

## B.S. in Biochemistry/Molecular Biology 2016-2017: Option 1 - CWILT

First Year					
Fall	Credits	Interim	Credits	Spring	Credits
BIO120 & BIO121 Introduction to Molecular and Cellular Biology and Introduction to Molecular and Cellular Biology Lab	4	<u>BIB101 Introduction to the Bible</u>	3	BIO122 & 122D Introduction to Organismic Biology and Introduction to Organismic Biology Lab	4
CHE113 & 113D General Chemistry I and General Chemistry I Lab (or CHE208/208D Accelerated General Chemistry/Lab) *1,*3	4			CHE214 & CHE215 (or elective if CHE208/208D was taken in fall) *3	4
MAT124M1 Calculus *1	4			MAT125 Calculus *2	4
<u>GES106 Introduction to Liberal Arts</u>	1			<u>GES130 Christianity Western Culture</u>	4
<u>GES110 College Writing</u>	3				
	16		3		16
Second Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE224 & CHE225 Organic Chemistry I and Organic Chemistry I Lab	4	Nature of Persons (N) course	3	CHE226 & CHE227 Organic Chemistry I and Organic Chemistry I Lab	4
PHY292 & 292D General Physics I and General Physics I Lab	4			PHY296 & PHY297 General Physics II and General Physics II Lab	4
<u>GES125 Introduction to the Creative Arts</u>	4			CHE312 & CHE313 Quantitative Analysis and Quantitative Analysis Lab	4
Second Language (S) course *2	4			<u>THE201 Christian Theology</u>	3
	16		3		15
Third Year					
Fall	Credits	Interim	Credits	Spring	Credits
BIO332 & BIO333 Genetics and Genetics Lab	4	Science, Technology and Society (K) course	3	BIO354 & BIO355 Cell Biology and Cell Biology Lab	4
BIO388 & BIO389 OR CHE388 and CHE389 Biochemistry I and Biochemistry I Lab	4			CHE396 & CHE397 Biochemistry II and Biochemistry II Lab	4
CHE344 & CHE345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab	4			<u>PEA100 Physical Wellness for Life</u>	1
Biology or Chemistry Seminar/Research *4	1			Biology or Chemistry Seminar/Research *4	1
	13		3	Contemporary Western Life and Thought (L) course	3
					13
Fourth Year					
Fall	Credits	Interim	Credits	Spring	Credits
Biology or Chemistry Seminar/Research *4	1	Interim Off		BIO396 & BIO397 Molecular Biology and Molecular Biology Lab	4
Elective (BIO224/225 recommended)	4			Biology or Chemistry Seminar/Research *4	1
World Cultures (U) course	3			Comparative Systems (G) course	3
Interpreting Biblical Themes (J) course	3			Contemporary Christian Issues (P) course	3
Leisure and Lifetime Sports (Q) course	1			Elective	1
Cross Cultural Experience (Z) course	0-3			Artistic Experience (A) course	0-3
	12-15		0		12-15

Total Credits: 122-128

\*1 This program assumes a student will use CHE113D and MAT124M to meet the general education laboratory science and Mathematics requirements.

\*2 Students must complete through the second semester of a first year language course or equivalent.

\*3 CHE208/CHE208D is a one-semester course that meets the requirements for CHE113/CHE113D and CHE214/CHE215. Students taking CHE208/CHE208D may choose an elective in the spring of their freshmen year.

\*4 Choose either the Biology Seminar/Research series (BIO339, BIO495, BIO496, BIO499) or Chemistry Seminar/Research series (CHE395 CHE490 and CHE494). Students pursuing the ACS-accredited B.S. must complete the chemistry

Most financial aid packages stipulate 12 credits/semester; Minnesota state grants 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 Biochemistry/Molecular Biology 2016-2017: Option 2 - Humanities

First Year					
Fall	Credits	Interim	Credits	Spring	Credits
BIO120 & BIO121 Introduction to Molecular and Cellular Biology and Introduction to Molecular and Cellular Biology Lab	4	<u>GES147 Humanities II: Renaissance and Reformation</u>	4	BIO122 & 122D Introduction to Organismic Biology and Introduction to Organismic Biology Lab	4
CHE113 & 113D General Chemistry I and General Chemistry I Lab (or CHE208/208D Accelerate General Chemistry/Lab) *1,*3	4			CHE214 & CHE215 (or elective if CHE208/208D was taken in fall) *3	4
MAT124M1 Calculus *1	4			MAT125 Calculus *2	4
<u>GES106 Introduction to Liberal Arts</u>	1			<u>GES244 Humanities III: European Enlightenment and American Culture to 1877</u>	4
<u>GES145 Humanities I: Greco-Roman through Middle Ages</u>	4				
	17		4		16
Second Year					
Fall	Credits	Interim	Credits	Spring	Credits
CHE224 & CHE225 Organic Chemistry I and Organic Chemistry I Lab	4	Nature of Persons (N) course	3	CHE226 & CHE227 Organic Chemistry I and Organic Chemistry I Lab	4
PHY292 & 292D General Physics I and General Physics I Lab	4			PHY296 & PHY297 General Physics II and General Physics II Lab	4
<u>BIB101 Introduction to the Bible</u>	3			CHE312 & CHE313 Quantitative Analysis and Quantitative Analysis Lab	4
<u>GES246 Humanities IV: Modern and Contemporary Western Culture</u>	4			<u>PEA100 Physical Wellness for Life</u>	1
	15		3		13
Third Year					
Fall	Credits	Interim	Credits	Spring	Credits
BIO332 & BIO333 Genetics and Genetics Lab	4	Science, Technology and Society (K) course	3	BIO354 & BIO355 Cell Biology and Cell Biology Lab	4
BIO388 & BIO389 Biochemistry I and Biochemistry I Lab	4			CHE396 & CHE397 Biochemistry II and Biochemistry II Lab	4
or	4			Biology or Chemistry Seminar/Research *4	1
CHE388 & CHE389 Biochemistry I and Biochemistry I Lab	4			Second Language (S) course *2	4
CHE344 & CHE345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab	4				
Biology or Chemistry Seminar/Research *3	1				
	13		3		13
Fourth Year					
Fall	Credits	Interim	Credits	Spring	Credits
Biology or Chemistry Seminar/Research *4	1	Interim Off		BIO396 & BIO397 Molecular Biology and Molecular Biology Lab	4
Elective (BIO224/225 recommended)	4			Biology or Chemistry Seminar/Research *4	1
World Culture (U) course	3			Comparative Systems (G) course	3
Interpreting Biblical Themes (J) course	3			Contemporary Christian Issues (P) course	3
Leisure and Lifetime Sports (Q) course	1			Elective	2
Cross Cultural Experience (Z) course	0-3			Artistic Experience (A) course	0-3
	12-15		0		13-16
<b>Total Credits: 122-128</b>					

\*1 This program assumes a student will use CHE113D and MAT124M to meet the general education laboratory science and Mathematics requirements.

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\*3 CHE208/CHE208D is a one-semester course that meets the requirements for CHE113/CHE113D and CHE214/CHE215. Students taking CHE208/CHE208D may choose an elective in the spring of their freshmen year.

\*4 Choose either the Biology Seminar/Research series (BIO339, BIO495, BIO496, BIO499) or Chemistry Seminar/Research series (CHE395, CHE490 and CHE494). Students pursuing the ACS-accredited B.S. must complete the chemistry series.

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