B.S. in Applied Physics (Optics Emphasis) 2020-2021: Option 1 - CWILT

FIRST YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
PHY 292 & PHY 292D General Physics I and General Physics I Lab *1	4	GES 125 Introduction to the Creative Arts	4	PHY 296 & PHY 297 General Physics II and General Physics II Lab	4
BIB 101 Introduction to the Bible	3			GES 130 Christianity Western Culture	4
GES 160 Inquiry Seminar	3			GES 140 Introduction to Wellbeing	3
MAT 124M1 Calculus 1	4			MAT 125 Calculus 2	4
	14		**4**		**15**
SECOND YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
PHY 302 & PHY 303 Electronics and Electronics Lab	4	World Cultures (U) course	3	PHY 312 & PHY 313 Modern Physics and Modern Physics Lab	4
COS 205 Scientific Computing	3			PHY 352 & PHY 353 Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	4
MAT 223 Multivariable Calculus	3			MAT 222 Differential Equations	3
PHY 260 Careers in Engineering and Physics Seminar	1			Second Language (S) course *2	4
Contemporary Western Life and Thought (L) course	3				
	14		**3**		**15**
THIRD YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
CHE 208 & CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab	4	Science, Technology, and Society (K) course	3	PHY 365 Physics Research Seminar	1
PHY 320 Mathematical Methods in Physics and Engineering	4			PHY 432 & PHY 433 Topics in Contemporary Optics and Topics in Contemporary Optics Lab	4
PHY 490 Research	3			Comparative Systems (G) course	3
THE 201 Christian Theology	3			Interpreting Biblical themes (J) course	3
				Elective	3
	14		**3**		**14**
FOURTH YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
PHY 400 Electricity and Magnetism	4	Interim Off		PHY 332 & PHY 333 Optics and Optics Lab	4
PHY 440 Quantum Mechanics	4			PHY 432 & PHY 433 (spring, even) Topics in Contemporary Optics, Topics in Contemporary Optics Lab	4
Contemporary Christian Issues (P) course	3			Elective	3
Cross-Cultural Experience (Z) course	0-3			Leisure and Lifetime Sport (Q) course	1
Elective	4			Artistic Experience (A) course	0-3
	15-18		**0**		***12-15**
Total Credits 123-129					

*1. Students may also choose to use this course to meet a General Education requirement.

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

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 Applied Physics (Optics Emphasis) 2020-2021: Option 2 - Humanities

FIRST YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
PHY 292 & PHY 292D General Physics I and General Physics I Lab *1	4	GES 147 Humanities II: Renaissance and Reformation	4	PHY 296 & PHY 297 General Physics II and General Physics II Lab	4
GES 145 Humanities I: Greco-Roman through Middle Ages	4			GES 244 Humanities III: European Enlightenment and American Culture to 1877	4
GES 140 Introduction to Wellbeing	3			BIB 101 Introduction to the Bible	3
MAT 124M1 Calculus 1	4			MAT 125 Calculus 2	4
	15		**4**		**15**
SECOND YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
PHY 302 & PHY 303 Electronics and Electronics Lab	4	World Cultures (U) course	3	PHY 312 & PHY 313 Modern Physics and Modern Physics Lab	4
COS 205 Scientific Computing	3			PHY 352 & PHY 353 Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	4
MAT 223 Multivariable Calculus	3			MAT 222 Differential Equations	3
GES 246 Humanities IV: Modern and Contemporary Western Culture	4			Second Language (S) course *2	4
	14		**3**		**15**
THIRD YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
CHE 208 & CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab	4	Science, Technology, and Society (K) course	3	PHY 365 Physics Research Seminar	1
PHY 320 Mathematical Methods in Physics and Engineering	4			Comparative Systems (G) course	3
Elective	3			Interpreting Biblical themes (J) course	3
				Elective	3
	12		**3**		**14**
FOURTH YEAR					
Fall	**Credits**	**Interim**	**Credits**	**Spring**	**Credits**
PHY 400 Electricity and Magnetism	4	Interim Off		PHY 332 & PHY 333 Optics and Optics Lab	4
PHY 440 Quantum Mechanics	4			Leisure and Lifetime Sport (Q) course	1
PHY 490 Research	3			Artistic Experience (A) course	0-3
Contemporary Christian Issues (P) course	3			Electives	8
Cross-Cultural Experience (Z) course	0-3				
	14-17		**0**		**13-16**
Total Credits 122-128					

*1. Students may also choose to use this course to meet a General Education requirement.

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

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.)