

Applied Physics Major (B.S.)
2009-2010 - Option 1

Suggested Sequence of Courses

Bethel University/College of Arts & Sciences

<i>Fall</i>		<i>Interim</i>		<i>Spring</i>		<i>Year</i>		
Freshman								
PHY290D	General Physics I	4	Nature of Persons (N) course	3	PHY295	General Physics II	4	
MAT124M	Calculus 1	4			MAT125	Calculus 2	4	
GES106	Introduction to the Liberal Arts	1			GES130	Christianity & Western Culture	4	
GES110	College Writing	3			BIB101	Introduction to the Bible	3	
GES125	Introduction to the Creative Arts	4						
		16		3			15	34
Sophomore								
PHY300	Electronics	4	World Cultures (U) course	3	PHY310	Modern Physics	4	
MAT223	Multivariable Calculus	3			MAT222	Differential Equations	3	
THE201	Christian Theology	3			COS205	Scientific Computing	3	
	Second Language (S)* course	4				Contemporary Western Life and Thought (L) course	3	
						Physical Well-being (Y) course	1	
		14		3			14	31
Junior								
PHY320	Math Methods in Physics & Engineering	4	Science, Technology, and	3	PHY350	Computer Methods in Physics & Engineering	4	
PHY420	Fluid Mechanics (alt. yrs.)	4	Society (K) course		PHY330	Optics (alt. yrs.)	4	
CHE111D	General Chemistry I	4				Comparative Systems (G) course	3	
	Leisure and Lifetime Sports (Q) course	1				Elective	4	
		13		3			15	31
Senior								
PHY481	Internship in Physics ^b	2			PHY430	Topics in Contemporary Optics (alt. yrs)	4	
COS344	Numerical Methods ^a	3			[^] PHY410	Thermodynamics (alt. yrs.)	4	
[^] PHY340	Mechanics	4				Contemporary Christian Issues (P) course	3	
	Interpreting Biblical Themes (J) course	3				Elective	3	
		12					14	26
							14	122

____ Artistic Experience (A) ____ Cross-cultural Experience (Z)

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

▪ This program assumes a student will use MAT124M and PHY290D to meet the general education Mathematics and Laboratory Science requirements.

^a Elective choices in related fields include: MAT330 Probability & Statistics and CHE212 Gen Chemistry II in addition to COS344.

^b An internship is the preferred option; however PHY360 and PHY365 Physics Research Seminar I and II may be substituted.

[^] Elective choices in upper-level physics include: PHY400 Electricity & Magnetism and PHY440 Quantum Mechanics in addition to PHY340 and PHY410.

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.)

Applied Physics Major (B.S.)
 2009-2010 - Option 2 – Humanities Option

Suggested Sequence of Courses

Bethel University/College of Arts & Sciences

<i>Fall</i>		<i>Interim</i>		<i>Spring</i>		<i>Year</i>		
Freshman								
PHY290D	General Physics I	4	BIB101	Introduction to the Bible	3	PHY295	General Physics II	4
MAT124M	Calculus 1	4				MAT125	Calculus 2	4
GES106	Introduction to the Liberal Arts	1				GES146	Western Humanity in Christian Perspective II	4
GES145	Western Humanity in Christian Perspective I	4				GES110	College Writing	3
	Physical Well-being (Y) course	1						
		14			3			15
Sophomore								
PHY300	Electronics	4	World Cultures (U) course	3	PHY310	Modern Physics	4	
MAT223	Multivariable Calculus	3			MAT222	Differential Equations	3	
	Second Language (S)* course	4			COS205	Scientific Computing	3	
	Nature of Persons (N) course	3			THE201	Christian Theology	3	
						Contemporary Western Life and Thought (L) course	3	
		14			3			16
Junior								
PHY320	Math Methods in Physics & Engineering	4	Science, Technology, and Society (K) course	3	PHY350	Computer Methods in Physics & Engineering	4	
PHY420	Fluid Mechanics (alt. yrs.)	4			PHY330	Optics (alt. yrs.)	4	
CHE111D	General Chemistry I	4				Comparative Systems (G) course	3	
	Interpreting Biblical Themes (J) course	3				Elective	3	
		15			3			14
Senior								
PHY481	Internship in Physics ^b	2			PHY430	Topics in Contemporary Optics (alt. yrs.)	4	
COS344	Numerical Methods ^a	3			^PHY410	Thermodynamics (alt. yrs.)	4	
^PHY340	Mechanics	4				Leisure and Lifetime Sports (Q) course	1	
	Contemporary Christian Issues (P) course	3				Elective	4	
		12					13	25
							122	

____ Artistic Experience (A) ____ Cross-cultural Experience (Z)

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^a Elective choices in related fields include: MAT330 Probability & Statistics and CHE212 Gen Chemistry II in addition to COS344.

^b An Internship is the preferred option; however PHY360 and PHY365 Physics Research Seminar I and II may be substituted.

[^] Elective choices in upper-level physics include: PHY400 Electricity & Magnetism and PHY440 Quantum Mechanics in addition to PHY340 and PHY410.

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