



SUBJECT MATTER TRACK
UNDERGRADUATE DUAL
MAJOR IN
BIOLOGY & EDUCATION

**GUIDELINES FOR DETERMINING
ELIGIBILITY FOR ADMISSION TO
EDUCATION PROGRAM, CLINICAL
PRACTICE AND COMPLETION OF
PROGRAM
2016-2017**

****This program is no longer accepting students as of Fall 2017. Please see information on our MA STEM program.****

GUIDELINES FOR DETERMINING ELIGIBILITY FOR ADMISSION TO EDUCATION PROGRAM, CLINICAL PRACTICE AND COMPLETION OF PROGRAM

INTRODUCTION

The purpose of this guideline is to provide all native, transfer, and post-baccalaureate students interested in pursuing K-12 Biology certification in the Subject-Matter Education program and/or seeking enrollment in Clinical Practice (student teaching) the requirements needed to accomplish a certification in the teaching of Biology. The following pages provide the candidate, in order, the requirements that need to be met to enter into the program, enroll in the clinical practice experience and achieve successful program completion. Candidates are also provided with a sample Table (Table 1) that demonstrates possible required and/ or elective Biology content courses that can be targeted to help develop their content background for teaching middle and/ or high school Biology. Please note that Table 1 is merely a sample for demonstrative purposes. Candidates can choose to target any **science** content core courses throughout their Biology program only with the consent and approval of their science advisor. Education based courses must be approved through the education advisor. Further, a checklist of eligibility requirements accomplished is to be completed by candidate and the education advisor as candidate pursues this dual major program. Finally, common questions and or concerns asked are provided for the candidate's reference.

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>

IMPORTANT NOTIFICATION

- **PLEASE NOTE THAT THERE HAVE BEEN CHANGES TO THESE GUIDELINES IN ACCORDANCE WITH THE NJ DEPARTMENT OF EDUCATION GUIDELINES FOR CERTIFICATION. THERE NOW EXIST NEW REQUIREMENTS FOR STUDENTS SEEKING SCIENCE CERTIFICATION. IN ADDITION TO BEING EMBEDDED IN THESE REVISED GUIDELINES (YOU CAN ALSO SEE THESE IN RED WITHIN THE GUIDELINES). THE REQUIREMENTS ARE:**
 - ***Overall GPA must be 3.0 or above upon entry, during and exit of program**
 - ***Overall GPA must be 3.0 for all education/ professional courses**
 - **Grades of C- or better (no D's, F's or Incompletes) in all general education, core and specialization courses required for the B.A. in education**
 - **"Meets Expectations" on dispositional reports from College of Education instructors and cooperating teachers**
 - **Passing score on Praxis Core Academic Skills for Educators test***
 - **Reading Test (Test Code 5712) : Score of at least 156**
 - **Writing Test (Test Code 5722): Score of at least 162: and**
 - **Math Test (Test Code 5732): Score of at least 150**

**Please note that these items are both non-negotiable and non-appealable*

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REQUIREMENTS FOR CERTIFICATION

All native, transfer, and post-baccalaureate students interested in pursuing K-12 Biology certification in the Subject-Matter Education program and/or seeking enrollment in Clinical Practice (student teaching) must meet the following requirements:

For entry into the Subject-Matter Education Program:

1. *Biology GPA** of 2.00 or above
2. Grades of C or better in all Biology classes
3. Grades of C- (no D's, F's or Incompletes) in all general education, core, ore specialization courses required for the B.A. in education
4. Grades of C- or higher in "sophomore" courses *Please note that the sophomore courses will change (i.e. TLC I and II) pending curricular approval for 2016-2017. Regardless grade policy will still apply*
5. "Meets Expectations" on dispositional reports from College of Education instructors and cooperating teachers
6. **Overall GPA of at least 3.0**
7. Passing score on Praxis Core Academic Skills for Educators:
 1. Reading Test (Test Code 5712) : Score of at least 156
 2. Writing Test (Test Code 5722): Score of at least 162: and
 3. Math Test (Test Code 5732): Score of at least 150
8. *Required content major courses* (as listed by the Biology department; see <http://www.rowan.edu/colleges/csm/departments/biologicalSci/programs/index.html>) completed:
 - Undergraduates: at least 15 semester hours

For enrollment in Clinical Practice:

