

B.S. in Earth and Environmental Science Ecosystem Science Emphasis

Bachelor Degree Requirements:

☐ IR (BIOL 3460)

BIOL 3410

BIOL 3460

BIOL 5490

IMPORTANT INFORMATION TO REMEMBER

General Education Requirements:

Use this sheet with your Degree Audit to schedule your courses in a logical and functional sequence. YOU are responsible for ensuring that ALL requirements are met for the major AND that you have fulfilled ALL university requirements. Pay special attention when repeating courses and class time conflicts. Students must complete a minimum of 40 credit hours of upper division (3000+ level courses) and a minimum of 120 overall credit hours. Up to date information can be found in the catalog: https://catalog.utah.edu/programs/EESBS

☐ LS (BIOL 1120)

WRTG 1010 WRTG 2010	<u> </u>	10)	
Earth and En	vironmental Science Co	re	
CHEM 1210 General Chem 1 (F/S/Su) 4			
CHEM 1215	General Chem 1 Lab (F/S/Su)	1	
CHEM 1220	General Chemistry 2 (F/S/Su)	4	
CHEM 1225	General Chem 2 Lab (F/S)	1	
PHYS 2210	Phys for Sci & Eng 1 (F/S/Su)	4	
PHYS 2220	Phys for Sci & Eng 2 (F/S/Su)	4	
MATH 1210	Calculus I (F/S/Su)	4	
MATH 1220	Calculus II (F/S/Su)	4	
BIOL 1120	Intro to Earth System Science (F)	3	
ATMOS 3000	Professional Development in Atmospheric Sciences (F)	2	
Complete Science	ce Research Initiative Participation	on	
SCI 1500 Interdisciplinary Principles of Scientific Inquiry			
SCI 2715	SRI Undergraduate Research **Earn at least 2 credits**	2	
Complete ONE of the following			
ATMOS 5340	Environmental Programming and Statistics (F)	3	
GEO 3400	Computational Methods (F)	3	
BIOL 3715	Biol Data Analysis & Visualization (S)	3	
MATH 4100	Intro to Data Science	3	

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Ecosyste	m Science Emphasis Core	
BIOL 1620	Princ of Biol II Lecture (F/S)	4
BIOL 1625	Princ of Biol II Lab (F/S)	1

Ecology and Evolution (F/S)

Ecosystem Ecology (S)

Global Environmental Issues (F)

3

3

3

Ecosystem Science STEM Electives (Earn at least 9 credits)			
	BIOL 3270 Microbial Ecosystems 3		
	BIOL 3340 Intro to Plant Biology (S)		3
BIOL 3470 Conservation Biology (S) 3		3	
	BIOL 5350	Ornithology (F)	3
BIOL 5370 Mammalogy (S) 3		3	
	BIOL 5425 Mycology (F) 4		4
	BIOL 5440 Urban Ecology (F) 3		
	BIOL 5460 Plant Ecology (F) 3		
	BIOL 5495 Biophysical Ecology 4		4



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Broadening STEM Electives (Earn at least 9 credits; 6 credits must be 3000+ level)

