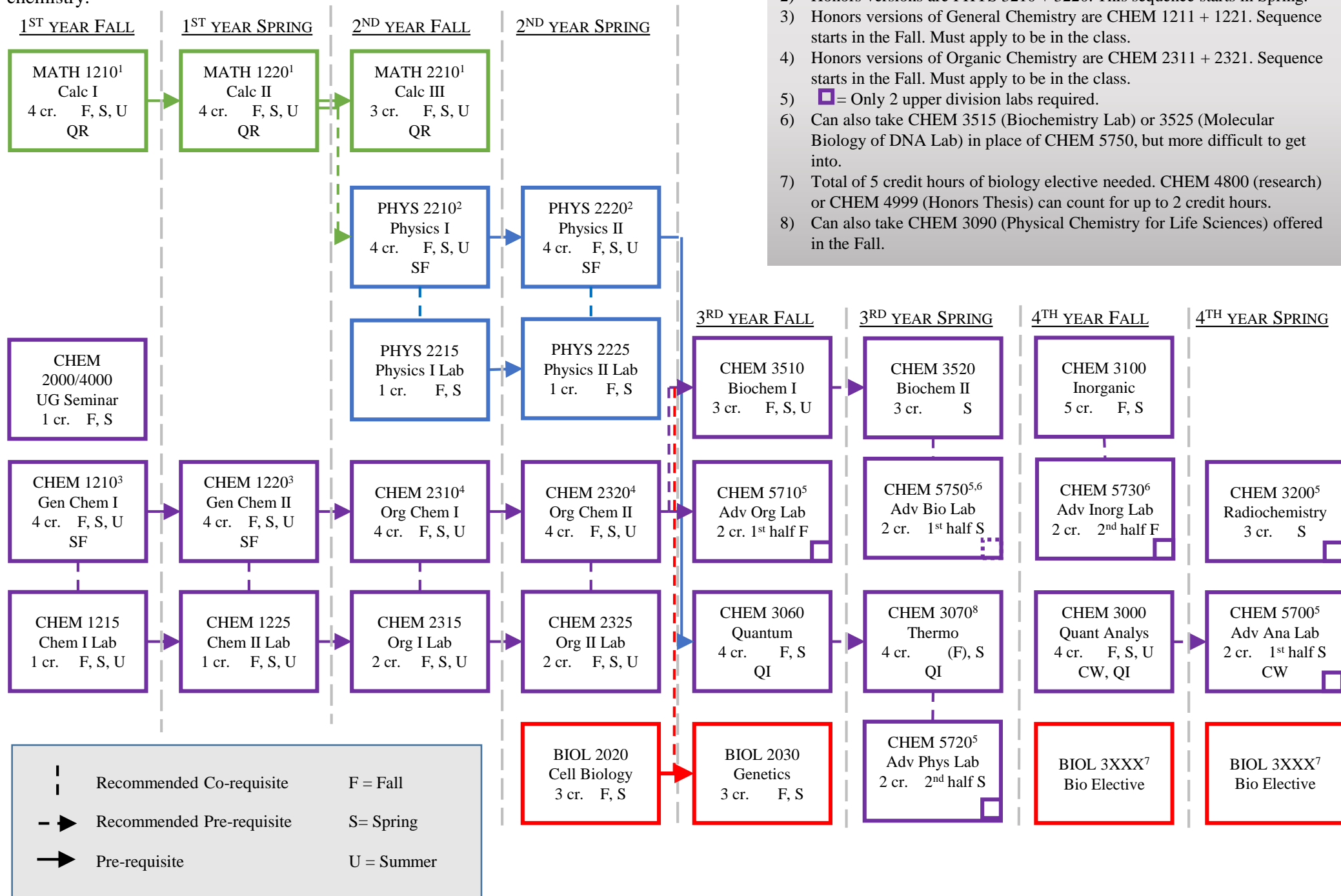


Chemistry Course Requirements – Biological Emphasis (2016-17)

The Biological emphasis has more biology electives and less math. Satisfies many of the prerequisites for students planning to attend health related post-bachelor's schools, such as medical, dental, pharmaceutical, or wanting to pursue graduate school in medical or biological chemistry.

- 1) Can take whichever calculus sequence is appropriate, including AP Calculus (MATH 1250 & 1260) or Engineering Calculus (MATH 1310 & 1320) Must finish the sequence that was started
- 2) Honors versions are PHYS 3210 + 3220. This sequence starts in Spring.
- 3) Honors versions of General Chemistry are CHEM 1211 + 1221. Sequence starts in the Fall. Must apply to be in the class.
- 4) Honors versions of Organic Chemistry are CHEM 2311 + 2321. Sequence starts in the Fall. Must apply to be in the class.
- 5) = Only 2 upper division labs required.
- 6) Can also take CHEM 3515 (Biochemistry Lab) or 3525 (Molecular Biology of DNA Lab) in place of CHEM 5750, but more difficult to get into.
- 7) Total of 5 credit hours of biology elective needed. CHEM 4800 (research) or CHEM 4999 (Honors Thesis) can count for up to 2 credit hours.
- 8) Can also take CHEM 3090 (Physical Chemistry for Life Sciences) offered in the Fall.



