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Changes to science and mathematics requirements for high school graduation have lead to an anticipated increase in demand for secondary science teachers. Preparation for secondary education at CSU-Pueblo involves a B.S. in a science discipline, plus a minor in education. Colorado licenses teachers in science, so preparation in all science disciplines is included.

Students who have already completed a B.S. need to complete any lacking science content area coursework plus the education minor. This minor includes several courses with field hours in a school district as a requirement. These courses are therefore scheduled over several semesters.

Students apply for formal admission to the teacher education program during the Frameworks in Education course (ED 301). After admission the remaining Education courses can be taken (RDG 435, ED 412, and ED 444). In addition to coursework, students must pass a content exam for science (PLACE or PRAXIS) prior to acceptance for student teaching during their last semester (ED 485 and ED 488).

Please see the Teacher Education website for more information: [www.ceeps.colostate-pueblo.edu/TEP/Pages/default.aspx](http://www.ceeps.colostate-pueblo.edu/TEP/Pages/default.aspx)

## **Biology B.S. SECONDARY EDUCATION EMPHASIS**

<b>Science and Math Courses</b>	<b>Title</b>	<b>Credits</b>	<b>Semester</b>
BIOL 181/L	College Biology I	4	
BIOL 182/L	College Biology II	4	
BIOL 201/L or 202/L	Botany or Zoology	4	
BIOL 350	Mendelian and Population Genetics	2	
BIOL 351	Molecular Biology and Genetics	2	
BIOL 206/L OR 301/L	Introduction to Microbiology OR General Microbiology	4-5	
BIOL 223/L or 224/L or 414/L	Anatomy and/or Physiology	4	
BIOL 352	Evolutionary Biology and Ecology	3	
BIOL 378	Laboratory in Teaching Biology	1	
BIOL 443/L, 441/L, 453/L, 479/L, 481/L, 485/L, 483/L, 484/L	Approved Upper Division Field Elective with lab: (Limnology, Freshwater Invert. Zoology, Ecology, Ichthyology, Entomology, Plant Taxonomy, Mammology, Ornithology)	3-4	
BIOL 3XX OR 4XX	Biology Upper Division Elective	3cr	
BIOL 493	Seminar	1	
MATH 221	Applied Calculus	4	
GEOL 101/L	Earth Science	4	
PHYS 201/L	Principles of Physics I	4	
PHYS 202/L	Principles of Physics II	4	
CHEM 121/L	General Chemistry I	5	
CHEM 122/L	General Chemistry II	5	
CHEM 211/L OR 301/L	Organic Chemistry	4-5	
	<b>Total</b>	<b>65-68 hrs</b>	
<b>General Education Courses</b>			<b>Semester</b>
ENG 101	English Composition I	3	
ENG 102	English Composition II	3	
SPCOM 103	Speaking and Listening (with a grade of B or better)	3	
(H)	Humanities course	3	
(H)	Humanities course	3	
(SS)	Social science course	3	
PSYCH 151 or 251	Human Development	3	
(HS)	History course	3	
	<b>General Education Total</b>	<b>24 hrs</b>	
<b>Education Minor Courses</b>	<b>Course Prefix/number</b>	<b>Cr (field hrs)</b>	<b>√</b>
Foundations of Ed	ED 202	3 hrs (30)	
Educational Media & Technology	ED 280	3 hrs	
Frameworks of Education*	ED 301	3 hrs (30)	
Teaching Diverse Learners**	ED 412	3 hrs (30)	
Content Area Literacy**	RDG 435	4 hrs (60)	
Teaching Secondary Science**	ED 444 (F)	4 hrs (60)	
Student Teaching**	ED 488	12 hrs (590)	
Capstone Seminar**	ED 485	2 hrs	
	<b>Education Total</b>	<b>34 hrs (800)</b>	<b>123-126 hrs Total</b>

\* Student must have completed >45 credit hours and have cumulative GPA >2.6.

\*\* Acceptance into the teacher education program required prior to enrolling in these courses.

Revised 7/20/11 hc