

Major Map

BULLETIN YEAR: 2021-2022 **Degree:** BA; BS

Major: ASTRONOMY & ASTROPHYSICS

The major map illustrates one path to completing your major, based on faculty members' advice on course sequence and a department's tentative plans for scheduling courses. This document provides general direction. For more specific advice and up to date schedules, it is expected that students will regularly discuss their plans of study with academic advisors and monitor the current class schedules as students are responsible for ensuring that all requirements for graduation have been met.

Course	Cr. Hrs.	Course	Cr. Hrs.
FIRST YEAR			
Semester: Fall Total Credit Hours: 9		Semester: Spring Total Credit Hours: 9	
MTH 132 – Calculus I	4	MTH 133 – Calculus II	4
PHY 145QR – University Physics I	4	PHY 146 – University Physics II	4
PHY 175 – University Physics I lab	1	PHY 176 – University Physics II lab	1

Course	Cr. Hrs.	Course	Cr. Hrs.
SOPHOMORE YEAR			
Semester: Fall Total Credit Hours: 15		Semester: Spring Total Credit Hours: 7	
MTH 223 – Linear Algebra & Matrix Theory	3	MTH 334 – Differential Equations	3
MTH 233 – Calculus III	4	² AST 261 – General Astronomy II	4
PHY 247 - Intro to Modern Physics	3		
PHY 277 – University Physics III lab	1		
¹ AST 260 – General Astronomy I	4		

Course	Cr. Hrs.	Course	Cr. Hrs.
JUNIOR YEAR			
Semester: Fall Total Credit Hours: 10		Semester: Spring Total Credit Hours: 9	
PHY 312 – Intro to Mathematical Physics	3	PHY 332 – Electricity & Magnetism	3
PHY 322 – Intermediate Mechanics	3	PHY 578WI – Experimental Physics	3
¹ AST 562 – Observational Astronomy	4	² AST 563 - Astrophysics	3

Course	Cr. Hrs.	Course	Cr. Hrs.
SENIOR YEAR			
Semester: Fall Total Credit Hours: 7		Semester: Spring Total Credit Hours: 3	
PHY 442 – Intro to Quantum Theory	4	PHY 450 – Thermal Physics	3
PHY 491WI – Senior Physics Project	3		

Course	Cr. Hrs.	Course	Cr. Hrs.
FIFTH YEAR (if needed)			
Semester: Fall Total Credit Hours:		Semester: Spring Total Credit Hours:	

Total: 69 semester hours

A minimum total of 120 hours are required for graduation; 40 of these hours must be at the 300 level or above.

¹AST 260/562 are offered in the Fall semester of even/odd years, respectively.

²AST 261/563 are offered in the Spring semester of odd/even years, respectively.

All students should plan their program carefully with a departmental advisor.

NOTE: Students that have not had a pre-calculus course in high school may begin with MTH 130 (Pre-calculus) in the fall of the first year. This requires moving the University Physics courses (PHY 145, 146, 247 and accompanying labs) to later semesters.