

# **Bachelor of Science with a Major in Chemistry Degree**

## **Pre-Professional Option**

**(Pre-Med, Pre-Dent, Pre-Dent Hygiene, Pre-Vet, Pre-PA). See Pre-Professional Program in the Undergraduate Catalogue**

This degree option is frequently the choice of pre-professional students because it allows a wide range of elective courses to fulfill the degree requirements. It is designed specifically for those students planning to attend medical, dental, veterinary, physician's assistant, or other professional programs. The general pre-professional requirements include 2 years of Chemistry and 1 year each of Biology, Physics, and English, with Biochemistry strongly recommended. These requirements would make Chemistry an appropriate major.

Upon completion of this degree program the student will have acquired:

- competence in the basic content of organic, inorganic, physical, analytical chemistry, biochemistry, and biology;
- the ability to carry out experimental protocols and analyze and interpret data;
- the ability to communicate effectively in both oral and written presentations;
- proficiency in the use of appropriate computer applications and information technology as applied to chemistry;
- adequate preparation to compete successfully in a professional school or a science-related career; and
- understanding of the impact of chemistry in a global/societal context.

<b>Requirement:</b>	<b>Hours</b>
<b>Core areas A, B, C, D, and E (see undergraduate catalogue)</b>	<b>42</b>

Core Area A must include MATH 1113\* (\*1 hr moved to Area F)

Core Area C: foreign language is recommended.

Core Area D must include MATH 1634\* (\*1 hr moved to Area F)  
PHYS 1111 or 2211 and PHYS 1112 or 2212.

<b>Core Area F: Courses specific for the major</b>	<b>18</b>
CHEM 1211 (with 1211L)	4
CHEM 1212 (with 1212L) or CHEM 2411 and 2411L	4
MATH 2644	4
CHEM 2411 and 2411L	4
Math credit from Area A and D	2

<b>Requirements for the major</b>	<b>27</b>
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Courses from the major:

CHEM 2130	1
CHEM 3422 and 3422L	4
CHEM 3310K	4
CHEM 3510 or 3521 or 3522	3
CHEM 4610	3
CHEM 4711	3
CHEM 4910L	3
CHEM electives (3000 or above)	6

Courses from supporting disciplines (one of the following courses):

CS 1300, MATH 2063, or 2654, or 3303, SPAN 1002	<b>3-4</b>
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<b>Recommended Minor (Biology, Psychology, or Spanish)</b>	
15-18 total hours with minimum 9 -12 hours at 3000-level or above	<b>15-18</b>

<b>Electives</b>	<b>11-15</b>
<b>TOTAL</b>	<b>120</b>

*General Restrictions: No D's are permitted in a major or minor course. A maximum of 3 hours of research is allowed in the degree program. Must complete 6 hours of 3000/4000level W- courses where at least one is a chemistry course.*

## Recommended Plan of Study for Pre-Professional (e.g. Biology Minor)

This semester-wise plan is designed to ensure that students take Chemistry courses and their pre-requisites and other required courses in a timely fashion to graduate in four years. The B.S. degree requires a minimum of 39 course credit hours of 3000 or above.

FRESHMAN FALL		FRESHMAN SPRING	
<a href="#">CHEM 1211</a> – Principles of Chem I	4	<a href="#">CHEM 1212</a> - Principles of Chem II	4
MATH 1113 – PreCalculus	4	MATH 1634 – Calculus I	4
ENGL 1101 – English Composition I	3	ENGL 1102 – English Composition II	3
BIOL 1107/1107L – Principles of Biology I	4	BIOL 1108/1108L – Principles of Biology II	4
Total	15	Total	15

SOPHOMORE FALL		SOPHOMORE SPRING	
<a href="#">CHEM 2411/2411L</a> – Organic Chem I	4	<a href="#">CHEM 3422/3422L</a> – Organic Chem II	4
MATH 2644 – Calculus II	4	<a href="#">CHEM 2130</a> – Chem Sophomore Seminar	1
<a href="#">CHEM 3310</a> – Analytical Chemistry	4	BIOL 2134/2134L - Molecular Cell Biology	4
Core C1	3	Core C2	3
		Core E1 (World History)	3
Total	15	Total	15

JUNIOR FALL		JUNIOR SPRING	
<a href="#">CHEM 4711</a> – Biochemistry	3	CHEM Elective	3
PHYS 1111 OR 2211	4	PHYS 1112 OR 2212	4
BIOL Elective (Human Physiology)	4	BIOL > 3000 – Biology Elective	3
Core E3 (POLS 1101 American Gov.)	3	Core B1 (PHIL 2110 – Critical Thinking)	3
Elective > 3000	3	Core B2	1
Total	17	Total	14

SENIOR FALL		SENIOR SPRING	
<a href="#">CHEM 3510</a> – Survey of Physical Chemistry	3	<a href="#">CHEM 4610</a> – Inorganic Chemistry	3
CHEM Elective	3	BIOL > 3000 – Biology Elective	3
CS 1300 or MATH 2063	4	Core E2 (U.S. History)	3
	3	Core E4	3
Elective > 3000	2	CHEM 4910L	3
Total	15	Total	15

Click on course number to link to the respective chemistry course description and prerequisites.