

# 2023 - 2024 Major Map

## Astronomical and Planetary Sciences, BS



School/College: [The College of Liberal Arts and Sciences](#)  
 LAASTPLSBS




Term 1 - A 0 - 11 Credit Hours <b>Critical course signified by</b> ⚠	Hours	Minimum Grade	Notes
⚠ AST 111: Introduction to Solar Systems Astronomy (SQ)	4	C	<ul style="list-style-type: none"> <li>ASU 101 or college-specific equivalent First-Year Seminar is required for all first-year students.</li> <li>AST 111 is a session C course (15 weeks long).</li> <li>Students who place into MAT 210 should take the course in term 1 to complete the MA requirement.</li> </ul>
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
Mathematics (MA)	3	C	
ASU 101-LA: The ASU Experience	1		
Term hours subtotal:	11		

Term 1 - B 11 - 17 Credit Hours	Hours	Minimum Grade	Notes
Social-Behavioral Sciences (SB) AND Global Awareness (G)	3		<ul style="list-style-type: none"> <li>View ASU Online first-year student registration information <a href="#">here</a>.</li> </ul>
Elective	3		
Term hours subtotal:	6		



Term 2 - A 17 - 27 Credit Hours <b>Critical course signified by</b> ⚠	Hours	Minimum Grade	Notes
⚠ AST 112: Introduction to Stars, Galaxies, and Cosmology (SQ)	4	C	<ul style="list-style-type: none"> <li>AST 112 is a session C course (15 weeks long).</li> <li>Select your <a href="#">career interest areas</a> and play <a href="#">me3@ASU</a>.</li> </ul>
ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
MAT 210: Brief Calculus (MA)	3	C	
Term hours subtotal:	10		



Term 2 - B 27 - 33 Credit Hours <b>Critical course signified by</b> ⚠	Hours	Minimum Grade	Notes
Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		
Elective	3		
⚠ Complete ENG 101 or ENG 105 or ENG 107 course(s)			
Term hours subtotal:	6		

Term 3 - A 33 - 40 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 PHY 111: General Physics (SQ) AND PHY 113: General Physics Laboratory (SQ)	4	C	<ul style="list-style-type: none"> <li>Review the <a href="#">Career Guide for ASU Online Students</a> to learn about available career planning resources.</li> </ul>
Humanities, Arts and Design (HU)	3		
Term hours subtotal:	7		

Term 3 - B 40 - 47 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
PHY 112: General Physics (SQ) AND PHY 114: General Physics Laboratory (SQ)	4	C	
Science and Society Elective	3	C	
 Complete First-Year Composition requirement.			
 Complete Mathematics (MA) requirement.			
Term hours subtotal:	7		

Term 4 - A 47 - 53 Credit Hours	Hours	Minimum Grade	Notes
Computer/Statistics/Quantitative Applications (CS)	3		<ul style="list-style-type: none"> <li>Register for a <a href="#">Handshake</a> account and participate in virtual career advising.</li> </ul>
Social-Behavioral Sciences (SB) AND Historical Awareness (H)	3		
Term hours subtotal:	6		

Term 4 - B 53 - 60 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 SES 106: Habitable Worlds (SQ)	4	C	
Literacy and Critical Inquiry (L)	3		
Term hours subtotal:	7		

Term 5 - A 60 - 66 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 AST 301: Physics of Astrophysics	3	C	<ul style="list-style-type: none"> <li>AST 301 is a session C course (15 weeks long).</li> </ul>
Elective	3		
Term hours subtotal:	6		

Term 5 - B 66 - 72 Credit Hours	Hours	Minimum Grade	Notes
Astronomical and Planetary Sciences Major Electives	3-4	C	<ul style="list-style-type: none"> <li>Major Elective options vary in credit hours. Depending on chosen</li> </ul>
Elective	3-2		

Term hours subtotal: 6

courses, overall elective hours may vary.

Term 6 - A 72 - 78 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes
★ AST 321: Introduction to Planetary and Stellar Astrophysics	3	C	<ul style="list-style-type: none"> <li>AST 321 is a session C course (15 weeks long).</li> <li>Develop your <b>professional online presence</b>.</li> </ul>
SES 376: Communicating Astronomical and Planetary Sciences I	3	C	
Term hours subtotal:	6		

Term 6 - B 78 - 84 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes
SES 377: Communicating Astronomical and Planetary Sciences II	3	C	<ul style="list-style-type: none"> <li>Use <b>Handshake</b> to research employment opportunities.</li> <li>Major Elective options vary in credit hours. Depending on chosen courses, overall elective hours may vary.</li> </ul>
Astronomical and Planetary Sciences Major Electives	3-4	C	
★ Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).			
Term hours subtotal:	6-7		

Term 7 - A 84 - 93 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes
★ AST 322: Introduction to Galactic and Extragalactic Astrophysics	3	C	<ul style="list-style-type: none"> <li>AST 322 and SES 350 are session C courses (15 weeks long).</li> <li>Apply for <b>full-time career opportunities</b>.</li> </ul>
★ SES 350: Engineering Systems and Experimental Problem Solving	3	C	
Upper Division Elective	3		
Term hours subtotal:	9		

Term 7 - B 93 - 96 Credit Hours	Hours	Minimum Grade	Notes
Astronomical and Planetary Sciences Major Electives	3-4	C	<ul style="list-style-type: none"> <li>Major Elective options vary in credit hours. Depending on chosen courses, overall elective hours may vary.</li> </ul>
Term hours subtotal:	3-4		

Term 8 - A 96 - 102 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Science and Society Elective	3	C	
Upper Division Literacy and Critical Inquiry (L)	3		
Term hours subtotal:	6		

Term 8 - B 102 - 108 Credit Hours <b>Necessary course signified by</b> ★	Hours	Minimum Grade	Notes

★ Upper Division Astronomical and Planetary Sciences Major Electives	3-4	C
Upper Division Elective	3-2	
Term hours subtotal:		6

- Major Elective options vary in credit hours. Depending on chosen courses, overall elective hours may vary.

