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

FIRST YEAR				
Fall	Credits Interim	Credits	Spring	Credi
PHY 292	4 GES 125 Introduction to the Creative Arts	4	PHY 296	
<u>& PHY 292D</u>			<u>& PHY 297</u>	
General Physics I and General Physics I Lab *1			General Physics II and General Physics II Lab	
BIB 101 Introduction to the Bible	3		GES 130 Christianity Western Culture	
GES 160 Inquiry Seminar	3		GES 140 Introduction to Wellbeing	
MAT 124M Calculus 1	4		MAT 125 Calculus 2	
	14	4		1
SECOND YEAR				
Fall	Credits Interim	Credits	Spring	Credi
PHY 302	4 World Cultures (U) course	3	PHY 312	
<u>& PHY 303</u>			<u>& PHY 313</u>	
Electronics and Electronics Lab			Modern Physics and Modern Physics Lab	
COS 205 Scientific Computing	3		PHY 352	
			<u>& PHY 353</u>	
			Computer Methods in Physics and Engineering and Computer Methods in Physics and Engineering Lab	
PHY 260 Careers in Engineering and Physics Seminar	1		MAT 222 Differential Equations	
MAT 223 Multivariable Calculus	3		Second Language (S) course *2	
Contemporary Western Life and Thought (L) course	3			
	14	3		1
THIRD YEAR				
Fall	Credits Interim	Credits	Spring	Credi
CHE 208	4 Science, Technology, and Society (K) course	3	ENR 308 Statics and Mechanics of Materials	
& CHE 208D				
Accelerated General Chemistry and Accelerated General Chemistry Lab				
PHY 320 Mathematical Methods in Physics and Engineering	4		PHY 365 Physics Research Seminar	
PHY 340 Mechanics				
TITL 340 MICCHAINGS	4		PHY 410 Thermodynamics	
PHY 424	4		PHY 410 Thermodynamics THE 201 Christian Theology	
			<u> </u>	
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices			<u> </u>	
PHY 424 & PHY 425			THE 201 Christian Theology	
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices	4		THE 201 Christian Theology Comparative Systems (G) course	
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory			THE 201 Christian Theology Comparative Systems (G) course	1
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR	16	3	THE 201 Christian Theology Comparative Systems (G) course	
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall	16 Credits Interim	3 Credits	THE 201 Christian Theology Comparative Systems (G) course Spring	
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall PHY 422	16	3 Credits	THE 201 Christian Theology Comparative Systems (G) course	
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall PHY 422 & PHY 423	16 Credits Interim	3 Credits	THE 201 Christian Theology Comparative Systems (G) course Spring	
PHY 424 8 PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall PHY 422 8 PHY 423 Fluid Mechanics and Fluid Mechanics Lab	16 Credits Interim 4 Interim Off	Credits	THE 201 Christian Theology Comparative Systems (G) course Spring Leisure and Lifetime Sport (Q) course	Credi
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 490 Research	16 Credits Interim 4 Interim Off 3	Credits	THE 201 Christian Theology Comparative Systems (G) course Spring Leisure and Lifetime Sport (Q) course Artistic Experience (A) course	Credi
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 490 Research Interpreting Biblical Themes (J) course	16 Credits Interim 4 Interim Off 3 3	Credits	THE 201 Christian Theology Comparative Systems (G) course Spring Leisure and Lifetime Sport (Q) course	
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 490 Research Interpreting Biblical Themes (J) course Contemporary Christian Issues (P) course	16 Credits Interim 4 Interim Off 3 3 3 3	Credits	THE 201 Christian Theology Comparative Systems (G) course Spring Leisure and Lifetime Sport (Q) course Artistic Experience (A) course	Credi
PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 490 Research Interpreting Biblical Themes (J) course	16 Credits Interim 4 Interim Off 3 3	Credits	THE 201 Christian Theology Comparative Systems (G) course Spring Leisure and Lifetime Sport (Q) course Artistic Experience (A) course Electives	Credi

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

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.)

