between 2.75 and 3.0 – possibility of entry pending entry cohort average)**
- Grades C- or better in any undergraduate education courses. Required courses for entry into the MA in STEM Education program may only be attempted twice.
- Submission of Matriculation packet to STEM Education- Accelerated program advisor **by August 1st** prior to entry into Senior year
- Submission of NJDOE Criminal Background check **by August 1st** prior to entry into Senior year
- Submission of clear TB test **by August 1st** prior to entry to Senior year. Mantoux (TB) Tests: School districts are now requiring current TB tests for all field placements. Please visit <http://www.rowan.edu/colleges/education/ofe/mantoux.html> for details..
- Attend advising session with College of Education Advisor
- Completion with a C- or higher in Adolescent Development and either a Health and Wellness course or any general Biology course or a nutrition course.

Transition Point 2: Entry Requirements for Matriculation into MA STEM (March 31 of Senior Year)

- *Achieve and maintain Overall/ Cumulative GPA of 3.0 or above **(if between 2.75 and 3.0 – possibility of entry pending entry cohort average)**
- Grades C- or better in any undergraduate education courses. Courses required for the MA in STEM Education may only be attempted twice.
- Grades for Graduate courses being taken as part of matriculation in the senior year for MA STEM must have a minimum of B- each.
- *Praxis II in Math: Content Knowledge; test code 5165 **prior to graduating from the MA STEM program** (Required score: **159**). See: <https://www.nj.gov/education/certification/testing/req/>
- Completed Full-Year Residency application in the College of Education designated data base system **(Between November 1 - November 30 during senior year)**
 - *Note: Students will be placed in the 7 most southern NJ counties for their Clinical Practice Placement; Burlington, Camden, Gloucester, Atlantic, Cumberland, Salem and Cape May. No exceptions will be made.*

Transition Point 3: Checkpoint for completion of BA and senior level education coursework (End of Spring semester i.e. Semester 8 - senior year):

- Submission of Transfer & Transition Forms
- Proof of completion of BA requirements in Math demonstrating a coherent sequence of at least 30 credit hours of content specialization courses; 12 of which are at the 300 level or higher.
- Complete successfully the following three undergraduate required courses:
 - Adolescent Psychology (or confirmed state equivalent)
 - Health & Wellness or Nutrition or Biology (human related preferable). If not completed see graduate advisor regarding alternative.

Transition Point 4: For successful program completion (At the end of the graduate year)

- Overall GPA of 3.0 or better (*nonnegotiable / non appealable*) at exit of the program with no course grade lower than B- and no *Incompletes*
- Meets minimum expectations on all signature assignments.
- *Successful submission and completion of NJDOE approved summative teacher performance project (iTPA Impact on Student Learning Assessment).
- Final residency evaluation demonstrates “Developing” or higher on all Danielson Framework indicators and “Meets Expectations” or higher on all SPA addendum indicators as evidenced by successful completion of STEM 60512 AND 60513
- Successful completion and recommendation for certification from, Rowan University Residency supervisor and Program, Coordinator.

Graduation and Certification: Please note the completion and submission of both graduation and teaching certification applications. See dates listed on the Registrar’s webpage at www.rowan.edu/Registrar. Students apply for graduation electronically through banner self-service and apply for certification through the College of Education Advising Center (CEAC). A student can obtain a cert application through the College of Education Advising Center or online on the College of Education webpage. **It is important that these forms be submitted to the appropriate office by the printed deadline dates.** “Walking” papers are not a means to graduate. It is only a means to participate in the commencement ceremony. Go to www.rowan.edu/registrar (under forms) for the Commencement Participation Form and deadline/details (signatures are needed). Completed certification application with Office of Clinical Experience at College of Education. Deadline: **January 15th -March 31st of graduate year.**

***Essential Notes**

- Please note that required values and passing for GPA, all praxis exams and iTPA/ Impact on Student Learning Assessment are non-negotiable and non- appealable.
- *Incomplete or unscorable tasks on iTPA/ Impact on Student Learning Assessment will/ may delay graduation and certification.*
- For all students, all of the **required courses and any eligible electives (*this means all allied science and math classes pertinent to your Math GPA*)** must be used in the calculation of the Math GPA (i.e., none of these courses is to be excluded in GPA calculation).
- For transfer (and native students taking any of these courses at other institutions), the Math GPA is to be calculated from transcripts and coursework at Rowan.
- **Please also reference** both the MA STEM Program and Clinical Practice Handbooks for more detailed information

*STEM Education -Accelerated
(BA Math Majors & MA in STEM Education)*

Table 1: Proposed Course Sequence with Transition Points. Table demonstrates a sample of course sequence throughout the STEM Education-Accelerated Math and MA STEM program. Courses listed are examples of courses that can be taken in Math but decision(s) pertaining to choice of designated math courses is reserved for the math department. Transition points indicate deadline for meeting particular benchmarks.

