



**COMBINED ADVANCED
DEGREE PROGRAM
TO SECONDARY EDUCATION
PROGRAM GUIDE
FOR
BA GEOLOGY MAJORS
& MA IN STEM EDUCATION
ELIGIBILITY FOR ADMISSION
AND COMPLETION OF PROGRAM
2020-2021**

INTRODUCTION

The purpose of this program guide is to provide all native and transfer, students interested in pursuing K- 12 Earth and Space Science certification in the Combined Advanced Degree Program (CADP) the requirements needed to accomplish a certification in the teaching of Earth and Space Science. The following pages provide the candidate with benchmarks for program entry and completion along with general College of Education policies regarding this program, student responsibilities and general advisement information.

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 Earth and Space Science. Please note that Table 1 is merely a sample for demonstrative purposes. Choice and sequence of Geology courses and general education courses need to be confirmed with the undergraduate science advisor. Candidates can choose to target any **science** content core courses throughout their Geology program only with the consent and approval of their science advisor.

Any *education* based courses in particular that wish to be taken prior to any graduate level course belonging to the MA STEM sequence, must be approved through the undergraduate CADP science education advisor.

Finally, a student agreement presented at end of this document, pertaining to matriculation into the MA STEM program and acknowledgement of program requirements should be signed by candidate. No signature provided will indicate “no entry” into the program

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 are exempt from the basic skills requirement (Praxis Core) if they can demonstrate a score on the SAT, ACT, or GRE at or above the cut score for the year in which they took the exam. To see if you are exempt please check:

<http://www.state.nj.us/education/educators/rpr/preparation/BasicSkillsExemptionCutScores.pdf>

PROGRAM TRANSITION POINTS AND REQUIREMENTS

Entry requirements into B.A. Geology please see <https://earth.rowan.edu/departments/geology/Programs.html>

- Check academic program guide for B.A. in Geology at <https://sites.rowan.edu/registrar/docs/program-guide-geology-ba---rc.pdf>

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 (*nonnegotiable / non appealable*)
- Undergraduate courses required for the MA in STEM Education may only be attempted twice. Submission of Matriculation packet to CADP 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.
- *Passing score on Praxis Core Academic Skills for Educators:
 - Reading Test (Test Code 5713) : Score of at least 156
 - Writing Test (Test Code 5723): Score of at least 162: and
 - Math Test (Test Code 5733): Score of at least 150
- Attend advising session with College of Education Advisor
- Completion with a C- or higher in Adolescent Development; Health and Wellness and Educational Psychology or any course equivalent

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
- Undergraduate 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 Earth and Space Science: Content Knowledge; test code 5571 and General Science Knowledge (5435) (Required score: **153 and 152 respectively**). See: <https://www.ets.org/praxis/nj/requirements>
- Completed Full-Year Residency application in the Tk20 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/ BS 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/BS requirements in Geology 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**:
 - Educational Psychology or Characteristics of Knowledge Acquisition (or confirmed state equivalent)
 - 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 (edTPA). Cut score / passing score as determined by state.
- Final residency evaluation demonstrates “Basic” or higher on all Danielson Framework indicators and “Meets Expectations” or higher on all SPA addendum indicators as evidence 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 OCE 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 edTPA are non-negotiable and non-appealable
- *Incomplete or unscorable tasks on edTPA 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 Geology GPA*) must** be used in the calculation of the Geology 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 Geology GPA is to be calculated from transcripts and coursework at Rowan.

