

2024 - 2025 Major Map

Applied Physics, BS

School/College: College of Integrative Sciences and Arts
LSAPHYBS

Term 1 0 - 13 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 265: Calculus for Engineers I (MATH OR MA)	3	C	- ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students. - Select your career interest communities and play me3@ASU.
ASU 101-CLS: The ASU Experience	1		
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 (HUAD)	3		
Social and Behavioral Sciences (SOBE)	3		
Term hours subtotal:	13		
Term 2 13 - 28 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 266: Calculus for Engineers II (MATH OR MA)	3	C	Join a student club or professional organization.
 PHY 121: University Physics I: Mechanics (SCIT OR SQ) AND	4	C	
PHY 122: University Physics Laboratory I (SCIT OR SQ)			
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 (HUAD)	3		
Elective	2		
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	15		
Term 3 28 - 44 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 MAT 267: Calculus for Engineers III (MATH OR MA)	3	C	Secure a part-time job or volunteer experience.
PHY 131: University Physics II: Electricity and Magnetism (SCIT			
 OR SQ) AND PHY 132: University Physics Laboratory II (SCIT	4	C	
OR SQ)			
Global Communities, Societies and Individuals (GCSI)	3		
Complete 2 courses:	6		
Elective			
Complete Mathematics (MATH) requirement.			
Term hours subtotal:	16		
Term 4 44 - 60 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 PHY 201: Mathematical Methods in Physics I (MATH OR CS)	3	C	
 PHY 252: Physics III (SCIT OR SQ)	4	C	
Governance and Civic Engagement (CIVI)	3		
Sustainability (SUST)	3		

Elective	3		
Term hours subtotal:	16		
Term 5 60 - 75 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ PHY 302: Mathematical Methods in Physics II	3	C	
★ PHY 314: Quantum Physics I	3	C	
Upper Division Applied Physics Electives	3	C	
Quantitative Reasoning (QTRS)	3		
Upper Division Elective	3		
Term hours subtotal:	15		
Term 6 75 - 90 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ PHY 315: Quantum Physics II	3	C	
Upper Division Applied Physics Electives	3	C	
Complete 3 courses:	9		
Elective			
Term hours subtotal:	15		
Term 7 90 - 105 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ PHY 331: Principles of Modern Electromagnetism	3	C	
★ PHY 460: Numerical Methods in Modern Physics	3	C	
PHY 321: Vector Mechanics and Vibration	3	C	
Upper Division Applied Physics Electives	3	C	
Upper Division Elective	3		
Term hours subtotal:	15		
Term 8 105 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ PHY 444: Fundamentals of Nanoscience	3	C	
PHY 484: Internship OR Upper Division Elective	3		
PHY 499: Individualized Instruction	3	C	
American Institutions (AMIT)	3		
Upper Division Elective	3		
Term hours subtotal:	15		

- Connect with faculty to seek opportunities for **research**.

- Use Handshake to research **employment opportunities**.

- Gather **professional references**.
- Apply for **full-time career opportunities**.

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

Upper Division Applied Physics Electives
(Complete 9 Credit Hours)

MAT 343: Applied Linear Algebra

PHY 333: Electronic Circuits and
Measurements

PHY 361: Introductory Modern Physics

PHY 416: Quantum Physics III

PHY 456: Laser Optics

PHY 495: Project Research

- **Total Hours:** 120
- **Upper Division Hours:** 45 minimum
- **University Undergraduate Graduation Requirements**

Notes:

Mathematics Placement Assessment score determines placement in first mathematics course.

Students must complete a minimum of 12 credit hours of PHY courses offered by the College of Integrative Sciences and Arts. At least six of these 12 credits must be upper-division.

General Studies designations listed next to courses on the major map were valid for the 2024 - 2025 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.