

## B.S. in Applied Physics (Computational Emphasis) 2016-2017: Option 1 - CWILT

First Year						
	Fall	Credits	Interim	Credits	Spring	Credits
PHY292 & 292D General Physics I and General Physics Lab *1		4	<a href="#">GES125 Introduction to the Creative Arts</a>		4 PHY296 & PHY297 General Physics II and General Physics Lab II	4
CHE208 & 208D Accelerated General Chemistry and Accelerated General Chemistry Lab		4			<a href="#">MAT125 Calculus 2</a>	4
<a href="#">GES106 Introduction to Liberal Arts</a>		1			<a href="#">GES130 Christianity Western Culture</a>	4
<a href="#">BIB101 Introduction to the Bible</a>		3			<a href="#">GES110 College Writing</a>	3
Mathematics (M) course		3				
		15		4		15
Second Year						
	Fall	Credits	Interim	Credits	Spring	Credits
PHY302 & PHY303 Electronics and Electronics Lab		4	<a href="#">COS351 High-Performance Computing</a>		3 PHY312 & PHY313 Modern Physics and Modern Physics Lab	4
<a href="#">MAT223 Multivariable Calculus</a>		3			PHY352 & PHY353 Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	4
<a href="#">COS205 Scientific Computing</a>		3			<a href="#">MAT222 Differential Equations</a>	3
<a href="#">PHY260 Careers in Engineering and Physics Seminar</a>		1			<a href="#">THE201 Christian Theology</a>	3
Nature of Persons (N) course		3			<a href="#">PEA100 Physical Wellness for Life</a>	1
		14		3		15
Third Year						
	Fall	Credits	Interim	Credits	Spring	Credits
CHE113 & 113D General Chemistry I and General Chemistry I Lab		4	Contemporary Western Life and Thought (L) course		3 PHY365 Physics Research Seminar	1
<a href="#">MAT241 Discrete Mathematics</a>		3			Comparative Systems (G) course	3
<a href="#">MAT376 Operations Research</a>		3			Science, Technology, and Society (K) course	3
World Cultures (U) course		3			Interpreting Biblical Themes (J) course	3
		13		3	Second Language (S) course	4
						14
Fourth Year						
	Fall	Credits	Interim	Credits	Spring	Credits
<a href="#">PHY320 Mathematical Methods in Physics and Engineering</a>		4	Interim Off		<a href="#">PHY340 Mechanics</a>	4
<a href="#">MAT330 Probability and Statistics</a>		3			Leisure and Lifetime Sport (Q) course	1
<a href="#">MAT344 Numerical Methods</a>		3			Electives	5
<a href="#">PHY490 Research</a>		3			Contemporary Christian Issues (P) course	3
Cross-Cultural Experience (Z) course		0-3			Artistic Experience (A) course	0-3
		13-16		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.)

## B.S. in Applied Physics (Computational Emphasis) 2016-2017: Option 2 - Humanities

First Year						
	Fall	Credits	Interim	Credits	Spring	Credits
PHY292 & 292D General Physics I and General Physics Lab *1		4	<u>GES147 Humanities II: Renaissance and Reformation</u>		4 PHY296 & PHY297 General Physics II and General Physics Lab II	4
CHE208 & 208D Accelerated General Chemistry and Accelerated General Chemistry Lab		4			<u>MAT125 Calculus 2</u>	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			<u>BIB101 Introduction to the Bible</u>	3
Mathematics (M) course		3			<u>PEA100 Physical Wellness for Life</u>	1
		16		4		16
Second Year						
	Fall	Credits	Interim	Credits	Spring	Credits
PHY302 & PHY303 Electronics and Electronics Lab		4	Nature of Persons (N) course		3 PHY312 & PHY313 Modern Physics and Modern Physics Lab	4
<u>MAT223 Multivariable Calculus</u>		3			PHY352 & PHY353 Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	4
<u>COS205 Scientific Computing</u>		3			<u>MAT222 Differential Equations</u>	3
<u>PHY260 Careers in Engineering and Physics Seminar</u>		1			Second Language (S) course *2	4
<u>GES246 Humanities IV: Modern and Contemporary Western Culture</u>		4				
		15		3		15
Third Year						
	Fall	Credits	Interim	Credits	Spring	Credits
CHE113 & 113D General Chemistry I and General Chemistry I Lab		4	<u>COS351 High-Performance Computing</u>		3 <u>PHY365 Physics Research Seminar</u>	1
<u>MAT241 Discrete Mathematics</u>		3			BIO120 & BIO121 Introduction to Molecular and Cellular Biology and Introduction to Molecular and Cellular Biology Lab	4
<u>MAT376 Operations Research</u>		3			Comparative Systems (G) course	3
World Cultures (U) course		3			Science, Technology, and Society (K) course	3
		13		3	Leisure and Lifetime Sport (Q) course	1
						12
Fourth Year						
	Fall	Credits	Interim	Credits	Spring	Credits
PHY320 Mathematical Methods in Physics and Engineering		4	Interim Off		<u>PHY340 Mechanics</u>	4
<u>MAT330 Probability and Statistics</u>		3			Interpreting Biblical Themes (J) course	3
<u>MAT344 Numerical Methods</u>		3			Contemporary Christian Issues (P) course	3
Cross-Cultural Experience (Z) course		0-3			Artistic Experience (A) course	0-3
Electives		5				
		15-18		0		10-13

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.)