

B.S. Medicinal Chemistry Degree

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 Seminar for Chemists		1
University Chemistry I		3
CH 1511: University Chemistry I Lab		1
CH 1153 University Chemistry I Recitation		1
MA 1160: Calculus with Technology I	MA 1032	4
PH 1100: Physics by Inquiry		1
UN 1015 Composition		3
Essential Education: Activities for Well-being and Success		1
Total		15

Spring

Course	Prerequisite	Credit
CH 1160: University Chemistry II	CH 1150	3
CH 1161: University Chemistry II Lab	CH 1151	1
CH 1163: University Chemistry II Recitation		1
Essential Education: Foundations of the Human World		3
MA 2160: Calculus with Technology II	MA 1160	4
PH 2100: University Physics I	MA 1160	3
Essential Education: Activities for Well-being and Success		1
Total		16

Second Year

Fall

Course	Prerequisite	Credit
Essential Education: Arts & Culture		3
BL 1400: Principles of Biology		3
BL 1410 Principles of Biology Lab		1
CH 2430: Mechanistic Organic Chemistry	CH 1160	3
CH 2410: Organic Chemistry I Lab	CH 1161	1
PH 2200: University Physics II – E & M	PH 2100	3
PH 1200: Physics by Inquiry II	PH 1100	1
Total		15

Spring

Course	Prerequisite	Credit
CH 2440: Synthetic Organic Chemistry	CH 2430	3
CH 2421: Organic Chemistry Lab II	CH 2411	2
CH 2710: Computing in Chemistry	CH 1160	4
MA 3160: Multivariable Calculus with Technology	MA 2160	2
MA 2320: Elementary Linear Algebra	MA 1160	2
Essential Education: Activities for Well-being and Success		1
Total		14

Third Year

Fall

Course	Prerequisite	Credit
CH 3124: Communication for the Chemical Sciences	UN 1015	3
CH 3510: Physical Chemistry I	MA 2160, PH 2200, CH 1160	3
CH 3511: Physical Chemistry Lab I		2
CH 4710: Biomolecular Chemistry	CH 2440	3
CH 4220: Bioanalytical Chemistry	CH 1160	3
CH 4221: Bioanalytical Chemistry Lab		2
Total		16

Spring

Course	Prerequisite	Credit
CH 3540: Biophysical Chemistry OR CH 3520: Physical Chemistry II	BL 1400, CH 1160 and MA 2160 OR CH 3510	3
CH 3541: Biophysical Chemistry Lab OR CH 3521: Physical Chemistry II Lab		2
CH 4720: Biomolecular Chemistry II	CH 4710	3
Essential Education: Experience		3
Essential Education: SHAPE		3
Free Electives		3
Total		17

Fourth Year

Fall

Course	Prerequisite	Credit
CH 4120: Medicinal Chemistry: Drug Design	CH 2440	3
MA 2720: Statistical Methods	MA 1032	4
CH 4440: Molecular Modeling	CH 3510 and CH 4710	3
Major Approved Electives*		4-6
Total		14-16

Spring

Course	Prerequisite	Credit
BL 4070: Environmental Toxicology	BL 1400 and CH 1160	3
CH 4412: Spectroscopy of Organic Chemistry	CH 2440	3
CH 4110: Medicinal Chemistry: Mechanism of Drug Interaction	CH 2440	3
CH 4721: Research Methods in Biomolecular Chemistry	CH 4710 and CH 4220	3
Free Electives **		1-2
Total		13-14

Grand Total = 120 Credits

* Major Approved Electives are selected from the list of approved electives for this major.

**Free Elective credits are dependent on number of credits taken for Major Approved Electives.