B.S. in Biochemistry/Molecular Biology 2018-2019: Option 1 - CWILT

First Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
BIO 124 & BIO 124D Integrative Biology: Genes, Cells, Change and Integrative Biology: Genes, Cells, Change Lab	4	GES 160 Inquiry Seminar	3	BIO 128 & BIO 128D Integrative Biology: Metabolism, Energy, Biodiversity and Integrative Biology: Metabolism, Energy, Biodiversity Lab	4
CHE 113 & CHE 113D (or CHE208/208D Accelerated General Chemistry/Lab)1, 3 General Chemistry IGeneral Chemistry I Lab	4			CHE 214 & CHE 215 (or elective if CHE208/208D was taken in fall)3 General Chemistry IIGeneral Chemistry II Lab	4
MAT 124M1 Calculus 1	4			MAT 125 Calculus 2	4
GES 140 Introduction to Wellbeing	3			GES 130 Christianity Western Culture	4
	15		**3**		**16**
Second Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
CHE 224 & CHE 225 Organic Chemistry I and Organic Chemistry I Lab	4	BIB 101 Introduction to the Bible	3	CHE 226 & CHE 227 Organic Chemistry II and Organic Chemistry II Lab	4
PHY 292 & PHY 292D General Physics I and General Physics I Lab	4			PHY 296 & PHY 297 General Physics II and General Physics II Lab	4
GES 125 Introduction to the Creative Arts	4			CHE 312 & CHE 313 Quantitative Analysis and Quantitative Analysis Lab	4
				Second Language (S) course*2	4
	12		**3**		**16**
Third Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
BIO 332 & BIO 333 Genetics and Genetics Lab	4	Science, Technology and Society (K) course	3	BIO 354 & BIO 355 Cell Biology and Cell Biology Lab	4
BIO 388 & BIO 389 Biochemistry I and Biochemistry I Lab	4			CHE 396 & CHE 397 Biochemistry II and Biochemistry II Lab	4
CHE 344 & CHE 345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab	4			Biology or Chemistry Seminar/Research*4	1
THE 201 Christian Theology	3			Contemporary Western Life and Thought (L) course	3
Biology or Chemistry Seminar/Research*4	1				
	16		**3**		**12**
Fourth Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
Biology or Chemistry Seminar/Research*4	1	Interim Off		BIO 396 & BIO 397 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	3
Cross Cultural Experience (Z) course	0-3			Artistic Experience (A) course	0-3
	12-15		**0**		**14-17**
Total Credits 122-128					

1. This program assumes a student will use CHE 113D and MAT 124M 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. CHE 208/CHE 208D is a one-semester course that meets the requirements for CHE 113/CHE 113D and CHE 214/CHE 215. Students taking CHE 208/CHE 208D may choose an elective in the spring of their freshmen year.

4. Choose either the Biology Seminar/Research series (BIO 339, BIO 495, BIO 496, BIO 499) or Chemistry Seminar/Research series (CHE 395, CHE 490 and CHE 494). 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.)

B.S. in Biochemistry/Molecular Biology 2018-2019: Option 2 - Humanities

First Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
CHE 113 & CHE 113D (or CHE208/208D Accelerated General Chemistry/Lab)1, 3 General Chemistry IGeneral Chemistry I Lab	4	GES 147 Humanities II: Renaissance and Reformation	4	BIO 128 & BIO 128D Integrative Biology: Metabolism, Energy, Biodiversity and Integrative Biology: Metabolism, Energy, Biodiversity Lab	4
BIO 124 & BIO 124D Integrative Biology: Genes, Cells, Change and Integrative Biology: Genes, Cells, Change Lab	4			CHE 214 & CHE 215 (or elective if CHE208/208D was taken in the fall)3General Chemistry IIGeneral Chemistry II Lab	4
MAT 124M1 Calculus 1	4			MAT 125 Calculus 2	4
GES 145 Humanities I: Greco-Roman through Middle Ages	4			GES 244 Humanities III: European Enlightenment and American Culture to 1877	4
	16		**4**		**16**
Second Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
CHE 224 & CHE 225 Organic Chemistry I and Organic Chemistry I Lab	4	GES 140 Introduction to Wellbeing	3	CHE 226 & CHE 227 Organic Chemistry II and Organic Chemistry II Lab	4
PHY 292 & PHY 292D General Physics I and General Physics I Lab	4			PHY 296 & PHY 297 General Physics II and General Physics II Lab	4
GES 246 Humanities IV: Modern and Contemporary Western Culture	4			CHE 312 & CHE 313 Quantitative Analysis and Quantitative Analysis Lab	4
				Second Language (S) course*2	4
	12		**3**		**16**
Third Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
BIO 332 & BIO 333 Genetics and Genetics Lab	4	Science, Technology and Society (K) course	3	BIB 101 Introduction to the Bible	3
BIO 388 & BIO 389 Biochemistry I and Biochemistry I Lab				BIO 354 & BIO 355 Cell Biology and Cell Biology Lab	4
or	4			CHE 396 & CHE 397 Biochemistry II and Biochemistry II Lab	4
CHE 388 & CHE 389 Biochemistry I and Biochemistry I Lab				Biology or Chemistry Seminar/Research*4	1
CHE 344 & CHE 345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab	4			World Cultures (U) course	3
Biology or Chemistry Seminar/Research*3	1				
	13		**3**		**15**
Fourth Year					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
Biology or Chemistry Seminar/Research*4	1	Interim Off		BIO 396 & BIO 397 Molecular Biology and Molecular Biology Lab	4
Elective (BIO224/225 recommended)	4			Biology or Chemistry Seminar/Research*4	1
Comparative Systems (G) course	3			Contemporary Christian Issues (P) course	3
Interpreting Biblical Themes (J) course	3			Artistic Experience (A) course	0-3
Leisure and Lifetime Sports (Q) course	1			Elective	4
Cross Cultural Experience (Z) course	0-3				
	12-15		**0**		**12-15**
Total Credits 122-128					

1. This program assumes a student will use CHE 113D and MAT 124M 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. CHE 208/CHE 208D is a one-semester course that meets the requirements for CHE 113/CHE 113D and CHE 214/CHE 215. Students taking CHE 208/CHE 208D may choose an elective in the spring of their freshmen year.
4. Choose either the Biology Seminar/Research series (BIO 339, BIO 495, BIO 496, BIO 499) or Chemistry Seminar/Research series (CHE 395, CHE 490 and CHE 494). 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.