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

Year 1	Semester 1 (13 credits)	s.h.	Semester 2 (15 credits)	s.h.
Courses that should normally be taken in the freshman year	COMP 01111: College Comp I	3	COMP 01112: College Comp II	3
	GEOG 16100 Earth, People, and the Environment	3	CHEM 06100 Chemistry I	4
	STAT 02101 Statistics I	3	MATH 01123 College Algebra	4
	GEOL 01101 Physical Geology	4	GEOL 01102 Historical Geology	4
Year 2	Semester 3 (18 credits)	s.h.	Semester 4 (18 credits)	s.h.
Courses that should normally be taken in the sophomore year	GEOL 01201 Mineralogy and Petrology	4	GEOL 01230 Paleoclimatology	4
	PHYS 00210 Physics I	4	PHIL 09.369 :Philosophy of Science (HHL) (recommended)	3
	CMS 04.205: Public Speaking	3	**PSY 09.210: Adolescent Development (SBS)	3
	CHEM 06101 Chemistry II	3	BIOL 01104 Introduction to Evolution and Scientific Inquiry	4
	GEOL 01210 Invertebrate Paleontology	4	GEOL 01240 Introduction to Field Methods	4
Year 3	Semester 5 (13-15 credits)	s.h.	Semester 6 (13-14 credits)	s.h.
Courses that should normally be taken in the junior year	Free/ Major Concentrated Elective	3-4	GEOL 01340 Structural Geology	4
	**HLTH 00103: Health and Wellness OR a Biology course (NPC)	3-4	**FNDS 21.230: Characteristics of Knowledge Acquisition (SBS)	3
	GEOL 01320 Sedimentology and Stratigraphy	4	EVSC 01.101/ ENST 94.101 Planet in Peril	3
	EVSC 01.120 Oceans in Crisis	3	ASTR11.100 Introductory Astronomy: Stars & Galaxies (OR ASTR11.200 Introductory Astronomy: Solar System & Exoplanets OR ASTR11.120 Introduction to Astronomy (Lecture and Lab) OR ASTR.11.230 Introductory Astrophysics	3-4
			TRANSITION POINT 1	
Year 4	Semester 7(13 credits) credits)	s.h.	Semester 8 (15 credits)	s.h.
Courses that should normally be taken in the senior year	GEOL 01450 Senior Seminar in Geology	4	Free/ Major Concentrated Elective	3
	*SMED 60.550: Schools & Society: Foundations for Secondary Teaching	3	*STEM 60510: Teaching STEM in Diverse Settings	3
	GEOL 01460 Current Research in Geology	1	*STEM 60501: STEM Teaching & Research Methods I	3
	GEOL 01470 Research Experience in Geology	2	*READ 30520: Content Area Literacy	3
	Free/ Major Concentrated Elective	3	Free/ Major Concentrated Elective	3
		TRANSITION POINTS 2 & 3		
Year 5	Semester 9 (9 credits)	s.h.	Semester 10 (9 credits)	s.h.
Courses that should normally be taken in Master's degree year	STEM 60522: STEM Teaching & Research Methods: Science II	5	STEM 60523: STEM Teaching & Research Methods: Science III	6
	*STEM 60512: STEM Education Residency I	1	*STEM 60513: STEM Education Residency II	3
			TRANSITION POINT 4	
	SELN 60576: Inclusive Instruction in STEM Classrooms	3	Semester 11 (3 credits)	s.h.
		STEM 60504: Professional Seminar for STEM Educators	3	
TOTAL CREDITS 4+1 B.A. GEOLOGY AND M.A. STEM EDUCATION				141-142

** Required for MA STEM matriculation.

*Indicates courses with field

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For General Education requirements and credits please see: https://drive.google.com/file/d/1iHLrRJwSOJvXAFVBvD-c_xiyiw6oq80E/view for BA in Geology. 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 Geology are. **Adolescent Development (satisfies SBS); Characteristics of Knowledge Acquisition (satisfies SBS) OR Health and Wellness (HLTH 00103) OR a biology course.**

Table 2. Sample Coursework Breakdown.

Required Course Work for the 4+1 B.A. Geology + M.A. in STEM Education

B.A. in Geology Coursework Credit Hours. *Please note that all course prerequisites and co –requisites for the undergraduate Geology portion of this dual degree are as identified by the Geology department and indicated in the B.A. Geology program guide*

Geology Major Core Courses: 37 credits	Credits	
GEOL 01101 Physical Geology	4	
GEOL 01102 Historical Geology	4	
GEOL 01201 Mineralogy and Petrology	4	
GEOL 01210 Invertebrate Paleontology	4	
GEOL 01230 Paleoclimatology	4	
GEOL 01240 Introduction to Field Methods	4	
GEOL 01320 Sedimentology and Stratigraphy	4	
GEOL 01340 Structural Geology	4	
GEOL 01450 Senior Seminar in Geology	4	
GEOL 01460 Current Research in Geology	1	
ROWAN Core Requirements : 9 credits	Credits	
as recommended by B.A. Geology major		
Geology Non Program Courses: 25 credits	Credits	
GEOL 16100 Earth, People and the Environment	3	
STAT 02101 Statistics I	3	
CHEM 06100 Chemistry I	4	
CHEM 06101 Chemistry II	4	
PHYS 00210 Physics I	4	
BIOL 01104 Introduction of Evolution and Scientific Inquiry	4	
MATH 01123 College Algebra	3	
Restricted/ Free Elective Courses: 49-50 credits	Credits	
**PSY 09.210 Adolescent Development	3	
**FNDS 21.230 Characteristics of Knowledge Acquisition OR PSY 22.215 Educational Psychology	3	

