

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

**SUBJECT MATTER TRACK**  
**UNDERGRADUATE DUAL**  
**MAJOR IN**  
**CHEMISTRY & EDUCATION**

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

*e*

**\*\*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 Chemistry 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 Chemistry. 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 Chemistry content courses that can be targeted to help develop their content background for teaching middle and/ or high school Chemistry. Please note that Table 1 is merely a sample for demonstrative purposes. Candidates can choose to target any **science** content core courses throughout their Chemistry 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*

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

### REQUIREMENTS FOR CERTIFICATION

All native and transfer students interested in pursuing K-12 Chemistry 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. *Chemistry GPA\** of 2.00 or above
2. Grades of C- or better in all Chemistry 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. *Restricted Elective* Chemistry courses (as listed by the Chemistry department see <http://www.rowan.edu/colleges/csm/departments/chembio/acad/>) completed:
  - Undergraduates: at least 15 semester hours

#### For enrollment in Clinical Practice:

1. *Chemistry GPA\** of 2.00 or above
2. Grade of C- or better in all Chemistry classes
3. Completion of at least 30 semester hours of *Restricted Elective* Chemistry courses (as listed by the Chemistry department see <http://www.rowan.edu/colleges/csm/departments/chembio/acad/>)
4. Passing score (152) on the PRAXIS II exam [Chemistry: Content Knowledge (5245) and Gen Science Knowledge (5435)]
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 Chemistry 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 *Chemistry GPA\** (2.00) with no grade lower than C- in Chemistry courses
5. "Meets Expectations" on *Science Inquiry Unit Plan Project*

#### \*Essential Notes:

- **All students need to refer to both their science and education advisor to make sure that courses chosen satisfy the number of credits in their content area needed for teaching certification.**
- For all students, all of the required courses and any eligible electives *must* be used in the calculation of the Chemistry 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 Chemistry 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 Chemistry Program**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

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

COURSE TITLE	CREDITS	NUMBER
Calculus I	4	MATH 01.130
Calculus II	4	MATH 01.131
Philosophy of Science or Philosophy of Science (WI)	3	PHIL 09.369
College Composition I	3	COMP 01.111
College Composition II	3	COMP01.112
Public Speaking	3	CMS 06.202
Introductory Mechanics	4	PHYS 02.200
Introductory Electricity & Magnetism	4	PHYS 02.201
Biochemistry	4	CHEM 07.348
Chemistry I or Advanced Chemistry I	4	CHEM 06.100 or .105
Chemistry II or Advanced Chemistry II	4	CHEM 06.101 or .106
Organic Chemistry I	4	CHEM 07.200
Organic Chemistry II	4	CHEM 07.201
Quantitative Analysis	4	CHEM 09.250
Physical Chemistry I	3	CHEM 08.400
Seminar I	1	CHEM 05.450
Research I or Cooperative Experience in Chemistry	3	CHEM 05.440 or .435
Advanced elective in Chemistry (See list of Approved Advanced Electives under BA Chemistry program)	4	XXXX
Free Elective	3	XXXX
Free Elective	3	XXXX

Table 1 displays credits and courses that are Gen Ed , Education and Chemistry core science content. It presents a **sample** of Chemistry content courses all native, transfer, and post-baccalaureate students interested in pursuing K-12 Chemistry certification in the Subject-Matter Education program can target for Chemistry 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 Chemistry in a middle or high school science classroom. Candidates are in no way limited to the Chemistry content core courses listed here. Any Chemistry content core course taken must be approved by the science advisor. **Also please note that if you are currently in the BS chemistry program you will need to follow the previously noted eligibility guidelines. Required content courses for eligibility should be those as listed by the Chemistry department (see <http://www.rowan.edu/colleges/csm/departments/chembio/acad/>) or equivalent. The BS Chemistry electives can be different than BA Chemistry requirements so it is suggested that you seek the advice of your science advisor when planning on taking content required courses and/or electives. This way you can choose those that are commensurable with any of the content required courses and/or electives provided for the BA Chemistry program. Again, always make sure to consult with your science and education advisors.**

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

Teacher Candidate: \_\_\_\_\_ Banner ID: \_\_\_\_\_

All native and transfer students seeking admission into the Chemistry 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>	<b>Grades:</b> Teaching in Learning Communities I: _____ Teaching in Learning Communities II: _____ Teaching Reading Writing Content Area: _____ Educational Technology: _____ <b>COE Advisor's Verification (Initials):</b>	
"Meets Expectations" on dispositional reports from College of Education instructors and cooperating teachers	<b>COE Advisor's Verification (Initials):</b>	
Successful completion (i.e., grades of C- or better) of at least 15 semester hours of <i>Free Elective</i> Chemistry courses (as listed in the <i>BA Chemistry academic guidelines</i> )	<b>Courses Completed (with semester hours and grade)</b> _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ <b>Advisor's Verification (Initials):</b>	
Grades of C- or better in all Chemistry classes	<b>Advisor's Verification (Initials):</b>	
Chemistry GPA* of 2.00 or above and <b>Overall GPA of 3.0 or above</b>	<b>Chemistry GPA:</b> _____ <b>Overall GPA:</b> _____ <b>Advisor's Verification (Initials):</b>	
<b>Post June 2014 -All candidates must pass Praxis Core Academic Skills for Educators test..</b>	<b>Score:</b> <b>COE Advisor's Verification (Initials):</b>	
<b>Meets all requirements and is eligible to register for <i>Teaching and Learning A: Science</i></b>		

