

B.S. in Applied Physics (Biomedical Emphasis) 2019-2020: Option 1 - CWILT

FIRST YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
PHY 292 & PHY 292D General Physics I and General Physics I Lab	4	GES 125Introduction to the Creative Arts	4	PHY 296 & PHY 297 General Physics II and General Physics II Lab	4
GES 160 Inquiry Seminar	3			GES 130Christianity Western Culture	4
MAT 124MCalculus 1	4			MAT 125 Calculus 2	4
BIB 101Introduction to the Bible	3			GES 140Introduction to Wellbeing	3
	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 223Multivariable Calculus	3			THE 201 Christian Theology	3
PHY 260 Careers in Engineering and Physics Seminar	1			Second Language (S) course ¹	4
Contemporary Western Life and Thought (L) course	3				
	14		3		15
THIRD YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
BIO 120 & BIO 120D (fall, odd years) Introduction to Molecular and Cellular Biology, Introduction to Molecular and Cellular Biology Lab	4	Science, Technology, and Society (K) course	3	PHY 365 Physics Research Seminar	1
CHE 208 & CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab	4			PHY 332 & PHY 333 Optics and Optics Lab	4
PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab	4			PHY 340Mechanics	4
Cross-Cultural Experience (Z) course	0-3			Comparative Systems (G) course	3
				Interpreting Biblical Themes (J) course	3
	12-15		3		15
FOURTH YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
PHY 320Mathematical Methods in Physics and Engineering	4	Interim Off		BIO 216 Human Physiology	3
BIO 214 & BIO 215 Human Anatomy and Human Anatomy Lab	4			Contemporary Christian Issues (P) course	3
PHY 424 & PHY 425 Materials and Devices and Materials and Devices Lab	4			Leisure and Lifetime Sport (Q) course	1
PHY 490 Research	3			Artistic Experience (A) course	0-3
				Electives	6
	15		0		13-16
Total Credits 123-129					

- Students may also use this course to complete a General Education requirement.
- 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 (Biomedical Emphasis) 2019-2020: Option 2 - Humanities

FIRST YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
PHY 292 & PHY 292D ¹ General Physics I and General Physics I Lab	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
MAT 124M Calculus 1	4			GES 140 Introduction to Wellbeing	3
BIB 101 Introduction to the Bible	3			MAT 125 Calculus 2	4
	15		4		15
SECOND YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
COS 205 Scientific Computing	3	World Cultures (U) course	3	PHY 312 & PHY 313 Modern Physics and Modern Physics Lab	4
GES 246 Humanities IV: Modern and Contemporary Western Culture	4			PHY 352 & PHY 353 Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	4
MAT 223 Multivariable Calculus	3			Second Language (S) course ¹	4
PHY 302 & PHY 303 Electronics and Electronics Lab	4			THE 201 Christian Theology	3
	14		3		15
THIRD YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
BIO 120 & BIO 120D Introduction to Molecular and Cellular Biology and Introduction to Molecular and Cellular Biology Lab	4	Science, Technology, and Society (K) course	3	PHY 365 Physics Research Seminar	1
CHE 208 & CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab	4			PHY 332 & PHY 333 Optics and Optics Lab	4
PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab	4			PHY 340 Mechanics	4
PHY 260 Careers in Engineering and Physics Seminar	1			Comparative Systems (G) course	3
Cross-Cultural Experience (Z) course	0-3			Interpreting Biblical Themes (J) course	3
	13-16		3		15
FOURTH YEAR					
Fall	Credits	Interim	Credits	Spring	Credits
PHY 320 Mathematical Methods in Physics and Engineering	4	Interim Off		BIO 216 & BIO 217 Human Physiology and Human Physiology Lab	4
BIO 214 & BIO 215 Human Anatomy and Human Anatomy Lab	4			Leisure and Lifetime Sports (Q) course	1
PHY 424 & PHY 425 Materials and Devices and Materials and Devices Lab	4			Elective	4
PHY 490 Research	3			Contemporary Christian Issues (P) course	3
	15		0	Artistic Experience (A) course	0-3
					12-15
Total Credits 124-130					

1. Students may also use this course to complete 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.)

Because of possible double counting between General Education and the major, the actual credit total can be reduced to 122.

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 u between fall and spring for state grant purposes only.)