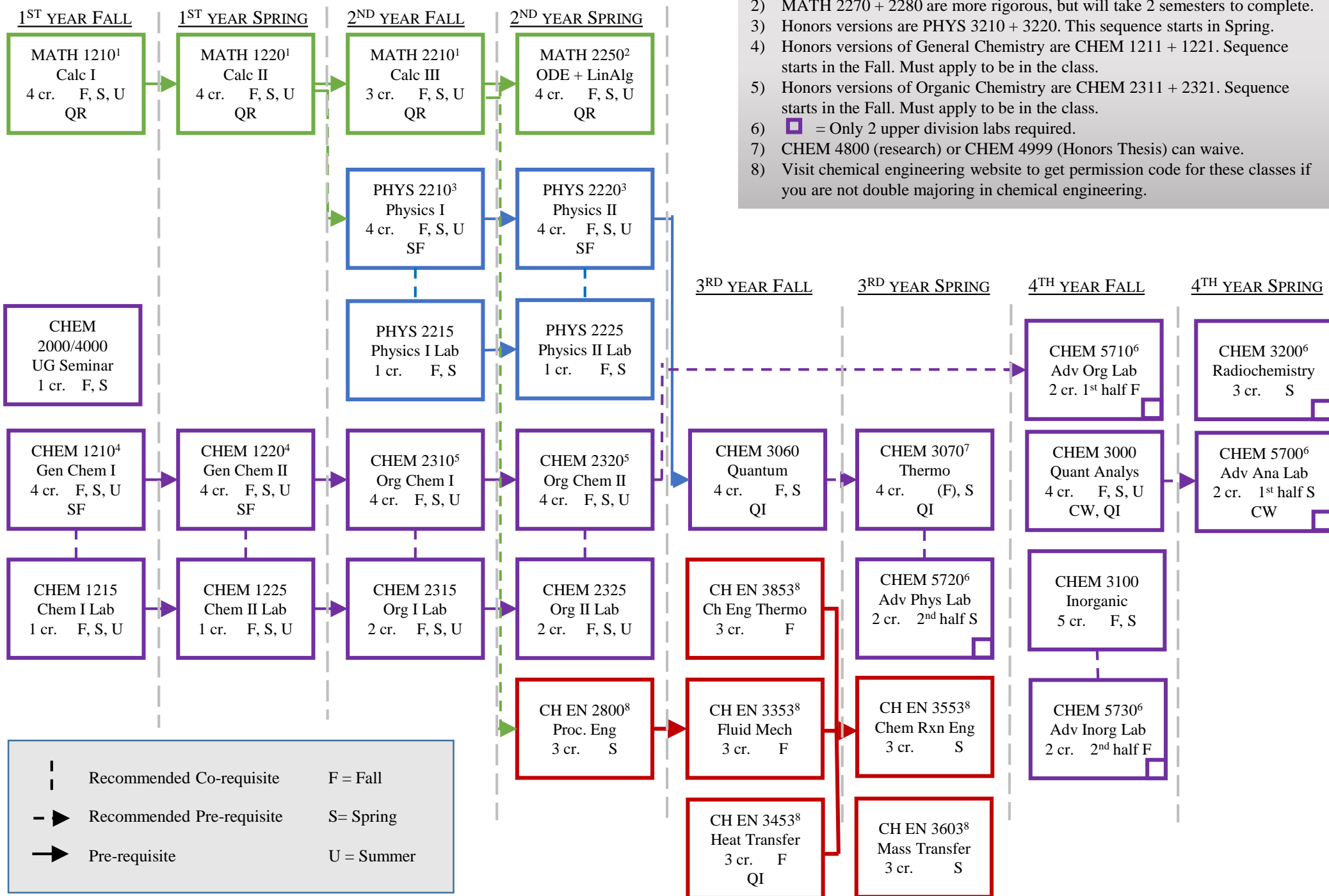


# Chemistry Course Requirements – Chemical Engineering Emphasis (2016-17)

This emphasis is great for those interested in double majoring in chemistry and chemical engineering as well as those who are considering graduate school in chemical engineering.