3000+ level)			
ASTR 3850	Dark Sky Studies: Lightscapes (F)		
ATMOS 1000	Secrets of the Greatest Snow on Earth (S)	3	
ATMOS 1010	Severe and Unusual Weather (F/S/SU)	3	
ATMOS 1020	Climate Change (F/S)	3	
ATMOS 3100	Atmospheric Chemistry (S)	3	
ATMOS 3200	Mountain Weather and Climate (S)	3	
ATMOS 5000	Intro to Atmospheric Science (F)	3	
ATMOS 5400	The Climate System (F)	3	
GEO 1100	Evolving Earth (F/S)	3	
GEO 3300	The Water Planet (S)	3	
GEO 2080	The Oceans (S)	3	
GEO 3300	The Water Planet (S)	3	
GEO 5680	The Carbon Cycle (F even)	3	
GEO 5650	Hydrology (F)	3	
GEOG 3110	Intro to Remote Sensing	3	
GEOG 5110	Environmental Analysis Through Remote Sensing	3	
GEOG 5120	Advanced Optical Remote Sensing	3	
GEOG 5130	Advanced Active Remote Sensing	3	
GEOG 5215	Climate Change Impacts	3	
	ATMOS 1000 ATMOS 1010 ATMOS 1020 ATMOS 3100 ATMOS 3200 ATMOS 5000 ATMOS 5400 GEO 1100 GEO 3300 GEO 2080 GEO 3300 GEO 5680 GEO 5650 GEOG 5110 GEOG 5110 GEOG 5120 GEOG 5130	ASTR 3850 Dark Sky Studies: Lightscapes (F) ATMOS 1000 Secrets of the Greatest Snow on Earth (S) ATMOS 1010 Severe and Unusual Weather (F/S/SU) ATMOS 1020 Climate Change (F/S) ATMOS 3100 Atmospheric Chemistry (S) ATMOS 3200 Mountain Weather and Climate (S) ATMOS 5000 Intro to Atmospheric Science (F) ATMOS 5400 The Climate System (F) GEO 1100 Evolving Earth (F/S) GEO 3300 The Water Planet (S) GEO 2080 The Oceans (S) GEO 3300 The Water Planet (S) GEO 5680 The Carbon Cycle (F even) GEO 5650 Hydrology (F) GEOG 3110 Intro to Remote Sensing GEOG 5120 Advanced Optical Remote Sensing GEOG 5130 Advanced Active Remote Sensing	

Field/Lab Courses (Earn at least 6 credits)

(Earn at least 6 credits)			
	ATMOS 5050	Environmental Instrumentation (F)	3
	BIOL 2355	Field Botany (Su)	2
	BIOL 3485	Conservation Biol Field Lab (S)	1
	BIOL 5355	Ornithology Field Lab (F)	1
	BIOL 5425	Mycology (F even)	4
	BIOL 5455	Desert Field Ecology (F)	3
	BIOL 5465	Plant Ecology Lab	3
	GEOG 3100	Intro to GIS (F/S)	4
	GEO 2500	Wasatch in the Field (F)	3
	GEO 3250	Geology of Utah (F)	3
	GEO 4500	Field Methods (S)	3
	GEO 4510	Field Geology 1 (Su)	2
	GEO 4520	Field Geology 2 (Su)	2
	GEO 4550	Field Geology for Geological Engineers	2



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SAMPLE SCHEDULE

1 st Fall Semester	Credits
BIOL 1620 + 1625	4+1
WRTG 1010	3
SCI 1500	1
BIOL 1120	3
ATMOS 3000	2
Total	14

2 nd Fall Semester	Credits
MATH 1220	4
CHEM 1220 + 1225	4+1
BIOL 3460 (IR)	3
SCI 2715	1
Al	3
Total	16

3 rd Fall Semester	Credits
Ecosystem STEM Elective	3
Broadening STEM Elective	3
PHYS 2220	4
HF	3
Total	13

4 th Fall Semester	Credits
Ecosystem STEM Elective	3
Field/Lab	3
Elective	3
Elective	4
Total	14

1 st Spring Semester	Credits
MATH 1210	4
CHEM 1210 + 1215	4+1
SCI 2715	1
WRTG 2010	3
FF	3
Total	16

2 nd Spring Semester	Credits
PHYS 2210	4
Ecosystem STEM Elective	3
CW	3
Broadening STEM	3
BF	3
Total	16

3 rd Spring Semester	Credits
Broadening STEM	3
Ecosystem STEM Elective	3
Field/Lab	3
BIOL 5490	3
DV	3
Total	15

4 th Spring Semester	Credits
Broadening STEM Elective	3
QI	4
Elective	3
Elective	3
Elective	3
Total	16