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

B.S. in Applied Physics (Mechanics Emphasis) 2020-2021: Option 2 - Humanities

FIRST YEAR					
Fall	Credits	Interim	Credits	Spring	Credi
PHY 292	4	GES 147 Humanities II: Renaissance and Reformation		PHY 296	
& PHY 292D		GLS 147 Humanities II. Renaissance and Reformation		& PHY 297	
General Physics I and General Physics I Lab *1				General Physics II and General Physics II Lab	
GES 145 Humanities I: Greco-Roman through Middle Ages	4			GES 244 Humanities III: European Enlightenment and American	
GES 145 Humanities I. Greco-Roman through Middle Ages	'				
	3			Culture to 1877	
GES 140 Introduction to Wellbeing				BIB 101 Introduction to the Bible	
MAT 124M Calculus 1	4			MAT 125 Calculus 2	
	15		4		
SECOND YEAR					
Fall	Credits	Interim	Credits	Spring	Cred
PHY 302	4	World Cultures (U) course	3	PHY 312	
& PHY 303				& PHY 313	
Electronics and Electronics Lab				Modern Physics and Modern Physics Lab	
COS 205 Scientific Computing	3			PHY 352	
				& PHY 353	
				Computer Methods in Physics and Engineering and Computer Methods in	
				Physics and Engineering Lab	
GES 246 Humanities IV: Modern and Contemporary Western Culture	4			MAT 222 Differential Equations	
MAT 223 Multivariable Calculus	3			Second Language (S) course *2	
	14		3		
THIRD YEAR					
Fall	Credits	Interim	Credits	Spring	Credi
		0. i T I		and the second s	
PHY 260 Careers in Engineering and Physics Seminar	1	Science, Technology, and Society (K) course	3	PHY 365 Physics Research Seminar	
PHY 260 Careers in Engineering and Physics Seminar PHY 320 Mathematical Methods in Physics and Engineering	1 4			ENR 308 Statics and Mechanics of Materials	
PHY 320 Mathematical Methods in Physics and Engineering				ENR 308 Statics and Mechanics of Materials	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422	4			ENR 308 Statics and Mechanics of Materials	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 8. PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 8. PHY 425 Electronic Materials and Devices and Electronic Materials and Devices	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory	4			ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR	4		3	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory	4 4 4 4 4 4 17 17 Credits	Interim	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR	4 4 4 4 4 4 17 17 Credits		3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall	4 4 4 4 4 4 17 17 Credits	Interim	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall CHE 208	4 4 4 4 4 4 17 17 Credits	Interim	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring	
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 8, PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 8, PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall CHE 208 8, CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab	4 4 4 17 17 Credits 4	Interim Interim Off	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring Leisure and Lifetime Sport (Q) course	Cred
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 8, PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 8, PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall CHE 208 8, CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab PHY 490 Research	4 4 4 17 17 Credits 4 3 3	Interim Interim Off	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring Leisure and Lifetime Sport (Q) course Artistic Experience (A) course	Cred
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 8, PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall CHE 208 8, CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab PHY 490 Research Electives	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Interim Interim Off	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring Leisure and Lifetime Sport (Q) course	Cred
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall CHE 208 & CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab PHY 490 Research Electronic Materials and Devices and Electronic Materials and Devices Contemporary Christian Issues (P) course	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Interim Interim Off	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring Leisure and Lifetime Sport (Q) course Artistic Experience (A) course	Cred
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 8, PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall CHE 208 8, CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab PHY 490 Research Electives	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Interim Interim Off	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring Leisure and Lifetime Sport (Q) course Artistic Experience (A) course Electives	Cred
PHY 320 Mathematical Methods in Physics and Engineering PHY 340 Mechanics PHY 422 & PHY 423 Fluid Mechanics and Fluid Mechanics Lab PHY 424 & PHY 425 Electronic Materials and Devices and Electronic Materials and Devices Laboratory FOURTH YEAR Fall CHE 208 & CHE 208D Accelerated General Chemistry and Accelerated General Chemistry Lab PHY 490 Research Electives Contemporary Christian Issues (P) course	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Interim Interim Off	3 Credits	ENR 308 Statics and Mechanics of Materials PHY 410 Thermodynamics Comparative Systems (G) course Interpreting Biblical Themes (J) course Spring Leisure and Lifetime Sport (Q) course Artistic Experience (A) course Electives	Credi

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