

BS Physics - 4 year plan

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		Fall	Pre-req courses	units	Term offered		Spring	Pre-req courses	units	Term offered	
Year 1	MATH 2210	Calculus I	MATH 1401 or satisfactory score on placement exam	4	Fall & Spring		MATH 2220	Calculus II	Math 2210 with grade of C- or higher	4	Fall & Spring
	PHYS 1500	Tools for Physicists	none	3	Fall		PHYS 2500	General Physics I	MATH 2210 and co-req of MATH 2220	4	Fall & Spring
	CHEM 2100	General Chemistry I	1 yr HS chemistry or equivalent AND pre- or co-req of one of Math 1301, 1401, 1601, 2210, or 2220	4	Fall & Spring		PHYS 2500L	General Physics I Lab	MATH 2210 and co-reqs of MATH 2220 & PHYS 2500	1	Fall & Spring
	CHEM 2100L	General Chemistry I Laboratory	co-req of CHEM 2100	1	Fall & Spring			GE courses		6	Fall & Spring
		GE courses		3	Fall & Spring						
		Total units		15				Total units		15	
Year 2	MATH 2310	Applied Linear Algebra	Math 2210 with grade of C- or higher, and Math 2220 as pre- or co-req	4	Fall & Spring		MATH 2320	Multivariable Calculus	Math 2220 and Math 2310 both with grade of C- or higher	4	Fall & Spring
	PHYS 2510	General Physics II	PHYS 2500 & MATH 2220	4	Fall & Spring		PHYS 2600L	Introduction to Electronics	PHYS 2210 & MATH 2310	1	Spring
	PHYS 2510L	General Physics II Lab	PHYS 2500, MATH 2500L, & MATH 2220 and co-req of PHYS 2510	1	Fall & Spring		PHYS 2700	Modern Physics	MATH 2310, PHYS 1500, PHYS 2510, PHYS 2510L & a co-req of MATH 2320	3	Spring
		GE courses		6	Fall & Spring			GE courses		6	Fall & Spring
		Total units		15				Total units		14	
Year 3	PHYS 3100	Mathematical Methods of Physics	MATH 2320 with a grade of C (2.0) or higher, MATH 2310, PHYS 100, PHYS 2510, and a combined 2.0 GPC in 2000-level physics courses	4	Fall		PHYS 3400	Electricity & Magnetism	PHYS 3100 with a grade of C- or better & PHYS 2700 with a grade of C- or better or co-req of PHYS 2700	3	Spring
	PHYS 3200	Classical Mechanics	PHYS 2510, PHYS 2510L, and a co-req of PHYS 3100	4	Fall		PHYS 3500	Statistical and Thermal Physics	PHYS 2700 and PHYS 3100 both with a grade of C- or better	4	Spring
	PHYS 3300	Computational Physics	PHYS 2510, PHYS 2510L, and a co-req of PHYS 3100	3	Fall		PHYS 3800	Intermediate Physics Laboratory	PHYS 2600L, PHYS 2700, PHYS 3300 AND a co-req of PHYS 2700 & PHYS 2600L	2	Spring
		GE courses		3	Fall & Spring			PHYS Elective		3	Fall & Spring
								GE course		3	Fall & Spring
		Total units		14				Total units		15	
Year 4	PHYS 4400	Electricity & Magnetism II	PHYS 3400 with a grade of C- or better	3	Fall		PHYS 4800	Senior Thesis (WI)*	PHYS 3200, PHYS 3400, and PHYS 3800	2	Spring
	PHYS 4700	Quantum Mechanics	PHYS 2700, PHYS 3100, PHYS 3200, and PHYS 3400 all with grades of C- or better in each course	4	Fall			PHYS Elective		3	Fall & Spring
		PHYS Elective		3	Fall & Spring			GE course		3	Fall & Spring
		GE courses		6	Fall & Spring			GE courses		6	Fall & Spring
		Total units		16				Total units		14	
								*Can be substituted by ASTR 4000 Observational Astronomy (WI)			

NOTES:

1. PHYS courses are in bold.
2. An additional 2 units of coursework of the student's choosing across the university will be required for graduation.
3. Plan averages 14-16 units per term. Taking less than this will require additional terms to graduate
4. Completing the requirements of the BS Physics will simultaneously satisfy the following GE requirements:
 GE Math (Area B4)
 GE Physical Science (Area B1)
 GE lab (Area B-lab)
 1 out of 2 Writing Intensive courses - upper division (this leaves 1 writing intensive course of the student's choosing upper or lower division)

Elective Courses

	Course	Pre-req courses	units	Term offered
PHYS 3600	Data Acquisition and Control	PHYS 2600L, PHYS 3100, PHYS 3300	2	Spring
PHYS 4600	Electronics	PHYS 3600	3	
PHYS 4851-3	Special Topics in Physics	depends on the topic	1-3	
PHYS 4851L-2L	Special Topics in Physics	depends on the topic	1-3	
PHYS 5100	Mathematical Methods of Physics II	PHYS 3100	3	
PHYS 5400	Optics	PHYS 4400	3	Spring
PHYS 5500	Solid State Physics	PHYS 4700	3	Spring
PHYS 5700	Quantum Mechanics II	PHYS 4700 with grade of C (2.0) or better	3	Spring
PHYS 5751-3	Internship		1-3	Fall & Spring
PHYS 5851-3	Special Topics in Physics	depends on the topic	1-3	
PHYS 5851L-2L	Special Topics in Physics	depends on the topic	1-3	
PHYS 5951-3	Independent Study		1-3	Fall & Spring
ASTR 2300	Introduction to Astronomy for Scientists*	PHYS 2510, PHYS 2510L	4	Spring
ASTR 3300	Astrophysics of Planetary Systems	ASTR 2300	3	
ASTR 3310	Astrophysics of Galaxies and Cosmology	ASTR 2300	3	
ASTR 4000	Observational Astronomy (WI)	ASTR 2300, PHYS 3300 or other programming course	3	Fall

*** Does not count as an elective towards the BA or BS physics, but is a pre-req for ASTR 3300, ASTR 3310, and ASTR 4000 which are approved electives for those degrees.**

**** Specific elective courses are not guaranteed to be offered each year, but a selection of electives will be offered each year at the discretion of the department.**