

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	Credit
CH 1150 University Chemistry I AND	3
CH 1151 University Chemistry Lab 1 AND	1
CH 1153 University Chemistry I Recitation	1
CH 1130 PFDC 1: Orientation	1
BL 1400: Principles of Biology AND	3
BL 1410: Principles of Biology Lab	1
MA 1160 Calculus with Technology I	4
UN 1015 Composition (OR UN 1025 Global Issues)	3
Total	17

Spring

Course	Credit
CH 1160 University Chemistry II AND	3
CH 1161 University Chemistry Lab II. AND	1
CH 1163 University Chemistry II Recitation	1
MA 2321 Elementary Linear Algebra	2
MA 3521 Elementary Differential Equations	2
PH 1100: Physics by Inquiry	1
MA 2160 Calculus with Technology II	4
UN 1025 Global Issues (OR UN 1015 Composition)	3
Total	17

Second Year

Fall

Course	Credit
CH 2130 PDFC 2: Career Planning	2
CH 2430 Mechanistic Organic Chemistry	3
CH 2411 Organic Chemistry Lab I	1
PH 2100 University Physics I – Mechanics	3
General Education Goal 4: Critical & Creative Thinking (or Goal 8)	3
Free Electives	3
Total	15

Spring

Course	Credit
CH 2440 Synthetic Organic Chemistry	3
CH 2421 Organic Chemistry Lab II	2
CH 2510 Introduction to Computational Chemistry and Informatics	3
PH 1200 Physics by Inquiry II	1
PH 2200 University Physics II – E & M	3
General Education Goal 8: Social Responsibility & Ethical Reasoning (or Goal 4)	3
Total	15

Third Year

Fall

Course	Credit
CH 3510 Physical Chemistry I	3
CH 3511 Physical Chemistry Lab I	2
CH 4710 Biomolecular Chemistry I OR CH 4310 Inorganic Chemistry I	3
CH 4222 Bioanalytical Chemistry	5
General Education HASS Distribution	3
Total	16

Spring

Course	Credit
CH 3130 PDFC 3: Communication	1
CH 3540 Biophysical Chemistry	3
CH 3541 Biophysical Chemistry Lab	2
CH 4720 Biomolecular Chemistry II	3
CH 4721 Research Methods in Biomolecular Chemistry	3
BL 2200 Genetics	3
Total	15

Fourth Year

Fall

Course	Credit
BL 3210 General Microbiology	4
BL 3300 Introduction to Genomics	3
BL 4030 Molecular Biology	3
*CH 4995 Undergraduate Research in Biochemistry	3
General Education HASS Distribution	3
Total	16

Spring

Course	Credit
CH 4130 PDFC 4: Senior Seminar	2
CH4330 Bioinorganic Chemistry	3
*CH 4995 Undergraduate Research in Biochemistry	3
Free Electives	3
General Education HASS Distribution	6
Total	17

Grand Total = 128 Credits

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

I': 3 Units of co-curricular activities are required (P.E. courses are typically taught in 0.5 unit classes. Thus, 6 of these are needed for 3 units). It is highly recommended that students take at least one P.E. class during each semester of their first year, if possible.