












## 2024 - 2025 Major Map

### Applied Biological Sciences (Applied Biological Sciences), BS

School/College: College of Integrative Sciences and Arts  
TSABSABS

Term 1 0 - 14 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BIO 181: General Biology I (SCIT OR SQ)	4	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>Select your <b>Career Interest Communities</b> and play <b>me3@ASU</b>.</li> </ul>
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			
MAT 251: Calculus for Life Sciences (MATH OR MA)	3	C	
Social and Behavioral Sciences (SOBE)	3		
Term hours subtotal:	14		
Term 2 14 - 29 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 BIO 182: General Biology II (SCIT OR SG)	4	C	<ul style="list-style-type: none"> <li>Join a <b>student club</b> or professional organization.</li> </ul>
 CHM 113: General Chemistry I (SCIT OR SQ)	4	C	
ABS 100: Discovering the Professions	1	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 (HUAD)	3		
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	15		
Term 3 29 - 43 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CHM 116: General Chemistry II (SCIT OR SQ)	4	C	<ul style="list-style-type: none"> <li>Students considering graduate school or health professions should complete the PHY 111/113 and PHY 112/114 sequence. All other students will complete PHY 101 and elective hours.</li> <li>Secure a <b>part-time job</b> or <b>volunteer experience</b>.</li> </ul>
PHY 101: Introduction to Physics (SCIT OR SQ) OR PHY 111: General Physics (SCIT OR SQ) AND PHY 113: General Physics Laboratory (SCIT OR SQ)	4	C	
Applied Biological Sciences Track	3	C	
Humanities, Arts and Design (HUAD)	3		
 Complete Mathematics (MATH) requirement.			
Term hours subtotal:	14		
Term 4 43 - 59.5 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
CHM 231: Elementary Organic Chemistry (SCIT OR SQ) AND  CHM 235: Elementary Organic Chemistry Laboratory (SCIT OR SQ) OR CHM 233: General Organic Chemistry I AND CHM 237: General Organic Chemistry Laboratory I	4	C	<ul style="list-style-type: none"> <li>Students considering graduate school or health professions should complete the following: CHM 233 and CHM 237, and CHM 234 and CHM 238 (instead of CHM 231 and CHM 235).</li> <li>Students considering graduate school or health professions should complete</li> </ul>
ABS 200: Building Your Professional Self	.5	C	
Global Communities, Societies and Individuals (GCSI)	3		

Sustainability (SUST)	3
Complete 2 courses:	
Elective	6
Term hours subtotal:	16.5

PHY 112 and 114 in term 4 as part of their electives.

Term 5 59.5 - 75 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ABS 370: Ecology	3	C	
ABS 300: Career Competencies and Skills	.5	C	
Applied Biological Sciences Track	3	C	
American Institutions (AMIT)	3		
Governance and Civic Engagement (CIVI)	3		
Elective	3		
Term hours subtotal:	15.5		

- Students considering graduate school or health professions should complete CHM 234 and CHM 238 as part of their electives in this term.
- Connect with faculty to seek opportunities for research.
- Use Handshake to research employment opportunities.

Term 6 75 - 90 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ABS 311: Molecular and Cellular Biology OR ABS 314: Applied Plant Physiology OR BIO 360: Animal Physiology	3	C	
★ Upper Division Applied Biological Sciences Track	3	C	
Applied Biological Sciences Track	3	C	
Complete 2 courses:			
Upper Division Elective	6		
Term hours subtotal:	15		

Term 7 90 - 104 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ABS 350: Applied Statistics (QTRS OR CS) OR STP 420: Introductory Applied Statistics (QTRS OR CS)	3	C	
★ ABS 490: Applied Biological Sciences Seminar	1	C	
★ BIO 340: General Genetics	4	C	
Complete 2 courses:			
Upper Division Elective	6		
Term hours subtotal:	14		

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

Term 8 104 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ Complete 2 courses:			
Upper Division Applied Biological Sciences Track	6	C	
Complete 3 courses:			
Upper Division Elective	10		
Term hours subtotal:	16		

- Students select one Applied Biological Sciences Track and complete 18 hours from within that track. Nine hours must be upper division.

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

Applied Biological Sciences Health Professionals Track	Applied Biological Sciences General Biology Track	Physician Assistant Track
ABS 302: Ethical and Policy Issues in Biology	ABS Elective	ABS Elective
	BIO Elective	BCH 361: Advanced Principles of Biochemistry

ABS 312: Structure and Function	BCH Elective	BIO 201: Human Anatomy and Physiology I (SCIT OR SG) AND BIO 202: Human Anatomy and Physiology II (SCIT OR SG)
ABS 318: Unseen Life on Earth	MIC Elective	MIC 205: Microbiology (SCIT OR SG) AND MIC 206: Microbiology Laboratory (SCIT OR SG)
ABS 319: Food, Health and Human Biology		
ABS 355: Ecology and Adaptations of Vertebrates		
ABS 394: Medicine and Culture		
ABS 417: Comparative Immunology		
ABS 484: Internship		
ABS 494: Anatomy Practicum		
ABS 494: Emerging Infections & Epidemics		
ABS 494: Natural Products & Drug Discovery		
BCH 361: Advanced Principles of Biochemistry AND BCH 367: Elementary Biochemistry Laboratory		
BIO 201: Human Anatomy and Physiology I (SCIT OR SG)		
BIO 202: Human Anatomy and Physiology II (SCIT OR SG)		
BIO 351: Developmental Biology		
MIC 205: Microbiology (SCIT OR SG) AND MIC 206: Microbiology Laboratory (SCIT OR SG)		
SPA 118: Basic Spanish for Health Care Professionals		
Optometry Track	Pharmacy Track	
ABS Elective	ABS Elective	
BCH 361: Advanced Principles of Biochemistry	BIO 201: Human Anatomy and Physiology I (SCIT OR SG) AND BIO 202: Human Anatomy and Physiology II (SCIT OR SG)	
BIO 201: Human Anatomy and Physiology I (SCIT OR SG) AND BIO 202: Human Anatomy and Physiology II (SCIT OR SG)	COM 100: Introduction to Human Communication (SOBE OR SB) or COM 225: Public Speaking (CIVI OR L)	
MIC 205: Microbiology (SCIT OR SG) AND MIC 206: Microbiology Laboratory (SCIT OR SG)	ECN 211: Macroeconomic Principles (SOBE OR SB) or ECN 212: Microeconomic Principles (SOBE OR SB)	
PSY 101: Introduction to Psychology (SOBE OR SB)	MIC 205: Microbiology (SCIT OR SG) AND MIC 206: Microbiology Laboratory (SCIT OR SG)	

- **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 science courses offered by the College of Integrative Sciences and Arts. Select from ABS, CHM, BIO, PHY, and MIC prefixes.

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.