

## B.S. in Chemistry 2016-2017: Option 1 - CWILT

First Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE113 & 113D General Chemistry I and General Chemistry I Lab *1		Nature of Persons (N) course	3	CHE214 & CHE215 General Chemistry II and General Chemistry II Lab (or elective if CHE208/208D was taken in fall) *1	4
or	4			MAT125 Calculus *2	4
CHE208 & 208D Accelerated General Chemistry and Accelerated General Chemistry Lab *1				<u>BIB101 Introduction to the Bible</u>	3
MAT124M Calculus *1	4			Second Language (S) course *2	4
<u>GES106 Introduction to Liberal Arts</u>	1				
<u>GES110 College Writing</u>	3				
<u>GES130 Christianity Western Culture</u>	4				
	<b>16</b>		<b>3</b>		<b>15</b>
Second Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE224 & CHE225 Organic Chemistry I and Organic Chemistry I Lab	4	Elective	3	CHE226 & CHE227 Organic Chemistry II and Organic Chemistry II Lab	4
PHY292 & 292D General Physics I and General Physics I	4			PHY296 & PHY297 General Physics II and General Physics II Lab	4
MAT223 or 222 Multivariable Calculus	3			<u>GES125 Introduction to the Creative Arts</u>	4
Contemporary Western Life and Thought (L) course	3			<u>THE201 Christian Theology</u>	3
	<b>14</b>		<b>3</b>		<b>15</b>
Third Year					
Fall	Credits	Interim	Credits	Spring	Credits
<u>CHE395 Chemistry Seminar: Research and Professional Development</u>	1	Science, Technology, and Society (K) course	3	CHE312 & CHE313 Quantitative Analysis and Quantitative Analysis Lab	4
CHE344 & CHE345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab	4			CHE348 & CHE349 Quantum Chemistry and Spectroscopy and Quantum Chemistry and Spectroscopy Lab	4
Chemistry Elective	2			<u>CHE490 Chemistry Seminar: Research</u>	2
World Cultures (U) course	3			Comparative Systems (G) course	3
Interpreting Biblical Themes (J) course	3			Leisure and Lifetime Sports (Q) course	1
<u>PEA100 Physical Wellness for Life</u>	1				
	<b>14</b>		<b>3</b>		<b>14</b>
Fourth Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE320 & CHE321 Instrumental Analysis and Instrumental Analysis Lab	4	Interim Off		CHE364 & CHE365 Advanced Inorganic Chemistry and Advanced Inorganic Chemistry Lab	4
CHE388 & CHE389 Biochemistry I and Biochemistry I Lab	4			<u>CHE494 Chemistry Seminar: Research Presentation</u>	1
Electives	5			Chemistry Elective	4
Cross Cultural Experience (Z) course	0-3			Contemporary Christian Issues (P) course	3
				Artistic Experience (A) course	0-3
	<b>13-16</b>		<b>0</b>		<b>12-15</b>
<b>Total Credits: 122-128</b>					

\*1 CHE208/CHE208D is a one-semester course that meets the requirements of CHE113/CHE113D and CHE214/CHE215. Students taking CHE208/CHE208D may choose an elective in the spring of their freshman year.

\*2 Students must complete through the second semester of a first year language course or equivalent (Check the catalog for details of this option.)

This program assumes that a student will use CHE113/CHE113D and MAT124M to meet the general education Laboratory Science and Mathematics requirements.

Most financial aid packages stipulate 12 credits/semester; Minnesota state grants are reduced when credit load falls below 15 credits/semester. (Interim credits may be split between fall and spring for state grant purposes only.)

## B.S. in Chemistry 2016-2017: Option 2 - Humanities

First Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE113 & 113D General Chemistry I and General Chemistry I Lab *1		GES147 Humanities II: Renaissance and Reformation	4	CHE214 & CHE215 General Chemistry II and General Chemistry II Lab (or elective if CHE208/208D was taken in fall) *1	4
or	4			MAT125 Calculus *2	4
CHE208 & 208D Accelerated General Chemistry and Accelerated General Chemistry Lab *1				GES244 Humanities III: European Enlightenment and American Culture to 1877	4
MAT124M Calculus *1	4			Second Language (S) course *2	4
GES106 Introduction to Liberal Arts	1				
GES145 Humanities I: Greco-Roman through Middle Ages	4				
Nature of Persons (N) course	3				
	16		4		16
Second Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE224 & CHE225 Organic Chemistry I and Organic Chemistry I Lab	4	Elective	3	CHE226 & CHE227 Organic Chemistry II and Organic Chemistry II Lab	4
PHY292 & 292D General Physics I and General Physics I	4			PHY296 & PHY297 General Physics II and General Physics II Lab	4
MAT223 or 222 Multivariable Calculus	3			BIB101 Introduction to the Bible	3
GES246 Humanities IV: Modern and Contemporary Western Culture	4			World Cultures (U) course	3
	15		3		14
Third Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE395 Chemistry Seminar: Research and Professional Development	1	Science, Technology, and Society (K) course	3	CHE312 & CHE313 Quantitative Analysis and Quantitative Analysis Lab	4
CHE344 & CHE345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab	4			CHE348 & CHE349 Quantum Chemistry and Spectroscopy and Quantum Chemistry and Spectroscopy Lab	4
Interpreting Biblical Themes (J) course	3			CHE490 Chemistry Seminar: Research	2
PEA100 Physical Wellness for Life	1			Comparative Systems (G) course	3
Elective	3			Leisure and Lifetime Sports (Q) course	1
	12		3		14
Fourth Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE320 & CHE321 Instrumental Analysis and Instrumental Analysis Lab	4	Interim Off		CHE364 & CHE365 Advanced Inorganic Chemistry and Advanced Inorganic Chemistry Lab	4
CHE388 & CHE389 Biochemistry I and Biochemistry I Lab	4			CHE494 Chemistry Seminar: Research Presentation	1
Chemistry Elective	2			Chemistry Elective	4
Elective	3			Contemporary Christian Issues (P) course	3
Cross Cultural Experience (Z) course	0-3			Artistic Experience (A) course	0-3
	13-16		0		12-15

### Total Credits: 122-128

\*1 CHE208/CHE208D is a one-semester course that meets the requirements of CHE113/CHE113D and CHE214/CHE215. Students taking CHE208/CHE208D may choose an elective in the spring of their freshman year.

\*2 Students must complete through the second semester of a first year language course or equivalent (Check the catalog for details of this option.)

This program assumes that a student will use CHE113/CHE113D and MAT124M to meet the general education Laboratory Science and Mathematics requirements.

Most financial aid packages stipulate 12 credits/semester; Minnesota state grants are reduced when credit load falls below 15 credits/semester. (Interim credits may be split between fall and spring for state grant purposes only.)