Sample schedule for BS in physics (astrophysics concentration)

This sample schedule is for the case that fall of year 1 is an odd year. (This distinction is necessary because some of the upper-level astronomy courses are offered every other year.)

Number of credits in parentheses.

Courses designated “Elective” are entirely at the student's discretion.

Two courses from ASTR 403, 404, 420, 480 are required. This sample schedules uses ASTR 404 and (420 or 480). As an alternative, ENGH 302 could be moved to year 4 and both ASTR 420 and 480 could be taken in spring of year 3.

Students who complete a second major may omit either PHYS 306 or 428 and need only take one course from ASTR 403, 404, 420, 480.

PHYS 122 and 123 are not required. They are included to bring the total credit number to 120.

Fall of Year 1 (15)

MATH 113	(4)	Calculus I
ENGH 101	(3)	Composition
Mason Core	(3)	
Mason Core	(3)	
PHYS 122	(1)	Inside Relativity
PHYS 123	(1)	Inside the Quantum World

Spring of Year 1 (15)

ASTR 124	(1)	Introduction to Observational Astronomy
MATH 114	(4)	Calculus II
PHYS 160	(3)	Physics I
PHYS 161	(1)	Physics I lab
Mason Core	(3)	
Mason Core	(3)	

Fall of Year 2 (16)

MATH 213	(3)	Calculus III
PHYS 260	(3)	Physics II
PHYS 261	(1)	Physics II lab
PHYS 251	(3)	Intro to Computer Techniques in Physics (satisfies Mason Core IT)
Mason Core	(3)	
Mason Core	(3)	

Spring of Year 2 (15)

MATH 214	(3)	Differential Equations
PHYS 308	(3)	Modern Physics
ASTR 210	(3)	Introduction to Astrophysics
PHYS 307	(3)	Thermal Physics
Elective	(3)	

Fall of Year 3 (15)

ASTR 401	(3)	Computer Simulation in Astronomy
PHYS 301	(3)	Analytical Methods of Physics
PHYS 303	(3)	Classical Mechanics
PHYS 305	(3)	Electromagnetic Theory
PHYS 311	(3)	Instrumentation

Spring of Year 3 (15)

ASTR 420 or 480	(3)	Exoplanets or The Interstellar Medium
PHYS 306	(3)	Wave Motion and Electromagnetic Radiation
PHYS 312	(3)	Waves and Optics
PHYS 402	(3)	Introduction to Quantum Mechanics and Atomic Physics
ENGH 302	(3)	Advanced Composition

Fall of Year 4 (14)

ASTR 328	(3)	Stars
ASTR 402	(4)	Methods of Observational Astronomy
ASTR 408	(3)	Senior Research
PHYS 416	(1)	Special Topics in Modern Physics
Elective	(3)	

Spring of Year 4 (15)

ASTR 404	(3)	Galaxies and Cosmology
PHYS 428	(3)	Relativity
Elective	(3)	
Elective	(3)	
Elective	(3)	