Curriculum - Astronomical and Planetary Sciences, BS

Catalog Year: 2026 - 2027 **General Studies Gold**

Degree: Bachelor of Science, BS

College/School: The College of Liberal Arts and Sciences

Plan Code: LAASTPLSBS

Minimum credit hours: 120

Upper division minimum credit hours: 45

Requirement	Minimum Grade	Credit Hours
Major Requirements		
A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in Class Search.		
Astronomical and Planetary Sciences Core Courses		
AST 111 Introduction to Solar Systems Astronomy (SCIT)	C	4
AST 112 Introduction to Stars, Galaxies, and Cosmology (SCIT)	C	4
AST 321 Stellar and Planetary Astrophysics This is a Session C course (15 weeks long).	C	3
AST 322 Introduction to Galactic and Extragalactic Astrophysics This is a Session C course (15 weeks long).	C	3
SES 106 Habitable Worlds (SCIT)	C	4
SES 350 Engineering Systems and Experimental Problem Solving (QTRS)	C	3

Requirement	Minimum Grade	Credit Hours
This is a Session C course (15 weeks long).		
SES 376 Communicating Astronomical and Planetary Sciences I	C	3
SES 377 Communicating Astronomical and Planetary Sciences II	C	3

Astronomical and Planetary Sciences Major Courses

MAT 210 Brief Calculus (MATH) **OR** **MAT 265 Calculus for Engineers I (MATH)** Additional math prerequisites may be needed.	C	3
PHY 111 General Physics (SCIT)	C	3
PHY 113 General Physics Laboratory (SCIT)	C	1
PHY 112 General Physics (SCIT)	C	3
PHY 114 General Physics Laboratory (SCIT)	C	1
AST 301 Physics of Astrophysics This is a Session C course (15 weeks long).	C	3
Astronomical and Planetary Sciences Major Electives	C	9 - 12

- **BIO 181 General Biology I (SCIT)**
- **BIO 182 General Biology II (SCIT)**
- **BIO 340 General Genetics**
- **BIO 345 Evolution**
- **CHM 113 General Chemistry I (SCIT)**
- **CHM 114 General Chemistry for Engineers (SCIT)**
- **CHM 116 General Chemistry II (SCIT)**

Requirement	Minimum Grade	Credit Hours
DAT 300 Mathematical Tools for Data Science		
DAT 301 Exploring Data in R and Python		
GLG 101 Introduction to Geology I (Physical) (SCIT) AND GLG 103 Introduction to Geology I: Laboratory (SCIT)		
GLG 108 Water Planet (SCIT)		
MAT 266 Calculus for Engineers II (MATH)		
MAT 267 Calculus for Engineers III (MATH)		
MAT 275 Modern Differential Equations (MATH)		
MAT 343 Applied Linear Algebra		
MCO 307 The Digital Audience		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
PHI 314 Philosophy of Science (HUAD)		
PHY 201 Mathematical Methods in Physics I (MATH)		
PHY 121 University Physics I: Mechanics (SCIT) AND PHY 122 University Physics Laboratory I (SCIT)		
PHY 131 University Physics II: Electricity and Magnetism (SCIT) AND PHY 132 University Physics Laboratory II (SCIT)		
PHY 241 University Physics III		
PHY 302 Mathematical Methods in Physics II		
PHY 310 Classical Particles, Fields, and Matter I		
PHY 311 Classical Particles, Fields, and Matter II		
PHY 314 Quantum Physics I		
PHY 315 Quantum Physics II		

Requirement	Minimum Grade	Credit Hours
PHY 334 Advanced Laboratory I		
PHY 361 Introductory Modern Physics		
PHY 412 Classical Particles, Fields, and Matter III		
PHY 441 Statistical and Thermal Physics		
SES 107 A Solar System Journey (SCIT)		
SES 141 Energy In Everyday Life (SCIT)		
SES 225 Global Biogeochemical Cycles		
SES 421 Foundations of Planetary Science		
STP 226 Elements of Statistics (QTRS)		
TWC 401 Fundamentals of Technical Communication		
TWC 446 Technical and Scientific Reports		
Upper Division Astronomical and Planetary Sciences Major Electives	C	6 - 7
BIO 340 General Genetics		
BIO 345 Evolution		
DAT 300 Mathematical Tools for Data Science		
DAT 301 Exploring Data in R and Python		
MAT 343 Applied Linear Algebra		
MCO 307 The Digital Audience		
MCO 335 Social Media Foundations		
MCO 425 Digital Media Literacy I		
PHI 314 Philosophy of Science (HUAD)		
PHY 302 Mathematical Methods in Physics II		
PHY 310 Classical Particles, Fields, and Matter I		

Requirement	Minimum Grade	Credit Hours
PHY 311 Classical Particles, Fields, and Matter II		
PHY 314 Quantum Physics I		
PHY 315 Quantum Physics II		
PHY 334 Advanced Laboratory I		
PHY 361 Introductory Modern Physics		
PHY 412 Classical Particles, Fields, and Matter III		
PHY 441 Statistical and Thermal Physics		
SES 421 Foundations of Planetary Science		
TWC 401 Fundamentals of Technical Communication		
TWC 446 Technical and Scientific Reports		

The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.		
Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list. At least one of the two courses must be upper division and students must earn a "C" or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields and ASU General Studies requirements.		
Science and Society Elective	C	3
Upper Division Science and Society Elective	C	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.		
ASU 101-LA The ASU Experience Campus immersion students enroll in LIA 101. ASU Online students enroll in ASU 101-LA.		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition **OR ENG 105 Advanced First-Year Composition** **OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition**	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses.

All undergraduate students must complete General Studies requirements.

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2026 - 2027 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.