

2024 - 2025 Major Map

Applied Biological Sciences (Natural Resource Ecology), BS

School/College: College of Integrative Sciences and Arts
LSABSNRBS

Term 1 0 - 14 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ ASU 101-CLS: The ASU Experience	1		<ul style="list-style-type: none"> ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students Select your Career Interest Communities and play me3@ASU.
⚠ BIO 181: General Biology I (SCIT OR SQ)	4	C	
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 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"> Join a student club or professional organization.
⚠ 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 ENG 107 or ENG 108: First-Year Composition	3	C	
Humanities, Arts and Design (HUAD)	3		
⚠ Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	15		
Term 3 29 - 46 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"> Students in the Wildlife Track should take ABS 274. Students in the Rangelands/Watershed Track should take ABS 225/226. Secure a part-time job or volunteer experience.
ABS 270: Sustainable Biological Systems	3	C	
ABS 274: Introduction to Wildlife Management OR ABS 225: Soils (SQ) AND ABS 226: Soils Laboratory (SQ)	4	C	
Global Communities, Societies and Individuals (GCSI)	3		
Elective	3		
⚠ Complete Mathematics (MATH) requirement.			
Term hours subtotal:	17		
Term 4 46 - 59.5 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ ABS 207: Applied Plant Taxonomy	3	C	<ul style="list-style-type: none"> Students considering graduate school or health professions should complete the Organic Chemistry Sequence of both CHM 233/237 and CHM 234/238
ABS 200: Building Your Professional Self	.5	C	
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	

Sustainability (SUST)	3
Elective	3
Term hours subtotal:	13.5

sequence, using CHM 234/238 in place of electives. All other students will complete CHM 231/235.

Term 5 59.5 - 76 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ABS 350: Applied Statistics (QTRS OR CS)	3	C	<ul style="list-style-type: none"> Students considering graduate school should complete the PHY 111/113 and PHY 112/114 sequence, using PHY 112/114 in place of electives. All other students can complete PHY 101. Connect with faculty to seek opportunities for research.
★ ABS 370: Ecology	3	C	
★ Upper Division Natural Resource Ecology Track	3	C	
ABS 300: Career Competencies and Skills	.5	C	
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	
Humanities, Arts and Design (HUAD)	3		
Term hours subtotal:	16.5		

Term 6 76 - 91 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	<ul style="list-style-type: none"> Students in the Wildlife Track should take ABS 355. Students in the Rangelands/Watershed Track should take ABS 430. Use Handshake to research employment opportunities.
★ ABS 355: Ecology and Adaptations of Vertebrates OR ABS 430: Watershed Management	3	C	
Complete 2 courses:	6	C	
Upper Division Natural Resource Ecology Track			
Governance and Civic Engagement (CIVI)	3		
Term hours subtotal:	15		

Term 7 91 - 105 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ABS 490: Applied Biological Sciences Seminar	1	C	<ul style="list-style-type: none"> Gather professional references. Apply for full-time career opportunities.
★ BIO 340: General Genetics	4	C	
★ Upper Division Natural Resource Ecology Track	3	C	
Complete 2 courses:	6		
Upper Division Elective			
Term hours subtotal:	14		

Term 8 105 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ABS 479: Ecosystem Management and Planning (L)	3	C	
ABS 484: Internship OR Upper Division Elective	3		
American Institutions (AMIT)	3		
Upper Division Elective	4		
Elective	2		
Term hours subtotal:	15		

- Students select one of three Natural Resource Ecology Tracks and complete 12 hours from within that track.

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

General Track (12 Credits)	Wildlife Track (12 Credits)	Rangeland and Watershed Track (12 Credits)
ABS 312: Structure and Function	ABS 376: Wildlife Ecology	ABS 368: Plant Propagation

ABS 318: Unseen Life on Earth	ABS 378: Animal Nutrition	ABS 376: Wildlife Ecology
ABS 376: Wildlife Ecology	ABS 384: Natural Resources Measurements	ABS 380: Restoration and Wildlife Plants
ABS 378: Animal Nutrition	ABS 470: Life History of Mammals	ABS 384: Natural Resources Measurements
ABS 380: Restoration and Wildlife Plants	ABS 472: Applied Herpetology	ABS 434: Soil Ecology
ABS 384: Natural Resources Measurements	ABS 473: Applied Ornithology	ABS 440: Ecological Restoration Techniques
ABS 417: Comparative Immunology	ABS 475: Habitat Management for Small Wildlife	ABS 441: Ecological Restoration Practicum
ABS 434: Soil Ecology	ABS 475: Habitat Management for Small Wildlife	ABS 474: Riparian Ecosystem Management
ABS 440: Ecological Restoration Techniques	ABS 485: GIS in Natural Resources	ABS 476: Large Mammal Habitat Ecology
ABS 441: Ecological Restoration Practicum AND ABS 470: Life History of Mammals	ABS 486: Introduction to Remote Sensing	ABS 481: Riparian and Wetland Restoration
ABS 472: Applied Herpetology	ABS 494: Applied Populations and Habitat Ecology	ABS 485: GIS in Natural Resources
ABS 473: Applied Ornithology	ABS 494: Emerging Infections & Epidemics	ABS 486: Introduction to Remote Sensing
ABS 474: Riparian Ecosystem Management		ABS 494: Applied Populations and Habitat Ecology
ABS 485: GIS in Natural Resources		ABS 494: Rangeland Ecosystem Management
ABS 486: Introduction to Remote Sensing		
ABS 489: Undergraduate Research		
ABS 494: Applied Populations and Habitat Ecology		
ABS 494: Emerging Infections & Epidemics		

- **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.