- 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) MATH 2270 + 2280 are more rigorous, but will take 2 semesters to complete.
- 3) Honors versions are PHYS 3210 + 3220. This sequence starts in Spring.
- 4) Honors versions of General Chemistry are CHEM 1211 + 1221. Sequence starts in the Fall. Must apply to be in the class.
- 5) Honors versions of Organic Chemistry are CHEM 2311 + 2321. Sequence starts in the Fall. Must apply to be in the class.
- 6)   = Only 2 upper division labs required.
- 7) CHEM 4800 (research) or CHEM 4999 (Honors Thesis) can waive.
- 8) Visit chemical engineering website to get permission code for these classes if you are not double majoring in chemical engineering.



# Chemistry Course Requirements – Chemical Engineering Emphasis (2016-17)

This emphasis is great for those interested in double majoring in chemistry and chemical engineering as well as those who are considering graduate school in chemical engineering.

Chemical Engineering Emphasis										
Done?	Dept.	Number	Course Name	Credit Hours	Gen Ed/ Bach Req	Prerequisites		Taught		
						Chemistry	Math/Other	F	S	U
<b>MATH CLASSES</b>										
<input type="checkbox"/>	MATH	1210	Calculus I <sup>o</sup>	4	QR		MATH 1060 or 1080	x	x	x
<input type="checkbox"/>	MATH	1220	Calculus II <sup>o</sup>	4	QR		MATH 1210	x	x	x
<input type="checkbox"/>	MATH	2210	Calculus III <sup>o</sup>	4	QR		MATH 1220	x	x	x
<input type="checkbox"/>	MATH	2250	ODEs and Linear Algebra <sup>o</sup>	4	QR		MATH 2250	x	x	x
<b>PHYSICS CLASSES</b>										
<input type="checkbox"/>	PHYS	2210	Physics for Sci & Eng I <sup>o</sup>	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 <sup>o</sup>	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
<b>CHEMISTRY CLASSES</b>										
<input type="checkbox"/>	CHEM	2000/4000	Undergrad Seminar	1				x		x
<input type="checkbox"/>	CHEM	1210 + 1215	General Chemistry I <sup>o</sup> + Lab	4 + 1	SF		MATH 1050	x	x	x
<input type="checkbox"/>	CHEM	1220 + 1225	General Chemistry II <sup>o</sup> + Lab	4 + 1	SF		CHEM 1210 + 1215	x	x	x
<input type="checkbox"/>	CHEM	2310 + 2315	Organic Chemistry I <sup>A</sup> + Lab	4 + 2			CHEM 1220 + 1225	x	x	x
<input type="checkbox"/>	CHEM	2320 + 2325	Organic Chemistry II <sup>A</sup> + 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 <sup>T</sup>	4	QI		MATH 2210 + PHYS 2220	(x)		x
<input type="checkbox"/>	CHEM	3100	Inorganic Chemistry	5			CHEM 1220 CHEM 2320 + 3060	x		x
<b>ADVANCED LABS - Choose 2</b>										
<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
<b>CHEMICAL ENGINEERING ELECTIVES<sup>1</sup></b>										
<input type="checkbox"/>	CH EN	2800	Process Engineering	3			MATH 2210	x		x
<input type="checkbox"/>	CH EN	3853	Chem Eng Thermodynamics	3			CH EN 2800	x		x
<input type="checkbox"/>	CH EN	3353	Fluid Mechanics	3			CH EN 2800	x		x
<input type="checkbox"/>	CH EN	3453	Heat Transfer	3			CH EN 2800	x		x
<input type="checkbox"/>	CH EN	3553	Chemical Rxn Engineering	3			CH EN 3853, 3353, 3453	x		x
<input type="checkbox"/>	CH EN	3603	Mass Transfer	3			CH EN 3853, 3353, 3453	x		x

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<sup>o</sup>: MATH 2270 + 2280 are more rigorous, but will take 2 semesters to complete.

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<sup>T</sup>: CHEM 4800 (research) or CHEM 4999 (Honors Thesis) can waive with advisor consent for double majors in chemical engineering.

<sup>I</sup>: Visit chemical engineering website to get permission code for these classes if you are not double majoring in chemical engineering.