

2024 - 2025 Major Map

Earth and Environmental Sciences, BA

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

This program's name has changed effective Fall 2024. The previous name was Earth and Environmental Studies.

Term 1 - A 0 - 7 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ Mathematics (MATH)	3		<ul style="list-style-type: none"> ASU 101 or college-specific equivalent First-Year Seminar is required for all first-year students. Students who place into MAT 210, MAT 251 or MAT 265 should take that course in Term 1 to complete the MA requirement.
ASU 101-LA: 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			
Term hours subtotal:	7		

Term 1 - B 7 - 14 Credit Hours	Hours	Minimum Grade	Notes
GLG 110: Dangerous World (SCIT OR SQ & G) AND GLG 111: Dangerous World Laboratory (SCIT OR SQ)	4	C	<ul style="list-style-type: none"> View ASU Online first-year student registration information here.
Social and Behavioral Sciences (SOBE)	3		
Term hours subtotal:	7		

Term 2 - A 14 - 20 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ MAT 170: Precalculus (MATH OR MA) OR MAT 210: Brief Calculus (MATH OR MA) OR MAT 251: Calculus for Life Sciences (MATH OR MA) OR MAT 265: Calculus for Engineers I (MATH OR MA)	3	C	<ul style="list-style-type: none"> Join a student club or professional organization.
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			
Term hours subtotal:	6		

Term 2 - B 20 - 28 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
GLG 108: Water Planet (SCIT OR SQ)	4	C	<ul style="list-style-type: none"> ASU Language Placement: Only true beginners are eligible for 101-level courses. All other students are required to take a placement exam, regardless of prior credit earned.
Second Language: Requirement satisfied through the following:			
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
⚠ Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	8		

Term 3 - A 28 - 35 Credit Hours Critical course signified by ⚠	Hours	Minimum Grade	Notes
⚠ CHM 101: Introductory Chemistry (SCIT OR SQ) OR CHM 107: Chemistry and Society (SCIT OR SQ) AND CHM 108: Chemistry and Society Laboratory (SCIT OR SQ) OR CHM 113: General	4	C	<ul style="list-style-type: none"> Review the Career Guide for ASU Online Students to learn about available career planning resources.



Chemistry I (SCIT OR SQ) OR CHM 114: General Chemistry for Engineers (SCIT OR SQ)


SES 220: Biology of a Changing Earth



3

C

Term hours subtotal: 7

Term 3 - B 35 - 42 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
GIS 205: Geographic Information Science I (QTRS OR CS)	3	C	
Second Language: Requirement satisfied through the following:			
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
 Complete First-Year Composition requirement.			
Complete Mathematics (MATH) requirement.			
Term hours subtotal:	7		

Term 4 - A 42 - 51 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
GIS 270: Statistics for Geography and Planning OR STP 226: Elements of Statistics (QTRS OR CS) OR STP 231: Statistics for Life Science (QTRS OR CS)	3	C	<ul style="list-style-type: none"> • Register for a Handshake account and participate in virtual career advising.
Humanities, Arts and Design (HUAD)	3		
Sustainability (SUST)	3		
Term hours subtotal:	9		

Term 4 - B 51 - 58 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 SES 225: Global Biogeochemical Cycles	3	C	
Second Language: Requirement satisfied through the following:			
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
Term hours subtotal:	7		

Term 5 - A 58 - 67 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 GLG 325: Oceanography	3	C	
Humanities, Arts and Design (HUAD)	3		
Upper Division Elective	3		
Term hours subtotal:	9		

Term 5 - B 67 - 74 Credit Hours	Hours	Minimum Grade	Notes
Second Language: Requirement satisfied through the following:			
* Completion of a language course at the intermediate level (202 or equivalent), including American Sign Language IV.	4	C	
Global Communities, Societies and Individuals (GCSI)	3		
Term hours subtotal:	7		

