BIOCHEMISTRY 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.

MAJOR REQUIREMENTS

Students who are pursuing the B.S. in Biochemistry in the College of Arts and Sciences are required to take at least 84 credits of coursework in the College of Arts and Sciences.

At least 46 credits in major courses, plus 23-27 credits in ancillary courses, including:

Requirement Description		Credits
ANCILLARY REQUIREMENTS. At least 23 credits.		
INTRODUCTORY BIOLOGY. Choose 1 of the following options:		4-8
Option A (recommended):		
BCOR 1400 & BCOR 1450	Exploring Biology 1 and Exploring Biology 2	
Option B:		
BCOR 1425	Accelerated Biology	
Option C:		
BIOL 1400 & BIOL 1450	Principles of Biology 1 and Principles of Biology 2	
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	
STATISTICS.		3
STAT 1410	Basic Statistical Methods 1	3
PHYSICS. Choose 1 of the following options:		8
Option A (recommended):		
PHYS 1600 & PHYS 1650	Fundamentals of Physics I and Fundamentals of Physics II	
Option B:		
PHYS 1400 & PHYS 1450	Elementary Physics I and Elementary Physics II	
CORE REQUIREMENTS. At least 32 credits.		
INTERMEDIATE BIOLOGY.		7
BCOR 2300	Genetics	3
BCOR 2500	Molecular & Cell Biology w/lab	4
GENERAL CHEMISTRY. Choose 1 of the following options:		5-8
Option A (recommended):		
CHEM 1410 & CHEM 1460 & CHEM 2400	Exploring Chemistry 1 and Exploring Chemistry 2 and Inorganic 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	
PHYSICAL CHEMISTRY.		3
CHEM 2600	Physical Chem for Life Science	3
BIOCHEMISTRY.		9
BIOC 3005	Biochemistry I	3
BIOC 3006	Biochemistry II	3
BIOC 3007	Biochemistry Lab	3
ADVANCED COURSES. 14 credits.		
INTERMEDIATE LABORATORY ELECTIVE. Choose 1 of the following:		4
BIOC 3030	Adv Biochem Lab: Protein CURE	
CHEM 2310	Quantitative Analysis	
MMG 2040	Intro Molecular Genetics	
MMG 3010	Applied Cell & Mol Bio Lab	
BIOL 4630	Adv Genetics Laboratory	
BIOL 4635	Adv Genetics & Proteomics Lab	
ADVANCED BIOCHEMISTRY ELECTIVES. 5-9 additional credits from the Undergraduate and/or Graduate Elective lists below, in any combination.		5-9

Undergraduate Elective Courses: ASCI 3180, BHSC 3420, BIOC 3063, BIOC 3075, BIOL 3500, BIOL 3505, BIOL 3530, BIOL 3560, BIOL 3565, BIOL 4135, BIOL 4405, CHEM 3320, CHEM 3400, CHEM 3600, CHEM 4580, MMG 3110, MMG 3230, MMG 3250, MMG 3270, MMG 3300, MMG 3310, MMG 3320, MMG 3330, NFS 3243, NSCI 3250, PHRM 3010, PHRM 3720, PHRM 3900, PSYS 3250, STAT 3210		
RESEARCH. Up to 4 credits from the following: BIOC 3995, BIOC 4996, CHEM 3995, or MMG 3995. Research credits in other related disciplines may be applied with the approval of the Biochemistry Directors.		0-4
Graduate Elective Courses Requiring Instructor Permission: BIOC 6072, CHEM 6410, CHEM 6460, CHEM 6580, CHEM 6620, CLBI 6010, MPBP 6010, MPBP 6100, NSCI 5230, NSCI 6020, PHRM 5400, STAT 5310		
SENIOR PROJECT. Choose 1 of the following:		1
BIOC 4084	Biochemistry Senior Seminar	
BIOC 4996	Honors	
Additional courses, including graduate-level courses, may be accepted as electives with prior approval from the Biochemistry Directors.		

RESTRICTIONS

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

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 subject code may be taken under that other subject code 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 subject code 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.