



**COMBINED ADVANCED
DEGREE PATHWAY
TO SECONDARY EDUCATION
PROGRAM GUIDE
FOR
BA/ BS PHYSICS MAJORS
& MA IN STEM EDUCATION
ELIGIBILITY FOR ADMISSION
AND COMPLETION OF PROGRAM
2019-2020**

INTRODUCTION

The purpose of this program guide is to provide all native and transfer, students interested in pursuing K- 12 Physics certification in the Combined Advanced Degree Program (CADP) the requirements needed to accomplish a certification in the teaching of Physics. 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 Physics. Please note that Table 1 is merely a sample for demonstrative purposes. Choice and sequence of Physics 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 Physics program only with the consent and approval of their science education advisor.

Education based courses in particular must be covered prior to taking any graduate level course belonging to the MA STEM sequence. These too must be approved through the undergraduate 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 BA/ BS Physics

- Meet entry requirements for the BA in Physics Program please see: <https://academics.rowan.edu/csm/departments/physics/acad/>
- Meet entry requirements for the BS in Physics Program , please see: https://sites.rowan.edu/registrar/_docs/program-guide-physics-bs---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*)
- 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

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
- 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 Physics: Content Knowledge; test code 5265 and General Science Knowledge (5435) (Required score: **141 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 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 Physics 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 Physics GPA*) must** be used in the calculation of the Physics 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 Physics 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 Physics and MA STEM program. Courses listed are examples of courses that can be taken in Physics 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 (14–15 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
	Computer Programming course (NPC)	3–4	Chemistry I I ¹	4
	MATH 01.130: Calculus I	4	MATH 01.131: Calculus II (NPC)	4
	PHYS 00.220: Introductory Mechanics	4	PHYS 00.221: Introductory TFW&O	4
Year 2	Semester 3 (17 credits)	s.h.	Semester 4 (16–17 credits)	s.h.
Courses that should normally be taken in the sophomore year	PHYS 00.222: Introductory Electricity & Magnetism	4	PHYS 00.300: Modern Physics	4
	MATH 01.230: Calculus III (NPC)	4	PHIL 09.369 :Philosophy of Science (HHL) (recommended)	3
	CMS 04.205: Public Speaking	3	PSY 09.210: Adolescent Development (SBS)	3
	Chemistry II I ¹	3	GE Elective (ACE)	3
	NPC/RE Elective	3	Additional PHYS course <i>or</i> ASTR 11.230	3–4
Year 3	Semester 5 (16 credits)	s.h.	Semester 6 (12-13 credits)	s.h.
Courses that should normally be taken in the junior year	PHYS Elective (300+)	3-4	PHYS Elective (300+)	4-3
	HLTH 00103: Health and Wellness OR a Biology course (NPC)	3–4	FNDS 21.230: Characteristics of Knowledge Acquisition (SBS)	3
	GE Elective (HHL LIT)	2-4	Free Elective	3
	Free Elective	3	Free Elective	3
	Free Elective	3		
			TRANSITION POINT 1	
Year 4	Semester 7(14 credits)	s.h.	Semester 8 (14 credits)	s.h.
Courses that should normally be taken in the senior year	PHYS 00.361/362/363: Physics Learning Assistant	2	PHYS 00.361/362/363: Physics Learning Assistant	2
	*SMED 60.550: Schools & Society: Foundations for	3	*STEM 60510: Teaching STEM in Diverse Settings	3
	Free Elective	3	*STEM 60501: STEM Teaching & Research Methods I	3
	Free Elective	3	READ 30520: Content Area Literacy	3
	Free Elective	3	Free Elective	3
			TRANSITION POINTS 2 & 3	

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

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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
	SELN 60576: Inclusive Instruction in STEM Classrooms	3	TRANSITION POINT 4	

Year 5 (cont'd)	Semester 11 (3 credits)	s.h.
Courses that should normally be taken in Master's degree year	STEM 60504: Professional Seminar for STEM Educators	3

*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 Physics. 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 Physics are. **Adolescent Development (satisfies SBS); Characteristics of Knowledge Acquisition (satisfies SBS) OR Health and Wellness (HLTH 00103) OR a biology course. Prerequisites of Calculus I and Biology 2 are required**

Table 2. Sample Coursework Breakdown.

B.A. in Physics Course Work: 66 Credits

Physics Major Core Courses: 16 credits	Credits	✓
Introductory Mechanics- RS	4	
Introductory Thermodynamics, Fluids, Waves and Optics	4	
Introductory Electricity and Magnetism	4	
Modern Physics	4	
Physics Elective Courses: 14 credits		
**2 300+ Phys courses	6-7	
**1 Additional PHYS course <i>or</i> ASTR 11.230	3-4	
**Physics Learning Assistant for Introductory Mechanics /TFWO/Electricity & Magnetism or 1 additional 300+ PHYS course	2+2 or 4	
Restricted Elective Courses: 6 credits		
***Schools & Society, Foundations for Secondary Teaching	3	
***STEM Teaching and Research Methods I	3	
Free Elective Courses: 30 credits		
Content Area Literacy	3	
Teaching STEM in Diverse Settings	3	
+24 Additional Credits of free electives	24	

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M.A. in STEM Education Coursework during the Residency Year: 22 Credits

Additional M.A. in STEM Education Required Core Courses	Credits	✓
Inclusive Instruction in STEM Classrooms	3	
Professional Seminar for STEM Educators	3	
STEM Education Residency I	1	
STEM Education Residency II	3	
STEM Teaching & Research Methods: Science II	5	
STEM Teaching & Research Methods: Science III	6	
TOTAL MA STEM CREDITS DURING RESIDENCY YEAR	21	
TOTAL CREDITS MA in STEM EDUCATION	33****	

** Must have a fixed total of 14 credits

***These courses are required for the M.A. in STEM-Ed so will be accepted for both degree programs.

**** 21 credits during residency +12 taken during BS program

¹ 15 credits of Chemistry (Chemistry I, Chemistry II, plus 7 additional free elective credits in chemistry are recommended to meet State certification standards in Physical Sciences)

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 Physics 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 Physics 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