1. *Biology GPA** of 2.00 or above
2. Grade of C or better in all Biology classes
3. Completion of at least 30 semester hours of *Required* and/or *Restricted Elective Biology* courses (as listed by the Biology department; see <http://www.rowan.edu/colleges/csm/departments/biologicalSci/programs/index.html>)
4. Passing score (152) on the PRAXIS II exam Biology: Content Knowledge (5235/0235) and Gen Science Knowledge (5435/0435)
5. Average grade of 3.0 in professional courses with no course grade lower than C and no *Incompletes*
6. **Overall GPA of 3.0**
7. Acceptable dispositional report(s) from university instructors and cooperating teachers
8. "Meets Expectations" on *Curriculum Study Report -both Safety and Curricular Practices-*(Teaching and Learning A Science), *Research Based Lab Project and Analysis Paper* (Teaching and Learning B Science) and *Science Inquiry Based Unit* (Teaching and Learning A & B Science)

For successful program completion:

1. "Meets Expectations" on all indicators (COE and Biology program-specific) of final Clinical Practice Evaluations
2. **Exit Overall GPA of 3.0**
3. Average grade of 3.0 in professional courses with no course grade lower than C and no *Incompletes*
4. Achieve minimum *Biology GPA** (2.00) with no grade lower than C in Biology courses
5. "Meets Expectations" on *Science Inquiry Unit Plan Project*

*Essential Notes

- For all students, all of the **required courses and any eligible electives** (*this means all allied science and math classes pertinent to your Biology GPA*) *must* be used in the calculation of the Biology 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 Biology GPA is to be calculated from transcripts and coursework at Rowan.
- **I have read and understand that the above guidelines and courses are required to continue in and to complete the Subject Matter Track in Biology Program.**

Signature

Date

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Table 1: Includes a sample of science content courses that can be taken for the Biology and Education dual major certification

COURSE TITLE	CREDITS	NUMBER
Calculus I	4	MATH 01.130
Chemistry I	4	CHEM 06.100
Chemistry II	4	CHEM 06.101
Philosophy of Science <i>or</i> Philosophy of Science (WI)	3	PHIL 09.368 <i>or</i> PHIL 09.369
Physics I <i>or</i> Intro. Mechanics	4	PHYS 02.202 <i>or</i> PHYS 02 200
Physics II (for life sciences) <i>or</i> Intro. Thermodynamics, Fluids, Waves, Optics	4	PHYS 02.203 <i>or</i> PHYS 02 210
*Biology 1: Diversity, Evolution and Adaptation (Current Rowan students) <i>or</i> Biology I (Transfer students)	4	BIOL 01.104 <i>or</i> BIOL 01.100
*Biology 2: Concepts in Genetics (Current Rowan students) <i>or</i> Biology II (Transfer students)	4	BIOL 01.106 <i>or</i> BIOL 01.101
Biology 3: Introduction to Cell Biology <i>or</i> Biology 3T: Skills and Methods (Transfer students)	4	BIOL 01.203 <i>or</i> BIOL 01202
Biology 4: Global Ecology	4	BIOL 01.204
Organic Chemistry I	4	CHEM 07.200
Organic Chemistry II	4	CHEM 07.201
Biometry	4	STAT 02280
Upper Level Biology Lab Elective as designated by Biology department <i>Please Note: It would be feasible for the future teaching profession, if Education dual majors have at least one Human Anatomy and Physiology course</i> <i>Also keep in mind that only ONE 200 level course can count as a Biology Lab elective</i>	4	BIOL xx3xx <i>or</i> BIOL xx4xx <i>or</i> BIOL 10210
Upper Level Biology Lab Elective as designated by Biology department	4	BIOL xx3xx <i>or</i> BIOL xx4xx <i>or</i> BIOL 10212
Upper Level Biology Lab Elective	4	BIOL xx3xx <i>or</i> BIOL xx4xx
Upper Level Biology Lab Elective	4	BIOL xx3xx <i>or</i> BIOL xx4xx
Upper Level Biology Elective	3 4	BIOL xx3xx <i>or</i> BIOL xx4xx
Special Topics (Senior Seminar) (WI) <i>or</i> Lab/Field Research	3	BIOL 01.440 <i>or</i> BIOL 01.475

*Transcripts of transfer students should demonstrate coverage of this content. Typically, Bio 1 and 2 at that institution should have BIOL 01.100 and 01.101 on the transcript.

Table 1 displays credits and courses that are Gen Ed, Education and Physics core science content. It presents a **sample** of Biology content courses all native, transfer, and post-baccalaureate students interested in pursuing K-12 Biology certification in the Subject-Matter Education program can target for Biology certification purposes. These have been listed to give you an idea of what possible content courses would help you in developing a content background to teach Biology in a middle or high school science classroom. Candidates are in no way limited to the Biology content core courses listed here. Any Biology content core course taken must be approved by the science advisor.

