







## 2022 - 2023 Major Map




### Biological Sciences (Conservation Biology and Ecology), BS



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


Term 1 0 - 15 Credit Hours Critical course signified by !	Hours	Minimum Grade	Notes
! BIO 181: General Biology I (SQ)	4	C	<ul style="list-style-type: none"> <li>LIA 101, ASU 101, or other First-Year Seminar required of all first-year students</li> <li>Students transferring General Statistics (STP 226 or PSY 230) will fulfill STP 231 requirement</li> <li>Select your <b>career interest area</b> and play <b>me3@ASU</b>.</li> </ul>
! LIA 101: Student Success in The College of Liberal Arts and Sciences	1		
CHM 113: General Chemistry I (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	
STP 231: Statistics for Life Science (CS)	3	C	
Term hours subtotal:	15		
Term 2 15 - 30 Credit Hours Critical course signified by !	Hours	Minimum Grade	Notes
! BIO 182: General Biology II (SG)	4	C	<ul style="list-style-type: none"> <li>Join a student <b>organization</b></li> <li>Create a resume and <b>Handshake</b> account with the Career &amp; Professional Development Center</li> <li>Explore extracurriculars (i.e. service learning, community service, internships, research, student involvement, shadowing, etc.)</li> <li>Attend a <b>Pre-Health 101 Session</b></li> <li>Students transferring Calculus (MAT 270 or MAT 210) will fulfill MAT 251 requirement</li> </ul>
CHM 116: General Chemistry II (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 (MA)	3	C	
Elective	1		
! Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	15		
Term 3 30 - 45 Credit Hours Critical course signified by !	Hours	Minimum Grade	Notes
! BIO 320: Fundamentals of Ecology	3	C	<ul style="list-style-type: none"> <li>Pre-health students should take CHM 233 and CHM 237 as their Physical Science requirement course this term. See the pre-health <b>website</b> for more information</li> <li>If CHM 233 and 237 are taken, then CHM 234 and 238 must be taken the following semester</li> <li>It is not recommended to take more than two lab courses in a term.</li> <li>Explore extracurriculars (i.e. service learning, community service, internships, research, student involvement, shadowing, etc.)</li> <li>Attend a <b>Study Abroad 101 Session</b></li> <li>Explore <b>minors or certificates</b></li> </ul>
Physical Science Requirement Course	3-4	C	
Science and Society Elective	3	C	
Humanities, Arts and Design (HU) AND Historical Awareness (H)	3		
Literacy and Critical Inquiry (L)	3		
! Complete First-Year Composition requirement.			
! Complete Mathematics (MA) requirement.			
Term hours subtotal:	15-16		
		Minimum	

Term 4 45 - 61 Credit Hours <b>Critical course signified by</b> 	Hours	Grade	Notes
 BIO 340: General Genetics	4	C	<ul style="list-style-type: none"> <li>• Meet with the <b>Career &amp; Professional Development Center</b> to learn how to develop professional skills</li> <li>• Explore extracurriculars (i.e. service learning, community service, internships, research, student involvement, shadowing, etc.)</li> <li>• Pre-health students should take CHM 234 and CHM 238 this term instead of an elective. See the pre-health <b>website</b> for more information</li> <li>• If CHM 233 and 237 are taken, then CHM 234 and 238 must be taken the following semester</li> </ul>
Humanities, Arts and Design (HU) AND Global Awareness (G)	3		
Social-Behavioral Sciences (SB)	3		
Complete 2 courses:			
Elective	6		
Term hours subtotal:	16		

Term 5 61 - 76 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 BIO 322: Conservation of Biodiversity	3	C	<ul style="list-style-type: none"> <li>• BIO 322 will be used to satisfy the upper-division Science and Society requirement for The College</li> <li>• Pre-health students should take PHY 111 and 113 instead of an elective this term. See the pre-health <b>website</b> for more information</li> <li>• Meet with your <b>advisor</b> to discuss ways to maximize your remaining time at ASU (i.e. pre-health; 4+1 Masters Programs; study abroad)</li> </ul>
 BIO 345: Evolution	3	C	
 Upper Division Human Dimensions of Conservation and Ecology Course	3	C	
Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C)	3		
Elective	3		
Term hours subtotal:	15		

Term 6 76 - 91 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 Upper Division Conservation Biology and Ecology Field Methods Course	3	C	<ul style="list-style-type: none"> <li>• Conservation Biology and Ecology courses teach students field (outdoor) and laboratory methods that are commonly used in conservation biology and ecology.</li> <li>• Pre-health students should take PHY 112 and 114 instead of an elective this term. See the pre-health <b>website</b> for more information</li> <li>• Use Handshake to research <b>employment opportunities</b></li> </ul>
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB)	3		
Complete 2 courses:			
Upper Division Elective	6		
Elective	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 91 - 106 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 Upper Division Advanced Ecology Course	3	C	<ul style="list-style-type: none"> <li>• Explore or apply for <b>full-time career opportunities</b> or <b>graduate school</b></li> <li>• Meet with your <b>advisor</b> to verify remaining degree requirements have been met prior to Term 8.</li> </ul>
Quantitative & Spatial Analysis Course	3-4	C	
Upper Division Literacy and Critical Inquiry (L)	3		
Complete 2 courses:			
Elective	6		
Term hours subtotal:	15-16		

