

ANDREWS PHYSICS FAQ

Scheduling a Physics Major

How many credit hours do I need for a Bachelor of Science degree with a physics major?

All Bachelor of Science degrees require a grand total of 124 credit hours of which 30 must be upper division credit hours. Of the total number of hours, 40 must be in physics; 29, in cognate areas; 42 in general education areas; and 13 in elective, minor, or second major areas.

How many physics credit hours are required for a physics major and how many classes does that represent?

It takes 40 credit hours to complete a physics major. That represents something like 16 to 18 courses ranging from 1 to 4 credits each. You may be interested in a realistic sample, given on the right, of scheduled courses leading to a BS in Physics degree in 4 years.

How many hours will I need to take each semester?

A full-time course load for a semester is considered to be 12-16 credit hours. Overloads of 17 credit hours may be petitioned but not particularly recommended.

What will it take to get a math major along with my physics major?

There are 2 types of math majors: 1) BS in math and 2) a second major in mathematical studies. The mathematical studies major may only be taken as a second major and requires 30 credits of mathematics. The physics major requirements already satisfy 21 of the required 30 credits for the mathematical studies 2nd major. For the BS in math, the physics requirements already satisfy 21 of the 42 credits required. It is highly recommended that physics majors take as much math as possible. Therefore the department strongly supports its students taking on the mathematical studies program.

What does it take to get a math minor along with my physics major?

Students receiving a physics major are already satisfying 18 credits of a math minor. They will only need 2 additional credits or 1 course to complete a math minor.

What if my interests go beyond physics? Can I include other areas?

While chemistry, math, and computing majors naturally complement the physics major, second majors have also been taken in other areas such as anthropology, religion, music, and German. We strongly support breadth in our majors and thus encourage development in other areas of personal interest. The strengths you take into these less traditional areas add to your success potential in the marketplace.

SAMPLE PHYSICS PROGRAM		
Freshman Year		
<u>Hrs</u>	<u>Course Name</u>	<u>Course#</u>
8	Calculus I, II	MATH141,142
8	General Chemistry	CHEM131,132
4	Computer Science	CPTR125 or CPTR151
1	Indep Study	PHYS295
<u>11</u>	GenEd	
	3 God & Human Life	RELT100
	3 Eng Comp I	ENGL115
	2 Comm Skills	COMM104
	3 Creativity & Arts	IDSC211
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Sophomore Year		
<u>Hrs</u>	<u>Course Name</u>	<u>Course#</u>
8	Physics for Scientists I, II	PHYS241,242
2	Phys for Sci Lab I, II	PHYS271,272
4	Calculus III	MATH240
3	Differential Equations	MATH286
3	Intro to Linear Algebra	MATH215
<u>11.5</u>	GenEd	
	3 Religion (3 of 5)	
	3 Eng comp II	ENGL215
	2 Civ and Ideas I	HIST117
	3 Civ and ideas II	HIST118
	0.5 Activity Course	
31.5		
Junior Year (2002-3)		
<u>Hrs</u>	<u>Course Name</u>	<u>Course#</u>
2.5	Theoretical Mechanics I	PHYS411
2.5	Thermodynamics	PHYS430
3	Electricity & Magnetism I	PHYS431
1	Advanced Laboratory I	PHYS377
6	Physics electives	
	3 E&M II	PHYS432
	2.5 Solid State	PHYS460
	2.5 Biophysics	PHYS416
	2.5 Optics	PHYS350
10	Electives	
<u>7</u>	GenEd	
	3 Religion	
	2 Essen of wellness	HLED130
	2 Phil of service	BHSC100
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Senior Year (2003-4)		
<u>Hrs</u>	<u>Course Name</u>	<u>Course#</u>
3	Quantum Mechanics I	PHYS481
1	Advanced Laboratory II	PHYS477
1	Research	PHYS495
8	Physics electives	
	3 Quantum II	PHYS482
	2.5 Particle	PHYS445
	2.5 Senior Review	PHYS475
	2.5 Topics in Relativity	PHYS420
6.5	Electives	
<u>12.5</u>	GenEd	
	3 Religion	
	3 Humanities	
	3 Social Sc (1 of 6)	
	3 Social Sc (1 of 3)	
	0.5 Activity Course	
32		