

# Secondary (7-12) Science Teacher Licensure Program

Revised 10/11

## Requirement Checklist for Undergraduate Students

Name: \_\_\_\_\_  
 Student ID: \_\_\_\_\_  
 Major: \_\_\_\_\_

Evaluator: \_\_\_\_\_  
 Date: \_\_\_\_\_

### Section 1: Content Requirements

The coursework requirements below reflect the content knowledge all candidates will be accountable for as secondary science teachers. These requirements may be fulfilled with coursework you are completing towards your major or your college's core requirements. It is *not* required that all content requirements be completed in order to apply and begin the teacher licensure program. However, all requirements must be satisfied *prior* to the student teaching semester. In order to fulfill a requirement below, the course must be: a) Completed for a grade (no Pass/Fail); b) Completed with a grade of "C-" or higher.

Advanced Placement (AP), International Baccalaureate (IB), and transfer credit may be applied towards the content requirements. However, this is dependent upon how the university awards equivalency for these credits. Major exemptions to the Arts & Sciences Core Requirements might not apply the Teacher Education Program. Contact an education advisor with questions.

All applicants to the teacher licensure program will be evaluated against the requirements below. Upon admission, all students will receive a completed copy of their checklist which will indicate the requirements that have already been fulfilled, and those that the student still needs to complete. You may also run a degree audit for all licensure programs through the MyCUInfo portal.

<p><b>GPA Requirement:</b> Have <i>and</i> maintain a 2.75 cumulative GPA (on 4.0 scale)</p> <p>_____ Cumulative (all institutions)                  _____ In Content Coursework                  _____ In Education (if applicable)</p>	<p><b>Basic Skills Requirement:</b> Complete an appropriate college-level Math and Composition course with a "B-" or higher. Acceptable scores on the ACT, SAT, GRE, or Praxis I PPST exam will also suffice.</p> <p>Verbal: _____ Math: _____</p>
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Dept/Course	Grade	Term	Requirement	Hours
			1. <b>Calculus I.</b> One course in first semester calculus. <i>At CU</i> , MATH 1300 or APPM 1350	<b>4 or 5</b>
All candidates must complete two (2) courses each in Biology, Chemistry, Earth/Space Science, and Physics. You must have a laboratory in three (3) of the four subject areas. All courses must be three (3) semester hours with a separate lab of one (1) semester hour, or a minimum of four (4) semester hours with a combined lecture/laboratory course.				
			2. <b>Biology</b> Course 1 Lab: _____	
			<b>Biology</b> Course 2	
			3. <b>Chemistry</b> Course 1 Lab: _____	
			<b>Chemistry</b> Course 2	
			4. <b>Earth/Space Science</b> Course 1 Lab: _____	
			<b>Earth/Space Science</b> Course 2	
			5. <b>Physics</b> Course 1 Lab: _____	
			<b>Physics</b> Course 2	
6. <b>Complete one (1) of the science tracks below.</b> Candidates must satisfy the hour requirement and all areas of study for their selected track.				
<b>BIOLOGY</b>			Major must include at least 34 hours in Biology (may include coursework from requirement 2 above) and the completion of <b>one</b> of the biology sequences listed below which cover the following topics: General Biology, Matter and Energy in Living Systems, Evolution, Ecology, Genetics, Molecular Biology, Human Anatomy, Environmental Biology, and Biotechnology.	<b>34</b>
			a. EBIO 1210 & EBIO 1230 <b>–AND–</b> EBIO 1220 & EBIO 1240	
			b. MCDB 1150 & MCDB 1151 <b>–AND–</b> MCDB 2150 & MCDB 2151 c. MCDB 1111 <b>–AND–</b> MCDB 2150 & MCDB 2151	
<b>CHEMISTRY</b>			Major must include at least 40 hours in Chemistry (may include coursework from requirement 3 above) and the study of each of the following:	<b>40</b>
			a. Analytical b. Inorganic c. Organic d. Physical	
<b>EARTH/SPACE SCIENCE</b>			Major must include at least 43 hours in Earth/Space Science (may include coursework from requirement 4 above) and the study of each of the following:	<b>43</b>
			a. Environmental Science b. Astronomy c. Historical & Physical Geology d. Meteorology e. Oceanography f. Geomorphology & Earth Systems	

