

Astronomy, Astronomy (BSAst)

Total Hours Required: 123

Plan of Study

The Plan of Study is a suggested four-year course sequence to support academic planning and serves as a helpful guide. Currently enrolled students should meet with their academic advisor to tailor their course selections and timelines to their individual goals and circumstances.

Course	Title	Hours
Year 1		
Semester 1		
M 408C or M 408N	Differential and Integral Calculus or Differential Calculus for Science	4
AST 307	Introductory Astronomy	3
RHE 306	Rhetoric and Writing	3
<u>First-Year Signature Course (090)</u>		3
<u>Social and Behavioral Sciences (080)</u>		3
Hours		16
Semester 2		
M 408D	Sequences, Series, and Multivariable Calculus	4
PHY 301	Mechanics	3
PHY 101L	Laboratory for Physics 301	1
Hours chosen from: BIO, CH, C S, or GEO		3
<u>Visual and Performing Arts (050)</u>		3
Free Elective		2
Hours		16
Semester 3		
GOV 310L	American and Texas Government	3
Hours		3
Year 2		
Semester 1		
M 427J	Differential Equations with Linear Algebra	4
PHY 316	Electricity and Magnetism	3
PHY 116L	Laboratory for Physics 316	1
Hours chosen from: BIO, CH, C S, or GEO		3
<u>Foreign Language other than English, Beginning Proficiency</u>		3
Hours		14
Semester 2		
M 427L	Advanced Calculus for Applications II	4
PHY 315	Wave Motion and Optics	3
PHY 115L	Laboratory for Physics 315	1
PHY 355	Modern Physics and Thermodynamics	3
<u>Foreign Language other than English, Beginning Proficiency</u>		3
Hours		14
Year 3		
Semester 1		
Upper-division Math course		3
AST 352K or AST 364P	Stellar Astronomy or Planetary Systems	3
PHY 353L	Modern Physics Laboratory	3
Research course		3
<u>U.S. History (060)</u>		3
Hours		15
Semester 2		
PHY 336K	Classical Dynamics	3
PHY 373	Quantum Physics I: Foundations	3
AST 353	Astrophysics	3
<u>U.S. History (060)</u>		3

Free Elective		3
	Hours	15
Year 4		
Semester 1		
PHY 369	Thermodynamics and Statistical Mechanics	3
PHY 352K	Classical Electrodynamics I	3
AST 358 or AST 376C	Galaxies and the Universe or Cosmology	3
American and Texas Government (070)		3
Free Elective		3
	Hours	15
Semester 2		
Hours chosen from: Upper-division AST, PHY, M, or GEO		3
Hours chosen from: Upper-division AST, PHY, M, or GEO		3
Humanities (040)		3
Hours chosen from: Upper-division AST course		3
Free Elective		3
	Hours	15
	Total Hours	123

Requirements

All requirements are listed below, starting with the most specialized moving to the most general. Additional requirements may follow the table, so be sure to read the entire page. Some required courses listed below may also satisfy [General Education](#) requirements, including [Core Curriculum](#).

Code	Title	Hours
Major (see details below)		
Hours in biology, chemistry, computer science, and/or geological sciences. CH 301 or CH 301C and the courses in the Elements of Computing Certificate Program may be counted toward this requirement; any other course to be counted must meet major requirements in the department that offers it.		6
M 408C	Differential and Integral Calculus (or the equivalent)	4
M 408D	Sequences, Series, and Multivariable Calculus (or the equivalent)	4
M 427J or M 427K	Differential Equations with Linear Algebra Advanced Calculus for Applications I	4
M 427L	Advanced Calculus for Applications II	4
Upper-division math		3
PHY 301	Mechanics	3
PHY 101L	Laboratory for Physics 301	1
PHY 315	Wave Motion and Optics	3
PHY 115L	Laboratory for Physics 315	1
PHY 316	Electricity and Magnetism	3
PHY 116L	Laboratory for Physics 316	1
PHY 336K	Classical Dynamics	3
PHY 352K	Classical Electrodynamics I	3
PHY 353L	Modern Physics Laboratory	3
PHY 355	Modern Physics and Thermodynamics	3
PHY 369	Thermodynamics and Statistical Mechanics	3
PHY 373	Quantum Physics I: Foundations	3
AST 307	Introductory Astronomy	3
AST 352K or AST 364P	Stellar Astronomy Planetary Systems	3
AST 353	Astrophysics	3
AST 358 or AST 376C	Galaxies and the Universe Cosmology	3

Hours chosen from:	3
AST 275	Topics in Astronomy Research
AST 375	Topics in Astronomy Research
AST 376R	A Practical Introduction to Research Methods
Upper-division Hours chosen from: Astronomy	3
Upper-division Hours chosen from: Physics, astronomy, math, and/or geosciences	6
<i>Subtotal</i>	79
Degree (see details below)	6
Free electives: Additional coursework to reach total hours required.	0
<i>Subtotal</i>	6
General Education	
Core Curriculum	38
Foreign Language other than English, Beginning Proficiency	
<i>Subtotal</i>	38
<u>College Requirements - Natural Sciences</u>	
<u>General University Requirements</u>	
Total Hours	123

Degree - Bachelor of Science in Astronomy (BSAst)

Requirements

Code	Title	Hours
<u>Foreign Language and Culture</u>		
(astronomy honors students are exempt from this requirement)		6
Total Hours		6

Special Requirements

Students must earn a grade of at least C- in each mathematics and science course required for the degree, and a University grade point average in these courses of at least 2.00. More information about grades and the grade point average is given in the [General Information Catalog](#).