

# Environmental Resource Management B.A.

## Environmental Resource Management Major

The Environmental Resource Management major is aimed at students searching for career options in the broadly-defined 'outdoor environment' that are related to natural resources, environmental systems, and sustainable development. This program will prepare students for careers in the environmental and human management of public and private spaces across differing categories of environmental systems - from public parks and lands to conservancy units managed by governmental and other non-profit agencies and organizations. This program aims to serve those students who do not wish to pursue careers as environmental scientists *per se* from more tightly focused 'environmental science' programs.

- **STUDENTS ARE REQUIRED TO TAKE THE CORE REQUIREMENTS (31 HOURS) AND MAY CHOOSE ONLY ONE OF THE FOUR SPECIALIZATION TRACKS (30-32 HOURS).**
- Each track is composed of clusters of courses with a specific concentration, each of which has a separate hourly requirement.
- For purposes of this degree program, those prerequisite courses required by BIOL, EARTHSCI, GEOG, and RTNL for mid/upper-level courses in each Track **THAT ARE NOT INCLUDED IN THE CORE REQUIREMENTS** will normally be waived by the appropriate departments.
- The separate tracks allow students to specialize in the area of most general interest while the primary & secondary foci within each track make sure students also are exposed to a wide range of important auxiliary coursework.
- A student with a major in the interdisciplinary B.A. Environmental Resource Management: Ecosystems Track may not declare another major or minor in biology.
- By permission of the Provost's Office, students enrolled in the B.A. Environmental Resource Management major will be considered majors in all four of the participating departments.

### Core Requirements

BIOL 2051	General Biology: Organismal Diversity	4
BIOL 3100	Evolution, Ecology and the Nature of Science*	3
CHEM 1110	General Chemistry I	4
EARTHSCI 1300	Introduction to Geology	4
or		
GEOG 1210 & GEOG 1211	Planet Earth and Planet Earth Laboratory	
EARTHSCI 3330/5330	Geomorphology	4
GEOG 2260	Environmental Resource Management	3
GEOG 2410	Geographic Information Systems I	3

RTNL 4320	Financial Resource Management in Recreation, Tourism and Nonprofit Leadership	3
HIST 4170/5170	U.S. Environmental History	3
<b>Total Hours</b>		<b>31</b>

\* For students pursuing the Environmental Resource Management B.A. degree, the Department of Biology will waive the BIOL 2052 and CHEM 1120 prerequisites for enrollment into BIOL 3100.

**Encouraged Certificates:** Certificate programs that are appropriate to couple with the ERM major and help to expand specific, relevant experiences for students.

- GIS & Cartography (Department of Geography)
- Sustainability (Interdisciplinary)
- Outdoor Leadership and Education (Department of Learning, Leadership, and Community)
- Tourism (Department of Learning, Leadership, and Community)
- Nonprofit Leadership (Department of Learning, Leadership, and Community)
- Public History (Department of History)

### Ecosystems Track

A total of 31-32 hours are needed for this track. There are 11-12 hours of required courses. In addition, student select courses from all three elective categories (A, B, & C) to accumulate to a minimum of 20 hours. At least one course must be taken from each elective category.

#### Required

BIOL 4168/5168	Ecology**	4
CHEM 1120	General Chemistry II §	4
MATH 1140	Precalculus	3-4
or STAT 1772	Introduction to Statistical Methods	

**Electives: 20**

#### Category A - Content Management Related Courses (pick at least 1 course)

BIOL 4105/5105	Wildlife Ecology and Management**	
BIOL 4108/5108	Biodiversity Conservation Policy**	
BIOL 4167/5167	Conservation Biology**	
BIOL 4180/5180	Restoration Ecology**	

#### Category B - Content Related Courses (pick at least 1 course)

BIOL 3109/5109	Plants of North America	
BIOL 3160	Field Zoology of Vertebrates*	

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BIOL 3170	Entomology *
BIOL 4157/5157	Biostatistics **
BIOL 4164/5164	Mammalogy **
BIOL 4172/5172	Developmental Plant Anatomy **
GEOG 4310/5310	GIS Applications: (Variable Topic)
GEOG 4320/5320	Geographic Information Systems II
<b>Category C - Cognates (pick at least 1 course)</b>	
EARTHSCI 1200	Elements of Weather
ENGLISH 4785/5785	Applied Writing: Projects, Grants and Careers ^
GEOG 2210	Modern Climate Change: Evidence and Predictions
GEOG 2240	Natural Hazards and Disasters
GEOG 3179	Cooperative Education in Geography ^
or BIOL 3179	Cooperative Education
or EARTHSCI 3430	Internship
or RTNL 4510	Internship in Recreation, Tourism and Nonprofit Leadership
or PH 4180	Internship
GEOG 3220	Environmental Geography: Variable Topic ^
GEOG 4220/5220	Soils and Landscapes
GEOG 4270/5270	Science of Scenery
GEOG 4240/5240	The Ice Age ^
GEOG 4250/5250	Laboratory Methods in Environmental Geography
GEOG 4370/5370	Remote Sensing of the Environment
MGMT 3183	Leadership Skills ^
MGMT 3185	Project Management ^
RTNL 2120	Foundations of Tourism
RTNL 4553/5553	Principles and Practice of Adventure Programming
RTNL/HIST 4556	Outdoor Recreation History Ethics and Emerging Trends

**Total Hours** **31-32**

\* For students pursuing the Environmental Resource Management B.A. degree, the Department of Biology will waive BIOL 2052 and CHEM 1120 for BIOL 3000-level courses.

