Physics

124 Credits

First Year

Fall			Spring		
	HASS Elective[1]	4		Free Elective	4
CHEM 1100	Chemistry I	4	BIOL 1010	Introduction to Biology	3
MATH 1010	Calculus I	4	BIOL 1015	Intro. to Biology Lab	1
PHYS 1150	Physics I (Honors)[2]	4	MATH 1020	Calculus II	4
			PHYS 1250	Physics II (Honors)[2]	4

Second Year

Fall			Spring		
	HASS Elective[1]	4		HASS Elective[1]	4
CSCI 1100	Computer Science I[3]	4	PHYS 4330	Theoretical Mechanics	4
MATH 2400	Introduction to Differential Equations	4	MATH 2010	Multivariable Calculus and Matrix Algebra	4
PHYS 2210	Quantum Physics I	4	PHYS 2220	Quantum Physics II	4

Summer Arch

Week 1-6			Week 7-12		
MATH 4XXX	Mathematics Elective[4]	4		HASS Elective[1]	4
PHYS 4010	Fundamentals of Experimental Physics I	2	PHYS 4020	Data-Intensive Experimental Physics	2
PHYS 4030	Computing for Physicists	2	PHYS 4040	Mathematical Physics	2

Third Year

Fall			Spring		
				Free Elective	4
			PHYS 4100	Introductory Quantum Mechanics	4
			PHYS 4210	Electromagnetic Theory	4
			PHYS 4420	Thermodynamics and Statistical Mechanics	4

Fourth Year

Fall			Spring		
	Free Elective	4		Free Elective	4
MATH 4XXX	Mathematics Elective[4]	4		Free Elective	4
	HASS Elective[1]	4		HASS Elective[1]	4
PHYS 4XXX	Culminating Experience[5]	4			

Footnotes

1. HASS courses shall total 24 credits and meet distribution requirements in the catalog.
2. PHYS 1100 and PHYS 1200 may be substituted for Honors Physics I and II (PHYS 1150 and PHYS 1250), respectively.
3. CSCI 1010 may be substituted for CSCI 1100.
4. MATH 4XXX electives to be chosen from the following:
   MATH 4100 - Linear Algebra
   MATH 4300 - Introduction to Complex Variables: Theory and Applications
   MATH 4400 - Ordinary Differential Equations and Dynamical Systems
   MATH 4500 - Methods of Partial Differential Equations of Mathematical Physics
   MATH 4600 - Advanced Calculus
   MATH 4700 - Foundations of Applied Mathematics
   MATH 4800 - Numerical Computing
5. Students must complete a culminating experience, which may be fulfilled (i) through research participation; (ii) by passing a designated 4-credit senior elective course; or (iii) by passing a designated 3-credit course in Physics or Astronomy plus 1 credit of PHYS 4910.

Free Electives
Physics majors planning to pursue graduate study should take advanced physics courses chosen from the following undergraduate- and graduate-level offerings:

ASTR 4220 - Astrophysics Credit Hours: 4
ASTR 4240 - Gravitation and Cosmology Credit Hours: 4
PHYS 4630 - Lasers and Optical Systems Credit Hours: 4
PHYS 4720 - Solid-State Physics Credit Hours: 4
PHYS 6510 - Quantum Mechanics I Credit Hours: 4
PHYS 6520 - Quantum Mechanics II Credit Hours: 4

Additional Information
Students planning on graduate work in astrophysics are urged to choose electives from the above list plus the following:

ASTR 2050 - Introductory Astronomy and Astrophysics Credit Hours: 4
ASTR 4120 - Observational Astronomy Credit Hours: 4
ASTR 4220 - Astrophysics Credit Hours: 4
ASTR 4240 - Gravitation and Cosmology Credit Hours: 4

Concentrations
Technical and free electives may be chosen to provide a 128-credit B.S. in Physics with a concentration in Computational Physics. Program advisers should be consulted.