





## 2022 - 2023 Major Map

### Physics, BS





School/College: The College of Liberal Arts and Sciences  
LAPHYBS

Term 1 0 - 14 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ MAT 270: Calculus with Analytic Geometry I (MA) OR MAT 265: Calculus for Engineers I (MA)	4-3	C	<ul style="list-style-type: none"> <li>ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.</li> <li>MAT 270 is recommended.</li> <li>Select your <b>career interest area</b> and play me3@ASU.</li> </ul>
ENG 101 or ENG 102: First-Year Composition OR			
ENG 105: Advanced First-Year Composition OR	3	C	
ENG 107 or ENG 108: First-Year Composition			
LIA 101: Student Success in The College of Liberal Arts and Sciences	1	C	
Humanities, Arts and Design (HU) AND Historical Awareness (H)	3		
Social-Behavioral Sciences (SB)	3		
⚠ Maintain 2.50 GPA in Critical Tracking Courses.			
Term hours subtotal:	14-13		
Term 2 14 - 30 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ MAT 271: Calculus with Analytic Geometry II (MA) OR MAT 266: Calculus for Engineers II (MA)	4-3	C	<ul style="list-style-type: none"> <li>MAT 271 is recommended</li> <li>PHY 150 is recommended</li> <li>Join a <b>student club</b> or professional organization</li> </ul>
PHY 150: Physics I (SQ) OR PHY 121: University Physics I: Mechanics (SQ) AND PHY 122: University Physics Laboratory I (SQ)	4	C	
ENG 101 or ENG 102: First-Year Composition OR			
ENG 105: Advanced First-Year Composition OR	3	C	
ENG 107 or ENG 108: First-Year Composition			
Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		
Elective	2		
⚠ Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
⚠ Maintain 2.50 GPA in Critical Tracking Courses.			
Term hours subtotal:	16-15		
Term 3 30 - 47 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ MAT 272: Calculus with Analytic Geometry III (MA) OR MAT 267: Calculus for Engineers III (MA)	4-3	C	<ul style="list-style-type: none"> <li>MAT 272 is recommended</li> <li>PHY 151 is recommended</li> <li>Take a look at <b>internship</b> or <b>research opportunities</b></li> </ul>
PHY 151: Physics II (SQ) OR PHY 131: University Physics II: Electricity and Magnetism (SQ) AND PHY 132: University Physics Laboratory II (SQ)	4	C	
Science and Society Elective	3	C	
Social-Behavioral Sciences (SB) AND Global Awareness (G)	3		
Elective	3		
⚠ Maintain 2.50 GPA in Critical Tracking Courses.			
Complete Mathematics (MA) requirement.			

Term hours subtotal: 17-16

Term 4 47 - 63 Credit Hours <b>Critical course signified by</b> 	Hours	Minimum Grade	Notes
 PHY 201: Mathematical Methods in Physics I (CS)	3	C	<ul style="list-style-type: none"> <li>PHY 252 is recommended.</li> <li>Activate your <b>Handshake account</b> and build out your profile.</li> </ul>
 PHY 252: Physics III (SQ) OR PHY 241: University Physics III AND PHY 202: Programming for Physicists	4	C	
Literacy and Critical Inquiry (L)	3		
Complete 2 courses:			
Elective	6		
 Maintain 2.50 GPA in Critical Tracking Courses.			




Term hours subtotal: 16

Term 5 63 - 78 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 PHY 302: Mathematical Methods in Physics II	3	C	<ul style="list-style-type: none"> <li>Prepare for a <b>career or graduate school</b></li> <li>Create a first draft <b>resume</b>.</li> </ul>
 PHY 310: Classical Particles, Fields, and Matter I	3	C	
 PHY 314: Quantum Physics I	3	C	
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB)	3		
Upper Division Elective	3		



Term hours subtotal: 15

Term 6 78 - 93 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 PHY 311: Classical Particles, Fields, and Matter II	3	C	<ul style="list-style-type: none"> <li>Explore <b>graduate programs</b></li> <li>Prepare for the <b>graduate school exams</b></li> </ul>
 PHY 315: Quantum Physics II	3	C	
 PHY 334: Advanced Laboratory I (L)	3	C	
Upper Division Science and Society Elective	3	C	
Upper Division Elective OR PHY 484: Internship	3		
 Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).			

Term hours subtotal: 15

Term 7 93 - 108 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 PHY 412: Classical Particles, Fields, and Matter III OR PHY 416: Quantum Physics III	3	C	<ul style="list-style-type: none"> <li>Develop your <b>professional online presence</b></li> </ul>
 PHY 441: Statistical and Thermal Physics	3	C	
PHY 333: Electronic Circuits and Measurements OR PHY 465: Advanced Laboratory II	3	C	
Upper Division Elective	3		
Elective	3		

Term hours subtotal: 15

Term 8 108 - 120 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 PHY Upper Division Elective	3	C	<ul style="list-style-type: none"> <li>Apply for <b>full-time careers</b></li> </ul>
Complete 3 courses:			
Elective	9		

Term hours subtotal: 12

- 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/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)

**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 2022 - 2023 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.