Term 8 106 - 120 Credit Hours <b>Necessary course signified by</b> 	Hours	Minimum Grade	Notes
 Upper Division Advanced Ecology, Biodiversity, Field or Research Course	3-4	C	<ul style="list-style-type: none"> <li>• Continue to apply for <b>full-time career opportunities</b> or <b>graduate school</b>.</li> </ul>
 Upper Division Advanced Human Dimensions of Conservation and Ecology Course	3	C	

Complete 2 courses:  
Upper Division Elective

5

Elective

3

Term hours subtotal: 14-15

- 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)

Human Dimensions of Conservation and Ecology	Conservation Biology and Ecology Field Methods	Physical Science Requirement Courses
BIO 304: Plants and Civilization (L) or ENV 302: Plants and Civilization (L)	BIO 405: Sonoran Desert Field Botany	CHM 231: Elementary Organic Chemistry (SQ) AND CHM 235: Elementary Organic Chemistry Laboratory (SQ)
BIO 324: Environmental Ethics (HU) or PHI 310: Environmental Ethics (HU)	BIO 407: Novel Ecosystems	GIS 205: Geographic Information Science I (CS)
BIO 412: Conservation in Practice	BIO 410: Techniques in Conservation Biology and Ecology (L)	GIS 211: Geographic Information Science II (CS)
BIO 434: People and Nature: Ecosystem Services or SOS 434: People and Nature: Ecosystem Services	BIO 484: Internship	GLG 101: Introduction to Geology I (Physical) (SQ) AND GLG 103: Introduction to Geology I: Laboratory (SQ)
	BIO 494: Discovering Biodiversity	GLG 327: Earth's Critical Zone or SOS 374: Earth's Critical Zone
		GPH 111: Introduction to Physical Geography (SQ)
		PHY 101: Introduction to Physics (SQ) or PHY 111: General Physics (SQ) AND PHY 113: General Physics Laboratory (SQ)
Quantitative & Spatial Analysis Courses	Advanced Ecology	Advanced Human Dimensions of Conservation and Ecology
BIO 411: Quantitative Methods in Conservation and Ecology	BIO 421: Landscape Ecology or SOS 421: Landscape Ecology	BIO 304: Plants and Civilization (L) or ENV 302: Plants and Civilization (L)
BIO 415: Statistical Models for Biology (CS)	BIO 422: Ecosystem Ecology	BIO 324: Environmental Ethics (HU) or PHI 310: Environmental Ethics (HU)
GIS 311: Geographic Information Science III (CS)	BIO 423: Population and Community Ecology	BIO 394: The Global Water Classroom
GIS 470: Advanced Statistics for Geography and Planning (CS)		BIO 412: Conservation in Practice
GIS 471: Spatial Statistics for Geography and Planning		BIO 434: People and Nature: Ecosystem Services or SOS 434: People and Nature: Ecosystem Services
SOS 212: Systems, Dynamics and Sustainability		BIO 494: Society and Natural Resource Management
		JUS 444: Environment and Justice (L & C) or FIS 444: Environment and Justice (L & C)
		PRM 370: Public Lands Management

PRM 380: Wilderness and Parks in America  
(SB & H)

REL 349: Nature, Sustainability and  
Religion or JST 349: Nature, Sustainability  
and Religion or SOS 349: Nature,  
Sustainability and Religion

SOS 310: Equity, Justice and Sustainability

SOS 321: Policy and Governance in  
Sustainable Systems

SOS 325: The Economics of Sustainability

Advanced Ecology, Biodiversity, Field or  
Research Course

ABS 376: Wildlife Ecology

ABS 380: Restoration and Wildlife Plants

ABS 470: Life History of Mammals

ABS 476: Big Game Habitat Management

ABS 481: Riparian and Wetland Restoration

ASM 443: Primatology

BIO 303: Plant Diversity and Evolution (L or  
SG)

BIO 313: The Flora of Arizona

BIO 325: Oceanography

BIO 331: Animal Behavior

BIO 370: Vertebrate Zoology

BIO 385: Comparative Invertebrate Zoology

BIO 386: General Entomology

BIO 405: Sonoran Desert Field Botany

BIO 410: Techniques in Conservation  
Biology and Ecology (L)

BIO 419: Physiological Plant Ecology

BIO 421: Landscape Ecology

BIO 430: Plant Geography or GPH 422:  
Plant Geography

BIO 436: Sociobiology and Behavioral  
Ecology

BIO 461: Comparative Animal Physiology

BIO 492: Honors Directed Study

BIO 495: Undergraduate Research

SOS 424: Dynamic Modeling in Social and  
Ecological Systems

**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.