

# BACHELOR OF SCIENCE IN PHYSICS - ASTROPHYSICS

Code	Title	Credit Hours
<b>Wellness Requirement</b>		
APPH 1040	Scientific Foundations of Health	2
	or APPH 10 The Science of Physical Activity and Health	
	or APPH 10 Flourishing: Strategies for Well-being and Resilience	
<b>Core IMPACTS</b>		
<b>Institutional Priority</b>		
CS 1301	Introduction to Computing	3
	or CS 1371 Computing for Engineers	
<b>Mathematics and Quantitative Skills</b>		
MATH 1552	Integral Calculus	4
<b>Political Science and U.S. History</b>		
HIST 2111	The United States to 1877	3
	or HIST 2112 The United States since 1877	
	or INTA 1200 American Government in Comparative Perspective	
	or POL 1101 Government of the United States	
	or PUBP 3000 American Constitutional Issues	
<b>Arts, Humanities, and Ethics</b>		
Any HUM		6
<b>Communicating in Writing</b>		
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
<b>Technology, Mathematics, and Sciences</b>		
PHYS 2211	Introductory Physics I <sup>1</sup>	4
PHYS 2212	Introductory Physics II <sup>4</sup>	4
MATH 1551	Differential Calculus	2
MATH 1553	Introduction to Linear Algebra	2
	or MATH 1554 Linear Algebra	
	or MATH 1555 Linear Algebra with Abstract Vector Spaces	
<b>Social Sciences</b>		
Any SS		9
<b>Field of Study</b>		
MATH 2551	Multivariable Calculus	4
MATH 2552	Differential Equations	4
CHEM 1310	Principles of General Chemistry for Engineers	4
	or CHEM 1200 Chemical Principles I	
PHYS 2213	Introduction to Modern Physics	3
PHYS 3201	Classical Mechanics I	3
<b>Upper-Level Physics</b>		
PHYS 3122	Electrostatics and Magnetostatics	3
PHYS 3123	Electrodynamics	3
PHYS 3141	Thermodynamics	3
PHYS 3143	Quantum Mechanics I	3
PHYS 4142	Statistical Mechanics	3
PHYS 4143	Quantum Mechanics II	3
PHYS 4321	Advanced Laboratory I	3
PHYS 4601	Senior Seminar I	1

PHYS 4602	Senior Seminar II	1
<b>Astrophysics Concentration</b>		
PHYS 2021	The Solar System	3
	or PHYS 2022 Stars, Galaxies, and the Universe	
PHYS 3021	Nuclear Astrophysics and Stellar Evolution	3
Choose one of the following:		
	PHYS 4147 Relativity	6
	PHYS 4247 Cosmology	
	PHYS 4347 Fundamentals of Astrophysics	
	PHYS 4263 Nuclei, Particles, and Fields	
Physics Electives <sup>2,3</sup>		5
<b>Free Electives</b>		
Free Electives		19
<b>Total Credit Hours</b>		<b>122</b>

Student must have 2.0 in all PHYS classes 3000-level or higher

- <sup>1</sup> If PHYS 2231 is taken, extra hour goes toward Free Electives
- <sup>2</sup> Any PHYS course or CHEM 3411, CHEM 3412, CHEM 3511, EAS 2750, EAS 4300, EAS 4430, MATH 2106, MATH 3215, MATH 3235, MATH 4320, MATH 4347 MATH 4348, MATH 4581, NRE 3301, NRE 4610
- <sup>3</sup> Minimum of one class in PHYS 3211, PHYS 3226, PHYS 4322
- <sup>4</sup> If PHYS 2232 is taken, extra hour goes toward Free Electives