Year 1	Semester 1 ^{1*} (16 credits)	s.h.	Semester 2 (16 credits)	s.h.
Courses that should normally be taken in the freshman year	MATH 01130: Calculus I	4	COMP 01112: College Comp II	3
	PHIL 09.130 Intro to Symbolic Logic	3	MATH 01131: Calculus II	4
	COMP 01111: College Comp I	3	Math 03.150 Discrete Mathematics	3
	Elective	3	ACE course	3
	Rowan Seminar/Elective	3	CS 01104 Introduction to Scientific Programming	3
Year 2	Semester 3 (16 credits)	s.h.	Semester 4 (15 credits)	s.h.
Courses that should normally be taken in the sophomore year	CMS 04205: Public Speaking	3	STAT 02.320 Concepts in Statistical Data Analysis	3
	MATH 01230: Calculus III	4	Math 01.232 Mathematical Modeling	3
	Math 01.210 Linear Algebra	3	PSY 09210: Adolescent Development	3
	Elective	3	Elective	3
	LIT Course	3	Elective	3
Year 3	Semester 5 (16 credits)	s.h.	Semester 6 (15 or 16 credits)	s.h.
Courses that should normally be taken in the junior year	Math 01.310 College Geometry	4	Math 01.410 History of Mathematics	3
	Math 01.340 Modern Algebra	3	Math 01.361 Real and Complex Variables	3
	SBS Elective	3	Math 01.205 Technological Tools for Discovering Mathematics or other Restricted Math Elective(Education) (3sh)	2-3
	Elective	3	PHYS 00.221 Intro Thermodynamics or PHYS 00222: Intro to Electricity & Magnetism	4
	PHYS00.220 Introductory Mechanics	4	Intro Thermodynamics or Intro to Electricity & Magnetism	3
			TRANSITION POINT 1	

^{1*} One of the courses taken freshman year must be a Rowan Seminar designated course.

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Year 4	Semester 7 (15 credits)	s.h.	Semester 8 (12 credits)	
Courses that should normally be taken in the senior year	*SMED 60550: Schools & Society**	3	*STEM 60510 Teaching STEM in Diverse Settings**	3
	Math 01.499 Mathematics Seminar for Educators	3	Elective	3
	Health & Wellness (HLTH 00103) or Biology	3/4	READ 30520 Adolescent Literacies**	3
	*STEM 60501 STEM Teaching & Research Methods I**	3	Elective	
	Elective	3	TRANSITION POINTS 2&3	

Year 5	Semester 9 (9 credits)	s.h.	Semester 10 (9 credits)	s.h.	Semester 11 (3 credits)	s.h.
Courses that should normally be taken in Master's degree year	STEM 60502: STEM Teaching & Research Methods: Mathematics II	4	STEM 60503: STEM Teaching & Research Methods: Mathematics III	5	STEM 60504: Professional Seminar for STEM Educators	3
	STEM 60524: STEM Clinical Seminar I	1	STEM 60525 Clinical Seminar II	1		
	*STEM 60512: STEM Clinical Practice I	1	*STEM 60513: STEM Clinical Practice II	3		
	SELN 60576: Inclusive Instruction in STEM Classrooms	3	TRANSITION POINT 4			

* One of the courses taken freshman year must be a Rowan Seminar designated course.

* Indicates courses with fields

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For General Education requirements and credits please see:

<https://academics.rowan.edu/csm/departments/math/docs/BA-BS-Requirements/ba-mathematics-new-3-concentrations-w-gened-25-jun-18.pdf> -for BA Math. However, please note that the courses required to earn initial NJ certification to teach in the public schools, but may not be required for BA in Chemistry are. **Adolescent Development (satisfies SBS) AND Health and Wellness (HLTH 00103) OR a biology course. Prerequisites of Calculus I and Biology 2 are required**

Table 2. Coursework Breakdown. Demonstrates breakdown of coursework

B.A. in Mathematics (Education Specialization) Coursework 38-39 Credit Hours

Mathematics (Education Specialization) Major Required Courses 38-39 credits	Credits	D
Discrete Mathematics	3	
Calculus II	4	
Calculus III	4	
Linear Algebra	3	
Concepts in Statistical Data Analysis	3	
Modern Algebra	3	
Mathematical Modeling	3	
Real and Complex Variables Math	3	
College Geometry	4	
History of Mathematics	3	
Mathematics Seminar for Educators	3	
Mathematics Major Restricted Elective	2-3	
TOTAL CREDITS MATHEMATICS (EDUCATION SPECIALIZATION) MAJOR COURSES	38-39	

Free Elective Courses: 38 or 37 credits (Note: 12*** of these credits are required courses for the MA STEM program)	Credits	D
Schools & Society: Foundations for Secondary Teaching ***	3	
Teaching STEM in Diverse Settings ***	3	
STEM Teaching & Research Methods I***	3	
Adolescent Literacies ***	3	
ADD 25-26 additional credits of free electives to reach a total of 120 s.h. total	26 or 25	
TOTAL CREDIT ELECTIVES	38 or 37	

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M.A. STEM Coursework during the Residency Year: Credit Hours Total (21)

Additional M.A. STEM Required Courses	s.h.	D
STEM Teaching & Research Methods II: Mathematics	4	
STEM Clinical Practice I	1	
STEM Clinical Seminar I	1	
Inclusive Instruction in STEM Classrooms	3	
STEM 60503: STEM Teaching & Research Methods III: Mathematics	5	
STEM Clinical Practice II	3	
STEM Clinical Seminar II	1	
Professional Seminar for STEM Educators	3	
TOTAL MA STEM CREDITS DURING RESIDENCY YEAR	21	
TOTAL REQUIRED MA STEM CREDITS	33**	

**These courses are required to fulfill the Rowan Experience Requirements;

*** 21 credits during Residency +12 taken during BA program