**CHECKLIST FOR DOCUMENTING ELIGIBILITY FOR
BIOLOGY SUBJECT-MATTER EDUCATION**

Teacher Candidate: _____ Banner ID: _____

All native and transfer students seeking admission into the Biology Subject-Matter Education Program must meet all of the following requirements:

Requirement	Candidate's Qualifications	Meet? (Y/N) Date(s)
Grades of C- or higher in "sophomore" courses <i>Please note that the sophomore courses will change (i.e. TLC I and II) pending curricular approval for 2016-2017. Regardless grade policy will still apply</i>	Grades: Teaching in Learning Communities I: _____ Teaching in Learning Communities II: _____ Teaching Reading Writing Content Area: ____ Educational Technology: _____ COE Advisor's Verification (Initials):	
"Meets Expectations" on dispositional reports from College of Education instructors and cooperating teachers	COE Advisor's Verification (Initials):	
Successful completion (i.e., grades of C or better) of at least 15 semester hours of <i>Required</i> and/or <i>Restricted Elective Biology</i> courses (as listed in <i>BS Biology Program Academic Guidelines</i> http://www.rowan.edu/colleges/csm/departments/biologicalSci/index.html (see degree requirements)	Courses Completed (with semester hours and grade) _____ (sh): _____ _____ (sh): _____ _____ (sh): _____ _____ (sh): _____ _____ (sh): _____ _____ (sh): _____ _____ (sh): _____ Advisor's Verification (Initials):	
Grades of C or better in all Biology classes	Advisor's Verification (Initials):	
Biology GPA* of 2.00 or above and Overall GPA of 3.0 or above	Biology GPA: _____ Overall GPA: _____ Advisor's Verification (Initials):	
Post June 2014 -All candidates must pass Praxis Core Academic Skills for Educators test.	Score: COE Advisor's Verification (Initials):	
Meets all requirements and is eligible to register for <i>Teaching and Learning A: Science</i>		

Advisor's Signature: _____

Date: _____

STATE HELPFUL REFERENCES FOR BIOLOGY

<http://www.state.nj.us/education/educators/license/endorsements/2210S.pdf>

<http://www.nj.gov/education/educators/license/1112.pdf>

FREQUENTLY ASKED QUESTIONS

1. If I fail the Praxis II exams can I continue to do my clinical field practice experience?

No you must pass the Praxis II exam in order to move on to your clinical field experience and/or be assigned to one.

2. If I repeat the Praxis exam and I still can't pass it but I still want to get a teaching certification in science, what are my options?

There are a variety of options that you can follow. These are listed in the following table briefly here for you along with the advantages and disadvantages that accompany the noted option taken. You should however talk to both your science and education advisor for further detail:

Option Chosen	Possible Advantage(s)	Possible Disadvantage(s)
Option 1- Continue to repeat the praxis until you achieve the score required	You will graduate with two Bachelor degrees- one in Education and one in Biology alongside your licensure to teach Biology	Delayed time for graduating and additional expenses
Option 2- Withdraw from the dual education program and only continue in your Biology major and follow that up with the state based alternate route program	Graduate with a Bachelor degree in Biology Possibly no delays in your graduation	No licensure to teach Biology immediately after graduation. Requires that you are mentored in a public school if you are offered a job position but you cannot be instated as a full time science teacher unless you pass the Praxis exam (Note: This is not encouraged as many schools currently seek to employ candidates that come from certified programs and not through alternate route)
Option 3- Withdraw from the dual education program and maintain a minor in education alongside your Biology major	Graduate with a Bachelor degree in Biology Possibly no delays in your graduation Achieve credits for a minor in education and possibly use these credits to continue in the future towards a degree and licensure in education.	No licensure to teach Biology Will need to register in an education program to achieve licensure
Option 4- Withdraw from the dual education program, graduate with your Bachelor in Biology and apply to the one year Master of Science in Teaching program	Graduate with a Bachelor degree in Biology Possibly no delays in your graduation Gain a Masters degree in education with your licensure	An additional year after graduation Additional expenses

3. Will my science teaching certification be acknowledged in other States, just in case I get a job outside New Jersey?

Yes but usually other states may require either or any of the following: (a) additional course content work (b) particular exams (other than Praxis) (c) different Praxis scores. You will need to check the local district and state policies of the specific area you intend to be employed in.

4. How common is it to get employed with a science teaching certification?

Very common. 99% of graduates registered in the dual major at Rowan since 2007 have found jobs and are currently teaching science in New Jersey, the majority in high schools and a few in middle schools. Some have already been tenured.