Pacific Union College

Major in Chemistry: B.A.

CHEM-01

2026-2027

Major Course Requirements

A minimum of 70.5 hours (34.5 upper-division hours)

➤ ***Required Core Courses (50.5 hours):***

CHEM 111+12+13+L	General Chemistry I, II, III+L	5+5+5
CHEM 324+L	Analytical Chemistry I+Lab	3+1
CHEM 325	Analytical Chemistry II	3
CHEM 371+72+73+L	Organic Chemistry I, II, III+L	4+4+4
CHEM 397	Chemistry Seminar	0.5
CHEM 414	Inorganic Chemistry	3
CHEM 451	Thermodynamics	4
CHEM 452	Kinetics	2
CHEM 490	Senior Capstone	1
SCIE 290	Sophomore Seminar	1
At least three credits from the following:		3
CHEM 426L	Integrated Chemistry Lab (2-3)	
CHEM 483L	Biochemistry III Lab (2)	

➤ ***Required Cognate Courses (20 hours):***

MATH 131+132	Calculus I,II	4+4
PHYS 111+12+13	General Physics I,II,III	4+4+4

Student Learning Outcomes

Students can:

- Apply quantitative or qualitative theories of molecular behavior to chemical problems.
- Synthesize, purify, characterize, and analyze substances.
- Access and utilize chemical data and communicate it orally and in writing.

Occupational Information

What can I do with this major?

Graduates with a bachelor's degree in chemistry have the necessary skills for entry-level employment as chemists in quality control, environmental, forensic, and research laboratories in private, industrial and government settings. They may also apply their degree in science-related jobs in sales, marketing, and middle management. Opportunities in the educational sector include employment in informal education arenas such as museums and content preparation for secondary teaching. The bachelor's degree in chemistry prepares the graduate for entry into professional and graduate schools.

Additional Education Required?

Some chemists with a bachelor's degree will seek to continue their education in graduate school to pursue advanced degrees leading to careers in chemical research, industry, forensic chemistry, patent law, scientific writing and secondary and college teaching.

Some graduates will use their bachelor's degree as a stepping stone to pursue professional education in preparation for careers in health professions such as dentistry, medicine, optometry, pharmacy, and veterinary medicine.

Job Outlook

Employment of chemists and materials scientists is expected to grow by 6% in the decade 2022-2032. This is faster than the average for all occupations. Greater than average growth will be likely for chemists working in environmental and biochemical areas.

As of 2022, the median annual wage for chemists was $80,670 and $104,380 for material scientists.

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General Education Requirements

To view general education requirements for this major, please refer to page A-02, Summary of General Education Requirements: B.A. Degree.

How to Construct Your Own Program

1. Consult with your academic advisor.
2. Consider your aptitudes, interests, and available courses.
3. Schedule major courses and cognates first.
4. Fill the rest of your schedule with G.E. requirements.
5. For the freshman year include English, Religion, and PE courses. Also include Basic Algebra I+II unless waived by previous work.

What the Degree Includes

A total of 180 quarter hours including:

1. A minimum of 60 upper division hours.
2. General Education requirements.
3. Major requirements.
4. Minimum 2.0 GPA, overall and major.

For More Information

Chemistry Department
Pacific Union College
One Angwin Avenue
Angwin, CA 94508
707-965-7600

Website: puc.edu/chemistry

Sample Four-Year Program

This sample curriculum is designed to show you how a program may be constructed and to help you select a proper sequence of courses in the major. It is not likely that these courses can always be taken in the order given. Your advisor will help you design a personalized program of studies.

First Year	**F**	**W**	**S**
General Chemistry I,II,III	5	5	5
Calculus I,II	4	4	-
College English I,II	4	4	-
Religion Courses	-	3	3
General Education/Electives	3	-	8
	16	16	16

Second Year	**F**	**W**	**S**
Organic Chemistry I,II,III	4	4	4
Analytical Chemistry I+Lab	3	-	-
General Physics I,II,III	4	4	4
General Education/Electives	5	8	8
Sophomore Seminar	-	1	-
	16	17	16

Third and Fourth Years	**F**	**W**	**S**
Thermodynamics	4	-	-
Kinetics	-	-	2
Integrated Chemistry Lab*	-	1	1
Inorganic Chemistry	-	-	3
Analytical Chemistry II	-	2	-
Seminar	-	-	0.5
Capstone	-	1	-
Senior Assessment Seminar	-	-	0.2
General Education/Electives	28	26	26
	32	30	32.7

* *Hours for advanced lab may be chosen from CHEM 426L or 483L.*