

B.S.Ed. in Chemistry: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Chemistry: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) chemistry. Through this program, students build knowledge and competencies in education and chemistry. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I*	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners*	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I*	3
<i>Health and Wellness</i> HSC 315 First Aid	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning*	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration*	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry*	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i>	3

Department of Education

Course	Credits
EDU 310 Teaching in a Multicultural Society*	
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology* • MAT 282 Calculus II* • Approved U.S. or British Literature Course* 	9
Required Concentration Courses*	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 395 Teaching of Science	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses*	37
CHE 102 Gen Chemistry II	4
CHE 104 Intro to Experimental	3
CHE 306 Inorganic Chemistry	3
CHE 320 Analytical/Instrument	3
CHE 331 Organic Chemistry I	4
CHE 341 Organic Chemistry II	3
CHE 371 Intermediate Lab I	1
CHE 372 Intermediate Lab II	1

Department of Education

Course	Credits
CHE 415 Biochemistry	4
CHE 461 Physical Chemistry	3
CHE 471 Advanced Lab I	1
Science Elective	3
PHY 101 College Physics I	4
Total	123

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** CHE 101 General Chemistry

* Must be passed with a C or higher.

Program Notes: This is a professional program. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program. The science elective can have a prefix of: CHE, BIO, EAS, PHS, PHY.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/chemistry.aspx>