Term 6 - A 74 - 83 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 GLG 305: Dynamic Earth	3	C	<ul style="list-style-type: none"> • Develop your professional online presence. • The list of approved major track electives along with their prerequisites may be viewed on the SESE website. At least two of the major track electives must be 400-level.
Upper Division Earth and Environmental Sciences (EES) Major Track Electives	3	C	
Upper Division Elective	3		
Term hours subtotal:	9		

		Minimum	
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Term 6 - B 83 - 89 Credit Hours	Hours	Grade	Notes
Upper Division Earth and Environmental Sciences (EES) Major Track Electives	3	C	<ul style="list-style-type: none"> • Use Handshake to research employment opportunities. • The list of approved major track electives along with their prerequisites may be viewed on the SESE website. At least two of the major track electives must be 400-level.
American Institutions (AMIT)	3		
Term hours subtotal:	6		

Term 7 - A 89 - 98 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ GLG 327: Earth's Critical Zone	3	C	<ul style="list-style-type: none"> • Apply for full-time career opportunities. • The list of approved major track electives along with their prerequisites may be viewed on the SESE website. At least two of the major track electives must be 400-level.
Upper Division Earth and Environmental Sciences (EES) Major Track Electives	3	C	
Upper Division Elective	3		
Term hours subtotal:	9		

Term 7 - B 98 - 104 Credit Hours	Hours	Minimum Grade	Notes
Upper Division Earth and Environmental Sciences (EES) Major Track Electives	3	C	<ul style="list-style-type: none"> • The list of approved major track electives along with their prerequisites may be viewed on the SESE website. At least two of the major track electives must be 400-level.
Governance and Civic Engagement (CIVI)	3		
Term hours subtotal:	6		

Term 8 - A 104 - 113 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ GLG 464: Solving Environmental Problems	3	C	<ul style="list-style-type: none"> • GLG 464 is a session C course (15 weeks long). • The list of approved major track electives along with their prerequisites may be viewed on the SESE website. At least two of the major track electives must be 400-level.
Upper Division Earth and Environmental Sciences (EES) Major Track Electives	3	C	
Upper Division Elective	3		
Term hours subtotal:	9		

Term 8 - B 113 - 120 Credit Hours	Hours	Minimum Grade	Notes
Complete 2 courses:	6		
Upper Division Elective			
Elective	1		
Term hours subtotal:	7		

- For the Earth and Environmental Sciences Track Electives, students are encouraged to choose a track, but they also have the option to choose any combination of courses across multiple tracks. Regardless of the chosen track, at least two of the Earth and Environmental Sciences Track Electives must be 400-level.
- Each of the focused tracks has overlap with a related certificate program that students can choose to pursue along with the chosen track. Students should discuss this option and how to add a certificate with their academic advisor.