Term 9 - A 108 - 114 Credit Hours <b>Necessary course signified by ★</b>	Hours	Minimum Grade	Notes
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★ Upper Division Astronomical and Planetary Sciences Major Electives	3	C
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB)	3	
Term hours subtotal:		6

Term 9 - B 114 - 120 Credit Hours	Hours	Minimum Grade	Notes
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Complete 2 courses: Upper Division Elective	6	
Term hours subtotal:		6

- 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 found at <https://thecollege.asu.edu/student-resources/science-society>. 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.

Hide Course List(s)/Track Group(s)

Astronomical and Planetary Sciences Major Electives	Upper Division Astronomical and Planetary Sciences Major Electives
BIO 181: General Biology I (SQ)	BIO 340: General Genetics
BIO 182: General Biology II (SG)	BIO 345: Evolution
BIO 340: General Genetics	MAT 343: Applied Linear Algebra
BIO 345: Evolution	MCO 307: The Digital Audience
CHM 113: General Chemistry I (SQ)	MCO 335: Social Media Foundations
CHM 114: General Chemistry for Engineers (SQ)	MCO 425: Digital Media Literacy I
CHM 116: General Chemistry II (SQ)	PHI 314: Philosophy of Science (HU)
GLG 101: Introduction to Geology I (Physical) (SQ) AND GLG 103: Introduction to Geology I: Laboratory (SQ)	PHY 302: Mathematical Methods in Physics II
GLG 108: Water Planet (SQ)	PHY 310: Classical Particles, Fields, and Matter I
MAT 275: Modern Differential Equations (MA)	PHY 311: Classical Particles, Fields, and Matter II
MAT 343: Applied Linear Algebra	PHY 314: Quantum Physics I
	PHY 315: Quantum Physics II

MCO 307: The Digital Audience

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MCO 335: Social Media Foundations

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MCO 425: Digital Media Literacy I

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PHI 314: Philosophy of Science (HU)

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PHY 201: Mathematical Methods in  
Physics I (CS)

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PHY 241: University Physics III

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PHY 302: Mathematical Methods in  
Physics II

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PHY 310: Classical Particles, Fields, and  
Matter I

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PHY 311: Classical Particles, Fields, and  
Matter II

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PHY 314: Quantum Physics I

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PHY 315: Quantum Physics II

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PHY 334: Advanced Laboratory I (L)

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PHY 361: Introductory Modern Physics

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PHY 412: Classical Particles, Fields, and  
Matter III

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PHY 441: Statistical and Thermal Physics

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SES 107: A Solar System Journey (SG)

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SES 141: Energy In Everyday Life (SQ)

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SES 225: Global Biogeochemical Cycles

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STP 226: Elements of Statistics (CS)

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TWC 401: Fundamentals of Technical  
Communication (L)

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TWC 446: Technical and Scientific  
Reports (L)

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PHY 334: Advanced Laboratory I (L)

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PHY 361: Introductory Modern Physics

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PHY 412: Classical Particles, Fields, and  
Matter III

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PHY 441: Statistical and Thermal Physics

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TWC 401: Fundamentals of Technical  
Communication (L)

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TWC 446: Technical and Scientific  
Reports (L)

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## Notes:

- First-Year Composition: All students are placed in ENG 101 unless submission of SAT, ACT, Accuplacer, IELTS, or TOEFL score, or college-level transfer credit or test credit equivalent to ASU's first-year composition course(s), determine otherwise. Students on Polytechnic, Downtown Phoenix and West Campuses are encouraged to complete the Directed Self-Placement survey to choose the first-year composition option they believe best suits their needs. Visit: <https://cisa.asu.edu/DSP>
- Mathematics Placement Assessment score determines placement in first mathematics course.

Please keep in mind that the applicability of a specific transfer course toward an ASU degree program depends on the requirements of the department, division, college or school in which you are enrolled at ASU. Transfer agreements that guarantee the completion of university level requirements do not necessarily meet college and major requirements. Please consult with an advisor for more information.

**Total Hours:** 120

**Upper Division Hours:** 45 minimum

**Major GPA:** 2.00 minimum

**Cumulative GPA:** 2.00 minimum

**Total hrs at ASU:** 30 minimum

**Hrs Resident Credit for**

**Academic Recognition:** 56 minimum

**Total Community College Hrs:** 64 maximum

**Total College Residency Hrs:** 12 minimum

## General University Requirements Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Arts and Design (HU)
- Social-Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed next to courses on the major map were valid for the 2023 - 2024 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.