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**HLTH 00103 Health and Wellness OR a Biology course.	3	
*** SMED 60.550:Schools & Society, Foundations for Secondary Teaching	3	
*** STEM 60501: STEM Teaching and Research Methods I	3	
*** READ 30520: Content Area Literacy	3	
*** STEM 60510: Teaching STEM in Diverse Settings	3	
****EVSC 01.120 Oceans in Crisis	3	
****EVSC 01.101 Planet in Peril	3	
**** Any one of the following Astronomy courses: ASTR11.100 Introductory Astronomy: Stars & Galaxies ASTR11.200 Introductory Astronomy: Solar System & Exoplanets ASTR11.120 Introduction to Astronomy (Lecture and Lab) ASTR.11.230 Introductory Astrophysics	3-4	
Add 19 additional free elective courses	19	
TOTAL CREDITS B.A. Geology	120-121	

M.A.STEM Coursework 33 Credit Hours

Coursework Sequence:

M.A. STEM Required Core Courses		
Course code	Course Name	s.h.
*** SMED 60550	Schools & Society: Foundations for Secondary Teaching	3
***STEM 60501	STEM Teaching & Research Methods I	3
***READ 30520	Content Area Literacy	3
***STEM 60510	Teaching STEM in Diverse Settings	3
SELN 60576	Inclusive Instruction in STEM Classrooms	3
STEM 60504	Professional Seminar for STEM Educators	3
STEM 60512	STEM Education Residency I	1
STEM 60513	STEM Education Residency II	3
M.A. STEM Required Specialized Courses		
STEM 60522	STEM Teaching & Research Methods: Science II	5
STEM 60523	STEM Teaching & Research Methods: Science III	6
TOTAL CREDITS M.A. STEM		33

**** Courses required to earn initial NJ certification to teach in the public schools but are not required for the B.A. in Geology**

***** These courses will be double counted (accepted for both degrees)**

****** Any one of these courses will be essential as backgrounds for meeting Earth and Space Science Praxis content requirements**

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Table 3. List of Pre and Co- requisite courses required for the graduate portion of the 4+1 Combined Advanced Degree Program B.A. in Geology and M.A. STEM Education

Course Code	Course Name	s.h	Pre requisite courses	Co-requisite courses
STEM 60501	STEM Teaching & Research Methods I	3	Matriculation into M.A. STEM	-----
STEM 60510	Teaching STEM in Diverse Settings	3	Matriculation into M.A. STEM	-----
READ 30520	Content Area Literacy	3	None	None
SMED 60550	Schools & Society: Foundations for Secondary Teaching	3	None	None
STEM 60522	STEM : Teaching & Research Methods II: Science	5	STEM 60501 STEM Teaching & Research Methods I STEM 60510 Teaching STEM in Diverse Settings READ 30520 Content Area Literacy SMED 60550 - Schools & Society: Foundations for Secondary Teaching	STEM 60512: STEM: Education Residency I SELN 60576 Inclusive Instruction in STEM Classrooms
STEM 60512:	STEM 60512: STEM: Education Residency I	1	STEM 60501 STEM Teaching & Research Methods I STEM 60510 Teaching STEM in Diverse Settings READ 30520 Content Area Literacy SMED 60550 - Schools & Society: Foundations for Secondary Teaching	STEM 60522: STEM : Teaching & Research Methods II: Science SELN 60576 Inclusive Instruction in STEM Classrooms
SELN 60576	Inclusive Instruction in STEM Classrooms	3	STEM 60501 STEM Teaching & Research Methods I STEM 60510 Teaching STEM in Diverse Settings READ 30520 Content Area Literacy SMED 60550 - Schools & Society: Foundations for Secondary Teaching	STEM 60522: STEM : Teaching & Research Methods II: Science STEM 60512: STEM: Education Residency I
STEM 60513	STEM Education Residency II	3	STEM 60512: STEM: Education Residency I STEM 60522: STEM : Teaching & Research Methods II: Science SELN 60576 Inclusive Instruction in STEM Classrooms	STEM 60523: STEM Teaching & Research Methods: Science III
STEM 60523	STEM Teaching & Research Methods: Science III	6	STEM 60522: STEM : Teaching & Research Methods II: Science SELN 60576 Inclusive Instruction in STEM Classrooms	STEM 60513: STEM Education Residency II
STEM 60504	Professional Seminar for STEM Educators	3	STEM 60513: STEM Education Residency II STEM 60523: STEM Teaching & Research Methods: Science III	None

STUDENT RESPONSIBILITIES

See University Undergraduate Catalog (www.rowan.edu/catalog):

“...It is the responsibility of the student to become knowledgeable of, and to observe, all University policies, regulations and procedures. The University is under no obligation to waive a requirement or grant an exception because a student pleads ignorance of a policy, regulation or requirement or because a student asserts that he/she has not been informed of such policy, regulation or requirement.