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

Climate/Environmental Change Track

Earth Resources Track

Earth and Environmental Sciences General Elective Track		
<p>This track includes all of the courses in the following tracks: 1) Climate/Environmental Change, 2) Earth Resources, 3) Environmental Education, 4) Environmental Management, 5) Environmental Policy and 6) Sustainability. While students are encouraged to pick a focused track, students may choose not to focus on one of the above tracks and may select courses across multiple tracks. Of the five major elective courses required, at least two of the courses must be 400-level.</p>	ABS 350: Applied Statistics (QTRS OR CS)	ABS 350: Applied Statistics (QTRS OR CS)
	GIS 470: Advanced Statistics for Geography and Planning (QTRS OR CS)	GIS 311: Geographic Information Science III (QTRS OR CS)
	GPH 314: Global Change (SUST OR HU & G)	GIS 322: Programming Principles in GIS II
	GPH 414: Climate Change (SUST OR G)	GIS 341: Cartography and Georepresentation (QTRS OR CS)
	PUP 442: Environmental Planning	GIS 470: Advanced Statistics for Geography and Planning (QTRS OR CS)
	SOS 314: Basic Energy Science	GPH 314: Global Change (SUST OR HU & G)
	SOS 320: Society and Sustainability (SOBE OR L or SB)	GPH 381: Geography of Natural Resources (SUST OR G)
	SOS 324: Sustainable Energy Technology and Systems	GPH 414: Climate Change (SUST OR G)
	SOS 326: Sustainable Ecosystems	PUP 442: Environmental Planning
	STP 420: Introductory Applied Statistics (QTRS OR CS)	SOS 320: Society and Sustainability (SOBE OR L or SB)
		SOS 324: Sustainable Energy Technology and Systems
		SOS 325: The Economics of Sustainability
		STP 420: Introductory Applied Statistics (QTRS OR CS)
Environmental Education Track	Environmental Management Track	Environmental Policy Track
ABS 302: Ethical and Policy Issues in Biology	ABS 350: Applied Statistics (QTRS OR CS)	ABS 302: Ethical and Policy Issues in Biology
BIO 324: Environmental Ethics (SUST OR HU) or PHI 310: Environmental Ethics (SUST OR HU)	BIO 324: Environmental Ethics (SUST OR HU) or PHI 310: Environmental Ethics (SUST OR HU)	ABS 350: Applied Statistics (QTRS OR CS)
GIS 470: Advanced Statistics for Geography and Planning (QTRS OR CS)	GIS 311: Geographic Information Science III (QTRS OR CS)	BIO 324: Environmental Ethics (SUST OR HU) or PHI 310: Environmental Ethics (SUST OR HU)
GPH 314: Global Change (SUST OR HU & G)	GIS 322: Programming Principles in GIS II	GIS 470: Advanced Statistics for Geography and Planning (QTRS OR CS)
GPH 381: Geography of Natural Resources (SUST OR G)	GIS 341: Cartography and Georepresentation (QTRS OR CS)	GPH 314: Global Change (SUST OR HU & G)
GPH 414: Climate Change (SUST OR G)	GIS 470: Advanced Statistics for Geography and Planning (QTRS OR CS)	GPH 414: Climate Change (SUST OR G)
PUP 442: Environmental Planning	GPH 314: Global Change (SUST OR HU & G)	PUP 442: Environmental Planning
SCN 300: Foundations of Environmental Education	GPH 381: Geography of Natural Resources (SUST OR G)	SOS 315: Energy Policy
SCN 310: Biodiversity Conservation: An Educational Inquiry	GPH 414: Climate Change (SUST OR G)	SOS 320: Society and Sustainability (SOBE OR L or SB)
SCN 401: Sustainability Science, Technology, and Society	PUP 301: Introduction to Urban Planning (L)	SOS 321: Policy and Governance in Sustainable Systems
STP 420: Introductory Applied Statistics (QTRS OR CS)	PUP 442: Environmental Planning	SOS 323: Sustainable Urban Dynamics
	STP 420: Introductory Applied Statistics (QTRS OR CS)	SOS 324: Sustainable Energy Technology and Systems
		STP 420: Introductory Applied Statistics (QTRS OR CS)

Sustainability Track

ABS 350: Applied Statistics (QTRS OR CS)

GIS 470: Advanced Statistics for Geography and Planning (QTRS OR CS)

GPH 314: Global Change (SUST OR HU & G)

GPH 414: Climate Change (SUST OR G)

PUP 442: Environmental Planning

SCN 401: Sustainability Science, Technology, and Society

SOS 300: Advanced Concepts and Integrated Approaches in Sustainability

SOS 310: Equity, Justice and Sustainability

SOS 314: Basic Energy Science

SOS 315: Energy Policy

SOS 320: Society and Sustainability (SOBE OR L or SB)

SOS 321: Policy and Governance in Sustainable Systems

SOS 323: Sustainable Urban Dynamics

SOS 324: Sustainable Energy Technology and Systems

SOS 325: The Economics of Sustainability

SOS 326: Sustainable Ecosystems

SOS 327: Sustainable Food & Farms

STP 420: Introductory Applied Statistics (QTRS OR CS)

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

Notes:

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.

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.