Content Requirements continue on page 2 →

<b>PHYSICS</b>	Major must include at least 28 hours in Physics (may include coursework from requirement 5 above) and the study of each of the following:	<b>28</b>											
	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">a. Mathematics through Differential Equations</td> <td style="width: 50%;">f. Heat &amp; Thermodynamics</td> </tr> <tr> <td>b. Astronomy</td> <td>g. Optics &amp; Sound</td> </tr> <tr> <td>c. Atomic &amp; Nuclear</td> <td>h. Quantum Mechanics</td> </tr> <tr> <td>d. Classical Mechanics</td> <td>i. Radiation &amp; Radioactivity</td> </tr> <tr> <td>e. Electricity &amp; Magnetism</td> <td>j. Relativity</td> </tr> <tr> <td></td> <td>k. Waves</td> </tr> </table>		a. Mathematics through Differential Equations	f. Heat & Thermodynamics	b. Astronomy	g. Optics & Sound	c. Atomic & Nuclear	h. Quantum Mechanics	d. Classical Mechanics	i. Radiation & Radioactivity	e. Electricity & Magnetism	j. Relativity	
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## Section 2: Education (EDUC) Requirements

**COURSES THAT MAY BE TAKEN PRIOR TO ADMISSION:** Though not required, prospective students that are interested in completing an education course prior to admission may enroll in **EDUC 2020** Step 1, **EDUC 2030** Step 2, **EDUC 3013** School & Society, and/or **EDUC 4050** Knowing and Learning. Students that do not complete EDUC 3013 prior to admission should complete it during their first semester in the program.

**NOTE:** Applicants are evaluated based upon a number of criteria; completing coursework prior to applying **does not** guarantee acceptance.

			1. <b>EDUC 2020 Step 1: Inquiry Approaches to Teaching</b>	<b>1</b>
			2. <b>EDUC 2030 Step 2: Inquiry Based Lesson Design.</b> EDUC 2020 is a prerequisite for enrolling in EDUC 2030.	<b>1</b>
			3. <b>EDUC 3013 School &amp; Society.</b> Counts in the A&S Core as Human Diversity or Contemporary Societies.	<b>3</b>
			4. <b>EDUC 4050 Knowing &amp; Learning.</b> Includes up to 3 hours per week of school-based practicum.	<b>3</b>

**ADMISSION** to the Secondary Science Teacher Licensure program **is required** to take any of the courses below.

			5. <b>EDUC 4023 Differentiating Instruction in Diverse Secondary Classrooms.</b> Includes up to 4 hours per week of school-based practicum. Should be taken concurrently with EDUC 5385 Project-Based Instruction.	<b>3</b>
			6. <b>EDUC 4060 Classroom Interactions.</b> Includes up to 5 hours per week of school-based practicum. This course is a pre-requisite for EDUC 5385.	<b>3</b>
			7. <b>EDUC 4232 Language and Literacy across the Curriculum.</b> <i>Spring and Summer only.</i>	<b>3</b>
			8. <b>EDUC 5315 Perspectives on Science and Mathematics.</b> <i>Fall only.</i>	<b>3</b>
			9. <b>EDUC 5385 Project-Based Science Instruction.</b> Includes up to 6 hours per week of school-based practicum. Should be taken concurrently with EDUC 4023 Differentiating Instruction in Diverse Secondary Classrooms. Pre-requisite EDUC 4060.	<b>3</b>
			10. Complete <b>one (1)</b> of the courses below: a. <b>MCDB 4811 Teaching &amp; Learning Biology</b> <i>OR</i> b. <b>EDUC 4800-001 Teaching &amp; Learning Chemistry</b>	<b>3</b>

**Satisfactory completion of all Content Requirements and Education Requirements is a prerequisite for Student Teaching.** You must also pass either state-approved licensure exam, PRAXIS II (Paper-based Test Code: 10435) or PLACE (Test Code: 05), *prior* to student teaching.

### Student Teaching Semester

			11. <b>EDUC 4513 Education and Practice.</b> <i>Must be taken with EDUC 4712.</i>	<b>2</b>
			12. <b>EDUC 4712 Secondary Student Teaching.</b> <i>Must be taken with EDUC 4513.</i>	<b>10</b>
<b>Total EDUC Hours</b>				<b>38</b>

**IMPORTANT NOTE:** The CU Boulder School of Education has revised its teacher education programs to meet new statutory requirements. These changes will include, but not be limited to, the ability of an incoming freshman undergraduate student to complete the graduation requirements in four academic years and the inclusion of 800 hours of field experience within the teacher education program. This program has been reauthorized by the Colorado Commission of Higher Education. **However, course requirements are subject to change at any time.**