Advisor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**CHECKLIST FOR DOCUMENTING ELIGIBILITY FOR SUBJECT-MATTER EDUCATION CLINICAL PRACTICE  
(CHEMISTRY)**

Teacher Candidate: \_\_\_\_\_ Banner ID: \_\_\_\_\_

All native and transfer students interested in pursuing certification in Chemistry Subject-Matter Education and/or seeking enrollment in Clinical Practice (student teaching) must meet the following requirements

Requirement	Candidate's Qualifications	Meet? (Y/N) Date(s)
Grades of C- or higher in "junior" courses	<b>Grades:</b> Teaching and Learning A: Science: _____  Teaching and Learning B: Science: _____  Differentiated Instruction: _____  <b>COE Advisor's Verification (Initials):</b>	
"Meets Expectations" on <i>Curriculum Study Report -both Safety and Curricular Practices</i> -(Teaching and Learning A Science), <i>Research Based Lab Project and Analysis Paper</i> (Teaching and Learning B Science) and <i>Science Inquiry Based Unit</i> (Teaching and Learning A & B Science)	<b>TNLB Instructor's Verification (Initials):</b>	
"Meets Expectations" on dispositional reports from College of Education instructors and cooperating teachers	<b>COE Advisor's Verification (Initials):</b>	
Successful completion (i.e., grades of C- or better) of at least 30 semester hours of <i>Free Elective Chemistry</i> courses (as listed in the <i>BA Chemistry academic guidelines</i> )	_____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ _____ ( sh): _____ <b>Advisor's Verification (Initials):</b>	
Grades of C- or better in all Chemistry classes	<b>Advisor's Verification (Initials)</b>	
Chemistry GPA* of 2.00 or above	<b>Chemistry</b> GPA: _____	
Average grade of 3.0 in professional education courses with no course grade lower than C- and no <i>Incompletes</i>	<b>Professional Education Course</b> GPA: _____	
<b>Overall GPA of 3.0 or above</b>	<b>Overall</b> GPA: _____  <b>Advisor's Verification (Initials):</b>	
Passing score (152) on the PRAXIS II exam [Chemistry: Content Knowledge (5245/0245) and Gen Science Knowledge (5435/0435)]	<b>Score:</b> Chemistry: Content Knowledge (5245/0245) _____ General Science Content Knowledge (5435/0435) _____ <b>COE Advisor's Verification (Initials):</b>	
<b>Meets all requirements and is eligible to register for <i>Clinical Practice</i></b>		

Advisor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## STATE HELPFUL REFERENCES FOR CHEMISTRY

<http://www.state.nj.us/education/educators/license/endorsements/2270S.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 Chemistry, 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)
<b>Option 1-</b> Continue to repeat the praxis until you achieve the score required	You will graduate with two Bachelor degrees- one in Education and one in Chemistry alongside your licensure to teach chemistry	Delayed time for graduating and additional expenses
<b>Option 2-</b> Withdraw from the dual education program and only continue in your Chemistry major and follow that up with the state based alternate route program	Graduate with a Bachelor degree in Chemistry Possibly no delays in your graduation	No licensure to teach Chemistry 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)
<b>Option 3-</b> Withdraw from the dual education program and maintain a minor in education alongside your Chemistry major	Graduate with a Bachelor degree in Chemistry 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 Chemistry Will need to register in an education program to achieve licensure
<b>Option 4-</b> Withdraw from the dual education program, graduate with your Bachelor in Chemistry and apply to the one year Master of Science in Teaching program at Rowan.	Graduate with a Bachelor degree in Chemistry Possibly no delays in your graduation Gain a Masters degree in education with your licensure	An additional year after graduation Additional expenses

**3. If am registered in the BS Chemistry program and I decide on getting a teaching certification can I register in the dual major program.** *Yes it may be possible pending on where you are in your program and what courses you have taken Mainly, you will need to meet entry requirements by the College of Education and there are specific dates for applications and forms that need to be submitted. Typically, it is during your first year that you are to announce whether or not you intend on doing a dual major program. In any case your advisor would be the best person to consult with on this.*

**4. 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.*

**5. 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.*