## **Biochemistry (BCHM)**

Freshman			
Fall	Hours	Spring	Hours
ENGL 1100 English Composition I		3 ENGL 1120 English Composition II	3
MATH 1610 Calculus I		4 MATH 1620 Calculus II	4
CHEM 1110 General Chemistry I <sup>1</sup>		3 CHEM 1120 General Chemistry for Scientists and Engineers II <sup>1</sup>	3
CHEM 1111 General Chemistry I Laboratory		1 CHEM 1121 General Chemistry II Laboratory	1
Core History		3 BIOL 1020 Principles of Biology	3
		BIOL 1021 Principles of Biology Laboratory	1
		14	15
Sophomore			
Fall	Hours	Spring	Hours
CHEM 2070 Organic Chemistry I		3 CHEM 2080 Organic Chemistry II	3
CHEM 2071 Organic Chemistry I Laboratory		1 CHEM 2081 Organic Chemistry II Laboratory	1
PHYS 1600 Engineering Physics I		4 PHYS 1610 Engineering Physics II	4
MATH 2630 Calculus III		4 MATH 2650 Linear Differential Equations	3
CHEM 3050 Analytical Chemistry		3 Core Humanities	3
CHEM 3051 Analytical Chemistry Laboratory		1	
		16	14
Junior			
Fall	Hours	Spring	Hours
CHEM 4070 Physical Chemistry I		3 CHEM 4080 Physical Chemistry II	3
CHEM 4071 Physical Chemistry I Laboratory		1 CHEM 4081 Physical Chemistry II Laboratory	1
CHEM 4071 Physical Chemistry I Laboratory BIOL 3200 General Microbiology		1 CHEM 4081 Physical Chemistry II Laboratory 3 Core Literature	1 3
BIOL 3200 General Microbiology		3 Core Literature	3
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory		3 Core Literature 1 BCHE 5190 Biochemistry II	3 <b>3</b>
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I		3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory	3 3 1
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory		3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature	3 3 1 1
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory		3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature 3 BIOL 3000 Genetics	3 3 1 1 3
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory		3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature 3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory	3 3 1 1 3 1
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory Elective	Hours	3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature 3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory	3 3 1 1 3 1
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory Elective	Hours	3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature 3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory	3 3 1 1 3 1 3 1 16
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory Elective  Senior Fall	Hours	3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature 3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory 15  Spring	3 3 1 1 3 1 16 Hours
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory Elective  Senior Fall CHEM 4100 Inorganic Chemistry	Hours	3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature 3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory  15  Spring 3 CHEM 4130 Instrumental Analysis	3 3 1 1 3 1 16 Hours 3
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory Elective  Senior Fall CHEM 4100 Inorganic Chemistry CHEM 4101 Inorganic Chemistry Laboratory	Hours	3 Core Literature 1 BCHE 5190 Biochemistry II 3 BCHE 5191 Biochemistry II Laboratory 1 CHEM 3000 Chemical Literature 3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory 15  Spring 3 CHEM 4130 Instrumental Analysis 1 CHEM 4131 Instrumental Analysis Laboratory	3 3 1 1 3 1 16 Hours 3 1
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory Elective  Senior Fall CHEM 4100 Inorganic Chemistry CHEM 4950 Undergraduate Seminar CHEM 4980 Undergraduate Research in	Hours	3 Core Literature  1 BCHE 5190 Biochemistry II  3 BCHE 5191 Biochemistry II Laboratory  1 CHEM 3000 Chemical Literature  3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory  15  Spring  3 CHEM 4130 Instrumental Analysis  1 CHEM 4131 Instrumental Analysis Laboratory  1 Core Fine Arts	3 3 1 1 3 1 16 Hours 3 1 3
BIOL 3200 General Microbiology BIOL 3201 General Microbiology Laboratory BCHE 5180 Biochemistry I BCHE 5181 Biochemistry I Laboratory Elective  Senior Fall CHEM 4100 Inorganic Chemistry CHEM 4950 Undergraduate Seminar CHEM 4980 Undergraduate Research in Chemistry or 4920 Chemistry Internship <sup>2</sup>	Hours	3 Core Literature  1 BCHE 5190 Biochemistry II  3 BCHE 5191 Biochemistry II Laboratory  1 CHEM 3000 Chemical Literature  3 BIOL 3000 Genetics BIOL 3001 General Genetics Laboratory  15  Spring  3 CHEM 4130 Instrumental Analysis  1 CHEM 4131 Instrumental Analysis Laboratory  1 Core Fine Arts  3 Core Social Science or Humanities <sup>4</sup>	3 3 1 1 3 1 16 Hours 3 1 3 3

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**Total Hours: 120** 

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- CHEM 1030/CHEM 1031 and CHEM 1040/CHEM 1041 sequence can substitute for CHEM 1110/CHEM 1111 and CHEM 1120/CHEM 1121. See advisor for details.
- 2 May take more CHEM 4920 or CHEM 4980 as additional elective hours.
- Students must complete a sequence of EITHER History or Literature to graduate. Please select the second half of EITHER the History or Literature sequence that you began.
- If a second LITERATURE sequence is chosen, this course must be a CORE SOCIAL SCIENCE. If a second HISTORY sequence is chosen, this course must be a CORE HUMANITIES.
- This course must be taken the semester of graduation.