

**Chemistry and Biochemistry B.S. Degree Requirements**

<b>CR</b>	<b>CHEMISTRY BS</b>	<b>BIOCHEMISTRY BS</b>		<b>CR</b>
4	CHEM 111/111L or HONS 190/190L General Chemistry I	CHEM 111/111L or HONS 190/190L General Chemistry I		4
4	CHEM 112/112L or HONS 190/190L General Chemistry II	CHEM 112/112L or HONS 190/190L General Chemistry II		4
5	CHEM 220/220L Analytical Chemistry	CHEM 220/220L Analytical Chemistry		5
4	CHEM 231/231L or HONS 192/192L Organic Chemistry I	CHEM 231/231L Organic Chemistry I Or HONS 192/192L		4
4	CHEM 232/232L or HONS 293/293L Organic Chemistry II	CHEM 232/232L Or HONS 293/293L Organic Chemistry II		4
3	CHEM 351 Biochemistry I	CHEM 351 Biochemistry I		3
4	CHEM 341/341L Physical Chemistry-Thermo	CHEM 341/341L Physical Chemistry-Thermo		4
4	CHEM 342/342L Physical Chemistry-Quantum	CHEM 342/342L Physical Chemistry-Quantum		4
3	CHEM 311 Inorganic Chemistry	CHEM 311 Inorganic Chemistry		3
4	PHYS 111/111L Physics I	PHYS 111/111L Physics I		4
4	PHYS 112/112L Physics II	PHYS 112/112L Physics II		4
4	MATH 120 Calculus I	MATH 120 Calculus I		4
5	MATH 229** (or Math 220 AND Math 221) Vector Calculus	MATH 229** (or Math 220 AND Math 221) Vector Calculus		5
1	CHEM 490 Senior Seminar I	CHEM 490 Senior Seminar I		1
1	CHEM 492 Senior Seminar II	CHEM 492 Senior Seminar II		1
3	CHEM 371 Synthesis	CHEM 352 Biochemistry II		3
4	CHEM 421/421L Instrumental	CHEM 354 Biochemistry Lab		1
1	CHEM 312L Inorganic Lab	BIOL 111/111L or HONS 151/151L Biology I		4
		BIOL 112/112L or HONS 152/152L Biology II		4
		BIOL 312/312L Molecular Biology		4
		<i>Select two courses that add to at least 3 credits</i>	<i>Select one lecture from the following options</i>	
		CHEM 312L (1) Inorganic Lab	CHEM 353 (3) Chemical Biology	3-4
		CHEM 355 (2) Research Methods	CHEM 356 (2) Basis of Disease	2-3
		CHEM 371 (2) Synthesis Lab	CHEM 421 (3) Instrumental	
		CHEM 481 (2) Research I	CHEM 422 (3) Environmental	
		CHEM 482 (2) Research II	CHEM 431 (3) Advanced Organic	
		CHEM 421L (1) Instrumental Lab		
		CHEM 422L (1) Environmental Lab		
<b>62</b>				<b>75-77</b>

	<b>CHEMISTRY BA as of Fall 2019</b>	<b>CHEMISTRY MINOR</b>	
5-8	CHEM 111/111L (Or HONS 190/190L)	CHEM 111/111L (Or HONS 190/190L)	5-8
	CHEM 112/112L (Or HONS 190/190L)	CHEM 112/112L (Or HONS 190/190L)	
5	CHEM 220/220L	CHEM 220/220L	5
4	CHEM 231/231L (Or HONS 192/192L)	CHEM 231/231L (Or HONS 192/192L)	4
4	CHEM 232/232L (Or HONS 293/293L)	CHEM 232/232L (Or HONS 293/293L)	4
		OR	
3	CHEM 341 OR CHEM 342	CHEM 341/341L	
		CHEM 342/342L	
6	Two ELECTIVE 3-credit hour CHEM course at 300 level or above that is not a special topics course 311, 351, 352, 353, 341, 342, 421, 422, 431	ELECTIVE 3-credit hour CHEM course at 300 level or above that is not a special topics course	3
2-5	Two elective lab courses at 300 level or above 354L, 355L, 312L, 371, 432, 422L, 421L, 341L, or 342L		
4	MATH 120		
5	MATH 229 (or MATH 220 and MATH 221)		
1	CHEM 492		
<b>39-48</b>			<b>21-24</b>