

B.S. Biochemistry and Molecular Biology - Chemistry

This is not an official list of degree requirements. Adjustments may be required due to curriculum changes.

First Year

Fall

Course	Prerequisite	Credit
CH 1134: Professional Development for Chemists		1
BL 1400: Principles of Biology		3
BL 1410: Principles of Biology Lab		1
CH 1150: University Chemistry I		3
CH 1151 University Chemistry Lab I		1
CH 1153 University Chemistry I Recitation		1
MA 1160: Calculus with Technology I	MA 1032	4
UN 1015: Composition		3
Total		17

Spring

Course	Prerequisite	Credit
BL 2220: Genetics	BL 1400	3
CH 1160: University Chemistry II	CH 1150	3
CH 1161 University Chemistry Lab II	CH 1151	1
CH 1163 University Chemistry II Recitation		
Essential Education: Foundations of the Human World		3
MA 2160: Calculus with Technology II	MA 1160	4
PH 1100: Physics by Inquiry		1
Total		16

Second Year

Fall

Course	Prerequisite	Credit
BL 3300: Genomics	BL 2200	3
CH 2430: Mechanistic Organic Chemistry	CH 1160	3
CH 2411: Organic Chemistry Lab I	CH 1161	1
MA 2321: Elementary Linear Algebra and MA 3521: Elementary Differential Equations **	MA 1160 MA 2160	4
PH 2100: University Physics I	MA 1160	3
Total		14

Spring

Course	Prerequisite	Credit
CH 2440: Synthetic Organic Chemistry	CH 2430	3
CH 2421: Organic Chemistry Lab II	CH 2411	1
CH 2710: Computing in Chemistry	CH 1160	4
Essential Education: SHAPE		3
PH 1200: Physics by Inquiry II	CH 1100	1
PH 2200: University Physics II – E & M	CH 2100	3
Essential Education: Activities for Well-being and Success		1
Total		16

Third Year

Fall

Course	Prerequisite	Credit
CH 3124: Communication for the Chemical Sciences	UN 1015	3
CH 3510: Physical Chemistry I	MA 2160 and PH 2200	3
CH 3511: Physical Chemistry 1 Lab	MA 2160 and PH 2200	2
CH 4220: Bioanalytical Chemistry I	CH 3510	3
CH 4221: Bioanalytical Chemistry I Lab		2
CH 4710: Biomolecular Chemistry I	CH 2430	3
Essential Education: Activities for Well-being and Success		1
Total		17

Spring

Course	Prerequisite	Credit
Essential Education: Arts & Culture		3
CH 4720: Biomolecular Chemistry II	CH 4710	3
Essential Education: Experience		3
Essential Education: Intercultural Competency		3
Essential Education: Activities for Well-being and Success		1
Total		13

Fourth Year

Fall

Course	Prerequisite	Credit
BL 3210: General Microbiology	BL 1400	4
BL 4030: Molecular Biology	CH 4710	3
CH 4330: Bioinorganic Chemistry	CH 4710	3
CH 4995: Undergraduate Research in Biochemistry *		3
Total		13

Spring

Course	Prerequisite	Credit
CH 3540: Biophysical Chemistry	CH 1160 and MA 2160	3
CH 3541: Biophysical Chemistry Lab		2
CH 4721: Research Methods in Biomolecular Chemistry	CH 4710 and CH 4220	3
CH 4995: Undergraduate Research in Biochemistry *		3
Free Electives		3
Total		14

Grand Total = 120 Credits

* Degree Requirements: 6 credits of CH 4995 OR BL 4840 AND 3 credits of CH or BL 3000-4000 course(s).

** Students can take MA 2321/MA 3521 together as accelerated courses or as MA 2320 and MA 3520 as full semester courses in the same or different semesters.