

Secondary (7-12) Science Teacher Licensure Program

Revised 02/12

Requirement Checklist for Post-Baccalaureate 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 previously completed college-level coursework. To receive credit based upon previous coursework, the course must be:**

- Completed at a regionally accredited institution of higher education and for college-level credit.
- Completed with a grade of "C-" or better on a 4.0 scale. Pass/Fail credits will not be accepted unless documented on the institution's transcript that a "pass" is equivalent to "C-" or higher.
- Advanced Placement (AP) and International Baccalaureate (IB) credit may be accepted towards the requirements if the scores meet CU Boulder testing standards (see the CU Boulder course catalog online for score requirements).

It is *not* required that all content requirements be fulfilled before applying for admission, but all requirements must be completed *prior* to the student teaching semester. Applicants with significant deficiencies in the content requirements may not be adequately prepared to enter the program and may be asked to reapply. The School of Education evaluates each applicant's transcript(s) to determine which content requirements have already been fulfilled, and those that the applicant must still complete. All applicants will receive a copy of their checklist upon admission. For students that have deficiencies in the content requirements, recommendations for completing these courses "at CU" have been provided below.

GPA Requirement: Have *and* maintain a 2.75 cumulative GPA (on 4.0 scale)

_____ Cumulative (all institutions)
 _____ In Content Coursework
 _____ In Education (if applicable)

Basic Skills Requirement: 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.

Verbal: _____ Math: _____

Dept/Course	Grade	Term	Requirement	Hours									
			1. Written Communication. Three semester hours in college-level composition or writing.	3									
			2. Humanities. Three semester hours (Literature, Philosophy, Theater)	3									
			3. Social Science. Three semester hours in social science.	3									
			4. Calculus I. One course in first semester calculus. <i>At CU, MATH 1300 or APPM 1350</i>	4 or 5									
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.													
			5. Biology Course 1 Lab: Biology Course 2										
			6. Chemistry Course 1 Lab: Chemistry Course 2										
			7. Earth/Space Science Course 1 Lab: Earth/Space Science Course 2										
			8. Physics Course 1 Lab: Physics Course 2										
9. Complete one (1) of the science tracks below. Candidates must satisfy the hour requirement and all areas of study for their selected track.													
BIOLOGY			Complete thirty (30) semester hours in Biology (may include courses from requirement 5 above). Coursework must include the study of each of the following topics:	30									
			<table border="0"> <tr> <td>a. General Biology</td> <td>e. Genetics</td> </tr> <tr> <td>b. Matter & Energy in Living Systems</td> <td>f. Molecular Biology</td> </tr> <tr> <td>c. Ecology</td> <td>g. Human Anatomy</td> </tr> <tr> <td>d. Evolution</td> <td>h. Environmental Biology</td> </tr> <tr> <td></td> <td>i. Biotechnology</td> </tr> </table>		a. General Biology	e. Genetics	b. Matter & Energy in Living Systems	f. Molecular Biology	c. Ecology	g. Human Anatomy	d. Evolution	h. Environmental Biology	
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d. Evolution	h. Environmental Biology												
	i. Biotechnology												
CHEMISTRY			Complete thirty (30) semester hours in Chemistry (may include courses from requirement 6 above). Coursework must include the study of each of the following topics:	30									
			<table border="0"> <tr> <td>a. Analytical</td> <td>c. Organic</td> </tr> <tr> <td>b. Inorganic</td> <td>d. Physical</td> </tr> </table>		a. Analytical	c. Organic	b. Inorganic	d. Physical					
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Content Requirements continue on page 2 →

EARTH/SPACE SCIENCE			Complete thirty (30) semester hours in Earth/Space Science (may include courses from requirement 7 above). Coursework must include the study of each of the following topics:	30
			a. Environmental Science b. Astronomy c. Historical & Physical Geology d. Meteorology e. Oceanography f. Geomorphology & Earth Systems	
PHYSICS			Complete thirty (30) semester hours in Physics (may include courses from requirement 8 above). Coursework must include the study of each of the following topics:	30
			a. Mathematics through Differential Equations b. Astronomy c. Atomic & Nuclear d. Classical Mechanics e. Electricity & Magnetism f. Heat & Thermodynamics g. Optics & Sound h. Quantum Mechanics i. Radiation & Radioactivity j. Relativity k. Waves	
ENVIRONMENTAL SCIENCE			Must have a degree in Environmental Science or Conservation. Coursework must include the study of each of the following topics (may include courses from requirement 5 & 7 above):	6
			a. Ecology b. Astronomy c. 17 semester hours in Biology	
			10. Recent Science coursework in the past five (5) years. Six semester hours.	3
			Course 1	3
			Course 2	3

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 2040** Step 1 & 2 Combination, **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. See the ACCESS link on the Resources page of the *Prospective Student Guide* to learn how to enroll in courses prior to admission.

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

			1. EDUC 2020 Step 1: Inquiry Approaches to Teaching	1
			2. EDUC 2030 Step 2: Inquiry Based Lesson Design. EDUC 2020 is a prerequisite for enrolling in EDUC 2030.	1
			3. EDUC 3013 School & Society	3
			4. EDUC 4050 Knowing & Learning. Includes up to 3 hours per week of school-based practicum.	3

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

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

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

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.**