It is the student’s responsibility to become familiar with, and to remain informed about, all academic, administrative, financial or other policies, regulations or requirements concerning admission, registration, payment of tuition or fees, continued enrollment, grades and satisfactory program progress, graduation requirements or any other matter which affects the student. Students are especially expected to know the requirements of the program in which they are enrolled. While the faculty and staff (advisors) will endeavor to assist in every manner possible, students are responsible for becoming and remaining informed of current program and graduation requirements, their status in the program and their progress toward graduation.”

Please work closely with your education and subject matter area advisors to make sure that these requirements are satisfied. Your graduation and/or certification approval may be withheld if these requirements are not met.

ADVISEMENT INFORMATION

Because the time period for registration is limited, you are encouraged to make an appointment for advisement.

Even if the individual courses are completed, the undergraduate and graduate degrees will not be awarded until all of the requirements for both programs also met/completed. Meeting on a regular basis with both advisors will avoid any graduation/certification problems.

Be reasonable in your demands on your advisors’ time and resources:

- (1) Make an appointment to see your advisor, do not just “show up” expecting your advisor to be available. See your advisor well ahead of deadlines [If you wait until the last minute you will not get the attention you are seeking.]**
- (2) Attend the College of Education Advising Center (CEAC) regular information sessions scheduled on the College of Education website.**
- (3) Be sure to ask for clarification on any and all issues [It is better to receive correct information than to accept rumors.]**
- (4) Check your Rowan University email account for vital emails from your advisor.**

Your undergraduate advisor is a 12 month employee. Please plan your advising appointments early and do not wait until the last minute to be seen.

For your questions regarding graduate work, please contact the MA STEM in Education program coordinator

STUDENT ACKNOWLEDGEMENT OF PROGRAM REQUIREMENTS

- I have read and understand all the CADP program requirements and transition points for the CADP in Geology BA/MA STEM Education program. I also understand from the above guidelines all the courses required to continue in and to complete the CADP in Geology BA/MA STEM Education program.
- I understand that I can apply for graduation with a BA/BS Science and Math Majors and MA in STEM Education and certification after successfully completing all of the requirements needed for both the BA/BS Science and Math Majors and MA in STEM Education. I will apply to graduate and earn both degrees (Bachelor's and Master's) upon completion of all graduate coursework.
- I understand that even if the Residency Year is completed, the BA/BS Science and Math Majors will not be awarded until all the requirements for the MA in STEM Education are also met/completed.
- I understand that due to federal regulations, certain programs are not eligible for the Title IV financial aid. A list of eligible and ineligible programs is located at <https://rowanu.com/graduate/aid>.
- I acknowledge that I am responsible for making any registration changes (adds/drops/withdrawals) each term following the proper procedures and within the appropriate deadline according to the type of course in which I am enrolled, or I will be responsible for any charges and/or fees incurred.
- I understand that if I fail to comply with the statements above and do not meet any/all requirements within the specified timeframe, I may not be able to start and/or continue in my selected program..
- I understand that completion time will be impacted if I fail to meet with both advisors, meet application deadlines such as passing Praxis Core and II, meet GPA requirements, meet all general education courses or prerequisite requirements.
- I understand that any disciplinary or academic sanctions will / may result in an extended time for program completion and will prolong graduation.
- I understand that it is my responsibility to meet the University's deadline to apply for graduation. I further understand that failure to do so will result in my certification being delayed until the end of the semester in which I officially graduate even if I have completed all requirements
- **(Statement for freshmen and transfers who selected the program during university application process): I have read and acknowledged all the information in this program guide in my first meeting with the education advisor, and was informed I had an option to opt out of this program with the knowledge that if I do, the education advisor will request my major to be changed to the original subject matter program.**
- **Student initials (if opting out of the program):** _____
- Sign if you agree to all CADP program requirements and to staying in the program:

Print Full Name and Signature

Date