

B.S. in Physics 2019-2020: Option 1 - CWILT

FIRST YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
BIB 101 Introduction to the Bible	3	GES 125 Introduction to the Creative Arts	4	GES 130 Christianity Western Culture	4
GES 160 Inquiry Seminar	3			GES 140 Introduction to Wellbeing	3
MAT 124M Calculus 1	4			MAT 125 Calculus 2	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
	14		4		15
SECOND YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
COS 205 Scientific Computing	3	World cultures (U) course	3	MAT 222 Differential Equations	3
MAT 223 Multivariable Calculus	3			PHY 312 & PHY 313 Modern Physics and Modern Physics Lab	4
PHY 260 Careers in Engineering and Physics Seminar	1			PHY 352 & PHY 353 (or elective) ² Computer Methods in Physics and Engineering Computer Methods in Physics and Engineering Lab	4
PHY 302 & PHY 303 Electronics and Electronics Lab	4			Second Language (S) course ¹	4
THE 201 Christian Theology	3				
	14		3		15
THIRD YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
PHY 320 Mathematical Methods in Physics and Engineering	4	Science, Technology and Society (K) course	3	PHY 332 & PHY 333 (or elective) ³ Optics Optics Lab	4
PHY 340 Mechanics	4			PHY 365 Physics Research Seminar	1
PHY 400 Electricity and Magnetism	4			Comparative Systems (G) course	3
Contemporary Western Life and thought (L) course	3			Electives	6
	15		3		14
FOURTH YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
MAT 344 (or elective) ² Numerical Methods	3	Interim Off		PHY 410 Thermodynamics	4
PHY 440 Quantum Mechanics	4			PHY 432 & PHY 433 (or elective) ³ Topics in Contemporary Optics Topics in Contemporary Optics Lab	4
PHY 490 Research	3			Artistic Experience (A) course	0-3
Interpreting Biblical themes (J) course	3			Contemporary Christian Issues (P) course	3
Cross Cultural Experience (Z) course	0-3			Leisure and Lifetime Sports (Q) course	1
	13-16		0		12-15
Total Credits 122-128					

1. Students must complete through the second semester of a first year language course or equivalent.
2. Choose from MAT344 or PHY352/353
3. Choose from PHY332/333 or PHY432/433

This program assumes a student will use MAT124M and PHY292/292D to meet the general education Mathematics and Laboratory Science requirements.

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

B.S. in Physics 2019-2020: Option 2 - Humanities

FIRST YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
GES 140 Introduction to Wellbeing	3	GES 147 Humanities II: Renaissance and Reformation	4	BIB 101 Introduction to the Bible	3
GES 145 Humanities I: Greco-Roman through Middle Ages	4			GES 244 Humanities III: European Enlightenment and American Culture to 1877	4
MAT 124M Calculus 1	4			MAT 125 Calculus 2	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
	15		4		15
SECOND YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
COS 205 Scientific Computing	3	World Cultures (U) course	3	MAT 222 Differential Equations	3
GES 246 Humanities IV: Modern and Contemporary Western Culture	4			PHY 312 & PHY 313 Modern Physics and Modern Physics Lab	4
MAT 223 Multivariable Calculus	3			PHY 352 & PHY 353 ² Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	4
PHY 260 Careers in Engineering and Physics Seminar	1			Second Language (S) course	4
PHY 302 & PHY 303 Electronics and Electronics Lab	4				
	15		3		15
THIRD YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
PHY 320 Mathematical Methods in Physics and Engineering	4	Science, Technology and Society (K) course	3	PHY 332 & PHY 333 (or elective) ³ OpticsOptics Lab	4
PHY 400 Electricity and Magnetism	4			PHY 365 Physics Research Seminar	1
Comparative Systems (G) course	3			Interpreting Biblical Themes (J) course	3
Leisure and Lifetime Sports (Q) course	1			Electives	6
Elective	3				
	15		3		14
FOURTH YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
PHY 340 Mechanics	4	Interim Off		PHY 410 Thermodynamics	4
PHY 440 Quantum Mechanics	4			PHY 432 & PHY 433 (or elective) ³ Topics in Contemporary OpticsTopics in Contemporary Optics Lab	4
PHY 490 Research	3			Artistic Experience (A) course	0-3
Cross Cultural Experience (Z) course	0-3			Contemporary Christian Issues (P) course	3
Elective	3			Elective	3
	14-17		0		14-17
Total Credits 127-133					

1. Students must complete through the second semester of a first year language course or equivalent.
2. Choose from MAT344 or PHY352/353
3. Choose from PHY332/333 or PHY432/433

This program assumes a student will use MAT124M and PHY292/292D to meet the general education Mathematics and Laboratory Science requirements.

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