

**BS Degree in Chemistry**

The Bachelor of Science (BS) degree in chemistry is appropriate for students preparing for graduate school in chemistry or biochemistry, or for a career as a professional chemist. It involves more theoretical background and more laboratory work in chemistry than the B. A. degree. The B. S. degree in chemistry requires 124 semester hours credit, including 45 hours of Basic Studies and the following requirements. The average (mean) taken to complete this degree is 50 months. Factors that contribute to taking more than 44 months include working part-time, repeating courses, and improper schedule planning. Advisors can help you avoid these problems.

General Chemistry	CHM 101-102	4-4
General Chemistry Laboratory	CHML 101-102	0-0
Organic Chemistry	CHM 211-212	3-3
Organic Chemistry Laboratory	CHML 211-212	1-1
Introduction to Chemical Research	CHM 250	1
Quantitative Analysis	CHM 235	2
Quantitative Analysis Laboratory	CHML 235	2
Advanced Techniques of Organic Chemistry	CHM 312	2
Advanced Techniques of Organic Chemistry Laboratory	CHML 312	2
Physical Chemistry	CHM 321-420	4-3
Physical Chemistry Laboratory	CHML 321-420	1-1
Biochemistry	CHM 365	3
Analytical Chemistry	CHM 435	2
Analytical Chemistry Laboratory	CHML 435	2
Inorganic Chemistry	CHM 445	3
Inorganic Synthesis	CHML 445	1
Senior Seminar	CHM 495	1
Calculus	MAT 161-162	4-4
Multivariate Calculus, Differential Equations	MAT 261,361 or 335	4-3
Physics	PHY 201-202, or 101, 102, and 201	4-4
Biology	BIO 204	4
plus three hours from the following:		
Computational Chemistry	CHM 425	3
Physical Organic Chemistry	CHM 415	3
Biochemistry II	CHM 466	3
Biochemical Techniques and Instrumentation	CHM 467	2
Industrial and Polymer Chemistry	CHM 485	3
Medicinal Chemistry	CHM 417	3
DIS Research (incl. formal oral & written reports)	CHM 491	3
Honors in Chemistry (3 hours)	CHM 499	3

A minimum GPA of 2.0 on all chemistry courses counted toward the B. S. degree is required for graduation.

Suggestions: Students should arrange their work so as to take CHM 321-420 in the junior year. Two years of German are recommended.

Endorsement: This degree is certified by the American Chemical Society.

Option 1. General. 76 hours. Three hours from the following: CHM 415, 417, 425, 466, 467, 478, 485, 491, and 499. If 491 or 499 is used, the student must take a total of 3 credit hours in 491 and may count only 3 of the 6 credit hours taken as 499 for credit toward the major.

Option 2. Biochemistry. 81 hours. CHM 466, 467, and 3 hours from the following: BIO 325, 436, CHM 491 or CHM 499. For either CHM 491 or 499 the subject matter must be biochemical in focus, and a comprehensive written report is required.

BA Degree in Chemistry

The Bachelor of Arts degree in chemistry is appropriate for students preparing for a career which is closely related to chemistry, such as Environmental Science, Marine Science, various allied health sciences, chemical and pharmaceutical sales, or teaching at the secondary school level. The B.A. degree in chemistry requires 124 semester hours credit, including 45 hours of Basic Studies, and the following:

General Chemistry	CHM 101-102	4-4
Organic Chemistry	CHM 211-212	3-3
Organic Chemistry Laboratory	CHM 211-212	1-1
Quantitative Analysis	CHM 235	2
Quantitative Analysis Laboratory	CHM 235	2
Advanced Techniques of Organic Chemistry	CHM 312	2
Physical Chemistry	CHM 321	4
Inorganic Chemistry	CHM 445	3
Senior Seminar	CHM 495	1
Calculus	MAT 161-162	4-4
Physics	PHY 101-102, or 201-202	4-4
Biology	BIO 204	4

Plus a choice of Option 1 or Option 2, below:

Option 1: seven hours from the following, including one advanced lab (indicated by *):

Advanced Techniques of Organic Chemistry Lab*	CHML312	2
Physical Chemistry Lab*	CHML321	1
Environmental Chemistry	CHM 377	3
Environmental Chemistry Laboratory*	CHML377	1
Forensic Chemistry*	CHM 380	4
Physical Organic Chemistry	CHM 415	3
Medicinal Chemistry	CHM 417	3
Physical Chemistry II	CHM 420	3
Physical Chemistry II Laboratory*	CHM 420	1
Computational Chemistry	CHM 425	3
Analytical Chemistry*	CHM 435	2-2
Inorganic Synthesis*	CHM 445	1
Biochemistry	CHM 365	3
Biochemistry II	CHM 466	3
Biochemical Techniques and Instrumentation*	CHM 467	2
Chemical Oceanography	CHM 475	3
Industrial Chemistry	CHM 485	3
Directed Individual Study*	CHM 491	1-4
Honors in Chemistry*	CHM 499	3-4

* Satisfies requirement of one advanced laboratory

Option 2: One advanced laboratory and Teacher Education Requirements (See School of Education section of catalog.)

A minimum GPA of 2.0 on all chemistry courses counted toward the B. A. degree is required for graduation.

Suggestions: Under **Option 2**, if Secondary Teacher Certification in General Science is desired in addition to Secondary Teacher Certification in Chemistry, take another BIO course, PHY 260 and two courses from GLY 101, 120, 150.

Suggested electives for students interested in the following areas:

Environmental Chemistry: CHM 377, CHML 377; BIO 205, or 206; EVS 195, 495; GLY 120, STT 215.

Marine Chemistry: CHM 475; BIO 205 or 206, 362; GLY 150.

Industrial Chemistry: CHM 365, 435; CHML 435, 445; ACG 201, QMM 280 or STT 215.

Premedical Science: CHM 365, 417, 466, 467; BIO 206

