

CHEMISTRY B.S.

All students must meet the Degree and University Requirements.

All students must meet the Catamount Core Curriculum Requirements.

All students must meet the College Requirements.

Students pursuing a Bachelor of Science degree with a major in Chemistry complete an extensive set of courses representing the traditional chemical subdisciplines and engage in research. The B.S. degree Chemistry major is certified by the American Chemical Society, and it is particularly good preparation for graduate study in chemistry.

MAJOR REQUIREMENTS

At least 47 credits in major courses, plus 16 credits in ancillary courses, including:

FOUNDATIONS. At least 9 credits.		
GENERAL CHEMISTRY. Choose 1 of the following options:		1-8
Option A (recommended):		
CHEM 1070	Discovering Chemistry	
Option B:		
CHEM 1400 & CHEM 1450	General Chemistry 1 and General Chemistry 2	
ORGANIC CHEMISTRY. Choose 1 of the following options:		8
Option A (recommended):		
CHEM 1500 & CHEM 1550	Organic Chemistry for Majors 1 and Organic Chemistry for Majors 2	
Option B:		
CHEM 2580 & CHEM 2585	Organic Chemistry 1 and Organic Chemistry 2	
ANCILLARY COURSES. 16 credits.		
MATHEMATICS. Choose 1 of the following options:		8
Option A (recommended):		
MATH 1234 & MATH 1248	Calculus I and Calculus II	
Option B:		
MATH 1212 & MATH 1242	Fundamentals of Calculus I and Transitional Calculus	
PHYS 1600	Fundamentals of Physics I	4
PHYS 1650	Fundamentals of Physics II	4
CORE COURSES. At least 32 credits.		

CHEM 2020	Communication Skills Seminar	3
CHEM 2014	Professional Development	1
CHEM 2050	Advanced Synthesis Techniques	3
CHEM 2310	Quantitative Analysis	4
CHEM 2600	Intro Physical Chemistry	3
CHEM 2605	Physical Chemistry Lab	1
Choose 1 of the following:		1-4
CHEM 3602	Physical Chemistry Preparation	
MATH 2248	Calculus III	
BIOC 3005	Biochemistry I	3
CHEM 3320	Instrumental Analysis	3
CHEM 3325	Instrumental Analysis Lab	1
CHEM 3400	Advanced Inorganic Chemistry	3
CHEM 3600	Advanced Physical Chemistry	3
UNDERGRADUATE RESEARCH. 3 credits from the following, in any combination:		3
CHEM 2995	Undergraduate Research	
CHEM 3991	Internship	
CHEM 3995	Undergraduate Research	
CHEM 4996	Honors	
ADVANCED ELECTIVES. 6 credits.		
3-6 additional credits from the following:		3-6
CHEM numbered 4000 to 4989		
ALE 3640, BIOC 3006, BIOC 3007, BIOC 3063, BIOC 3075, GEOL 4405, PHRM 3010, PHRM 5400, PHRM 3720, PHRM 3900		
Special Topics: CHEM 3990, CHEM 4990		
With department permission, CHEM numbered 6000 to 6990		
Up to 3 additional credits from the following:		0-3
CHEM 3991	Internship	
CHEM 3995	Undergraduate Research	
CHEM 4996	Honors	
Additional courses, including graduate-level courses, may be accepted as electives with prior approval from the Chemistry Department. Graduate courses are often open to upper-level undergraduate students with instructor permission.		

RESTRICTIONS

Students completing the B.S. in Chemistry may not also receive the B.A. in Chemistry or the B.S. in Biochemistry.

OTHER INFORMATION

In the College of Arts and Sciences (CAS), only one course may overlap between a major and a minor or between two CAS majors.

Courses for the major and/or its pre/co-requisites that are cross-listed in the catalog or schedule of courses under another course prefix may be taken under that other prefix and still count for these requirements.

With the approval of the chair/director, courses that applied to the major in previous years but have since been deactivated may be applied to this year's major requirements if they are reactivated.

For a Bachelor of Science degree, no more than 50 credits in courses with the same departmental prefix may be used toward completion of the 120 credits required for graduation.

At least half of the credits used to complete major requirements must be taken at the University of Vermont.