Chemistry Course Requirements – Biological Emphasis (2016-17)

The Biological emphasis has more biology electives and less math. Satisfies many of the prerequisites for students planning to attend health related post-bachelor's schools, such as medical, dental, pharmaceutical, or wanting to pursue graduate school in medical or biological chemistry.

Biological Emphasis										
Done?	Depart.	Number	Course Name	Credit Hours	Gen Ed/ Bach Req	Prerequisites		Taught		
						Chemistry	Math/Other	F	S	U
MATH CLASSES										
<input type="checkbox"/>	MATH	1210	Calculus I ^o	4	QR		MATH 1060 or 1080	x	x	x
<input type="checkbox"/>	MATH	1220	Calculus II ^o	4	QR		MATH 1210	x	x	x
<input type="checkbox"/>	MATH	2210	Calculus III ^o	4	QR		MATH 1220	x	x	x
PHYSICS CLASSES										
<input type="checkbox"/>	PHYS	2210	Physics for Sci & Eng I ^o	4	SF		MATH 1210	x	x	x
<input type="checkbox"/>	PHYS	2215	Physics Lab for Sci & Eng I	1			MATH 1210	x		x
<input type="checkbox"/>	PHYS	2220	Physics for Sci & Eng II ^o	4	SF		MATH 1220 + PHYS 2210	x	x	x
<input type="checkbox"/>	PHYS	2225	Physics Lab for Sci & Eng II	1			MATH 1220 + PHYS 2210	x		x
CHEMISTRY CLASSES										
<input type="checkbox"/>	CHEM	2000/4000	Undergrad Seminar	1				x	x	
<input type="checkbox"/>	CHEM	1210 + 1215	General Chemistry I ^o + Lab	4 + 1	SF		MATH 1050	x	x	x
<input type="checkbox"/>	CHEM	1220 + 1225	General Chemistry II ^o + Lab	4 + 1	SF		CHEM 1210 + 1215	x	x	x
<input type="checkbox"/>	CHEM	2310 + 2315	Organic Chemistry I ^A + Lab	4 + 2			CHEM 1220 + 1225	x	x	x
<input type="checkbox"/>	CHEM	2320 + 2325	Organic Chemistry II ^A + Lab	4 + 2			CHEM 2310 + 2315	x	x	x
<input type="checkbox"/>	CHEM	3000	Quantitative Analysis	4	QI, CW		CHEM 1220	x	x	x
<input type="checkbox"/>	CHEM	3060	Quantum Chemistry & Spect	4	QI		MATH 2210 + PHYS 2220	x		x
<input type="checkbox"/>	CHEM	3070	Thermodynamics & Kinetics ^o	4	QI		MATH 2210 + PHYS 2220	(x)	x	
<input type="checkbox"/>	CHEM	3100	Inorganic Chemistry	5			CHEM 1220	x	x	
<input type="checkbox"/>	CHEM	3510	Biological Chemistry I	3			CHEM 2320 + 3060	x	x	x
<input type="checkbox"/>	CHEM	3510	Biological Chemistry II	3			CHEM 2320	x	x	x
<input type="checkbox"/>	CHEM	5750	Biological Chemistry Lab ^o	2			CHEM 3510			1st
ADVANCED LABS - Choose 2										
<input type="checkbox"/>	CHEM	5700	Analytical Chemistry Lab	2	CW		CHEM 3000			1st
<input type="checkbox"/>	CHEM	5710	Organic Chemistry Lab	2			CHEM 2320			1st
<input type="checkbox"/>	CHEM	5720	Physical Chemistry Lab	2			CHEM 3060, 3070			2nd
<input type="checkbox"/>	CHEM	5730	Inorganic Chemistry Lab	2			CHEM 3100			2nd
<input type="checkbox"/>	CHEM	3200	Radiochemistry	3						x
BIOLOGY ELECTIVES[†]: Need 5 credit hours of approved electives (see list of approved courses and DARS)										
<input type="checkbox"/>	BIOL	2020	Cell Biology	3				x	x	
<input type="checkbox"/>	BIOL	2030	Genetics	3				x	x	
<input type="checkbox"/>	BIOL									
<input type="checkbox"/>	BIOL									

^o: Can take whichever calculus sequence is appropriate, including AP Calculus (MATH 1250 & 1260) or Engineering Calculus (MATH 1310 & 1320) Must finish the sequence that was started.

^Δ: Honors versions are PHYS 3210 + 3220. This sequence starts in Spring.

^o: Honors versions of General Chemistry are CHEM 1211 + 1221. Sequence starts in the Fall. Must apply to be in the class.

^Δ: Honors versions of Organic Chemistry are CHEM 2311 + 2321. Sequence starts in the Fall. Must apply to be in the class

^o: Can also take CHEM 3090 (Physical Chemistry for Life Sciences) offered in the Fall.

^o: Can also take CHEM 3515 (Biochemistry Lab) or 3525 (Molecular Biology of DNA Lab) in place of CHEM 5750, to count for 3 advanced lab credits.

[†]: CHEM 4800 (research) +A5:K43or CHEM 4999 (Honors Thesis) can count for up to 2 credit hours of biology elective