

**Major Required 48 units**

CHM1210 - General Chemistry I (3) (B1)  
 CHM1210L - General Chemistry Laboratory I (1) (B3)  
 CHM1220 - General Chemistry II (3) (B1)  
 CHM1220L - General Chemistry Laboratory II (1) (B3)  
 CHM2210 - Quantitative Analysis (2)  
 CHM2210L - Quantitative Analysis Laboratory (2)  
 CHM2910A - Chemical Communication Activity (1)  
 CHM3140 - Organic Chemistry I (4)  
 CHM3140L - Organic Chemistry Laboratory I (1)  
 CHM3150 - Organic Chemistry II (3)  
 CHM3150L - Organic Chemistry Laboratory II (1)  
 CHM3270 - Biochemistry I (3)  
 CHM3270L - Biochemistry Laboratory I (1)  
 CHM3420 - Spectroscopic Methods (1)  
 CHM3420L - Spectroscopic Methods Laboratory (1)  
 CHM3430 - Separation Methods (1)  
 CHM3430L - Separation Methods Laboratory (1)  
 CHM3520L - Physical Chemistry Laboratory (2)  
 MAT1140 - Calculus I (4) (B4)  
 MAT1150 - Calculus II (4) (B4)  
 PHY1510 - Introduction to Newtonian Mechanics (3) (B1)  
 PHY1510L - Newtonian Mechanics Laboratory (1) (B3)  
 PHY1520 - Introduction to Electromagnetism and Circuits (3)  
 PHY1520L - Introductory Laboratory on Electromagnetism and Circuits (1)

**Subplan/Option Required 10 units**

CHM3040 - Elements of Physical Chemistry I (3) *and*  
 CHM3050 - Elements of Physical Chemistry II (3)  
**OR**  
 CHM3110 - Classical Physical Chemistry (3) *and*  
 CHM3120 - Quantum Physical Chemistry (3)

BIO1150 - Basic Biology (3) (B2)  
 BIO1150L - Basic Biology Laboratory (1) (B3)

**Subplan/Option Electives 23 units**

Students may take any 3000-4000 level chemistry courses not already counted in the major required to satisfy units. Up to 12 units may come from outside CHM. See advisor/dept for suggested courses that prepare for specific areas in chemistry or to tailor your curriculum to career goals.

**General Education Requirements 48 Units**

Students should consult the Academic Programs website

<https://www.cpp.edu/~academic-programs/general-education-course-listings.shtml>

for current information regarding this requirement. Unless specific courses are required, please refer to the list of approved courses under General Education Requirements, Areas A through E.

**Area A. English Language Communication and Critical Thinking (9 units)**

At least 3 units from each sub-area

1. Oral Communication
2. Written Communication
3. Critical Thinking

**Area B. Scientific Inquiry and Quantitative Reasoning (12 units)**

At least 3 units from B1, B2, B4, and B5 including 1 unit of lab from B1 or B2 to fulfill B3

1. Physical Sciences
2. Life Sciences
3. Laboratory Activity
4. Mathematics/Quantitative Reasoning
5. Science and Technology Synthesis

**Area C. Arts and Humanities (12 units)**

At least 3 units from each sub-area and 3 additional units from sub-areas 1 and/or 2

1. Visual and Performing Arts
2. Literature, Modern Languages, Philosophy and Civilization
3. Arts and Humanities Synthesis

**Area D. Social Sciences (12 units)**

At least 3 units from each sub-area

1. U.S. History and American Ideals
2. U.S. Constitution and California Government
3. Social Sciences: Principles, Methodologies, Value Systems, and Ethics
4. Social Science Synthesis

**Area E. Lifelong Learning and Self-Development (3 units)**
**Interdisciplinary General Education 21 Units**

An alternate pattern for partial fulfillment of GE Areas A, C, and D available for students is the Interdisciplinary General Education (IGE) program. Students should see an advisor for specific GE coursework required by their major. Please refer to the University Catalog General Education Program section for additional information.

**How IGE fulfills General Education Requirements:**

Year	Completion of IGE Courses	Satisfies GE Requirements
First	IGE 1100, IGE 1200	A2 and C2
Second/Third	IGE 2100, IGE 2200	C1 and C2
	IGE 2300, IGE 2400	D1 and D3
Third/Fourth	IGE 3100	C3 or D4

**American Institutions 6 Units**

Courses that satisfy this requirement may also satisfy GE Area D1 and D2.

**American Cultural Perspectives Requirement 3 Units**

Refer to the University Catalog General Education Program section for a list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.

**Graduation Writing Test**

All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the semester following completion of 60 units for undergraduates.