\*\*For students pursuing the Environmental Resource Management B.A. degree, the Department of Biology will waive BIOL 3140 as a prerequisite for BIOL 4000-level courses.

§ Students pursuing the Ecosystems track can take CHEM 1110 and CHEM 1120 (8 credits) OR CHEM 1130 (5 credits). CHEM 1130 is designed for students with exceptional preparation in Chemistry. Taking CHEM 1130 changes the total degree requirement from 62-63 credit hours to 59-60 credit hours.

^ These courses have additional prerequisites as follows:  
ENGLISH 4785/5785 has prerequisites of ENGLISH 2770 or consent of instructor; junior standing.  
GEOG 3220 has a prerequisite of GEOG 1120 or GEOG 1210 or GEOG 2210 or GEOG 1110 or consent of instructor.

GEOG 4240/5240 has prerequisites of GEOG 1210; GEOG 2210; EARTHSCI 1300; or consent of instructor; junior standing.  
MGMT 3183 has a prerequisite of MGMT 3965/5965.  
GEOG 3179 has prerequisites of 15 hours of geography at UNI; cumulative GPA of 2.50; junior standing; consent of department.  
RTNL 4320 has prerequisites of three (3) credit hours of RTNL 31XX; junior standing. For students pursuing the Environmental Resource Management major, Department of Health, Recreation and Community Services will waive the prerequisites of 3 hours of RTNL 31XX.  
RTNL 4510 has prerequisites of senior standing; consent of Internship Coordinator and a corequisite of RTNL 4520. For students pursuing the Environmental Resource Management major, Department of Health, Recreation and Community Services will waive this corequisite.  
PH 4180 has prerequisites of PH 3170; senior standing; 2.50 cumulative GPA; consent of Division of Health Promotion and Education Coordinator of Student Field Experiences.

## Geosystems Track

A total of 30 hours are needed for this track, with a minimum of 21 hours from the Primary Focus group and 9 hours from the Secondary Focus group.

### Electives

#### Primary Focus - Content Related Courses 21

EARTHSCI 1200	Elements of Weather
EARTHSCI 3350/5350	Environmental Hydrology ^
EARTHSCI 3322	Earth Materials ^
GEOG 2210	Modern Climate Change: Evidence and Predictions
GEOG 2240	Natural Hazards and Disasters
GEOG 3220	Environmental Geography: Variable Topic * ^
or	
EARTHSCI 3345/5345	Environmental Geology ***
GEOG 4220/5220	Soils and Landscapes
GEOG 4230/5230	Rivers
GEOG 4250/5250	Laboratory Methods in Environmental Geography
GEOG 4370/5370	Remote Sensing of the Environment
RTNL 2130	Foundations of the Nonprofit Sector
RTNL 4553/5553	Principles and Practice of Adventure Programming
RTNL 4554/5554	Managing Recreation Impacts on the Natural Environment

#### Secondary Focus - Management Cognates 9

BIOL 4105/5105	Wildlife Ecology and Management **
BIOL 4180/5180	Restoration Ecology **
EARTHSCI 3325/5325	Sedimentary Geology ****
EARTHSCI 3360/5360	Field and Laboratory Methods in Hydrology

ECON 3225/5225	Environmental Economics <sup>^</sup>
ENGLISH 4785/5785	Applied Writing: Projects, Grants and Careers <sup>^</sup>
GEOG 4170/5170	Climate Action Planning
GEOG 4240/5240	The Ice Age <sup>*</sup>
GEOG 4270/5270	Science of Scenery
GEOG 4310/5310	GIS Applications: (Variable Topic) <sup>^</sup>
GEOG 4320/5320	Geographic Information Systems II
RTNL 2120	Foundations of Tourism
RTNL/HIST 4556	Outdoor Recreation History Ethics and Emerging Trends
RTNL 4776/5776	Eco, Adventure and Sport Tourism
MGMT 3185	Project Management <sup>^</sup>
POLSCI 3172	Public Budgeting <sup>^</sup>
BIOL 3179	Cooperative Education <sup>^</sup>
or GEOG 3179	Cooperative Education in Geography
or EARTHSCI 3430	Internship
or RTNL 4510	Internship in Recreation, Tourism and Nonprofit Leadership
or PH 4180	Internship
Other courses as approved by advisors and program director	

**Total Hours** **30**

- \* \* For students pursuing the Geosystems Track, the Geography Department will accept GEOG 1210 and GEOG 1211 or EARTHSCI 1300 as the prerequisite for enrollment into all listed Geography courses except GEOG 4310/5310 and GEOG 4320/5320.
- \*\*\* The Biology Department will waive BIOL 3140 as a prerequisite for BIOL 4105/5105 and BIOL 4180/5180.
- \*\*\*\*\* The Earth and Environmental Sciences Department will accept GEOG 1210 and GEOG 1211 as substitutes for courses that require EARTHSCI 1300.
- \*\*\*\*\* The Earth and Environmental Sciences Department will waive the requirement of EARTHSCI 1320 for EARTHSCI 3325/5325.
- # # The Department of Health, Recreation and Community Services will waive RTNL 2120 as a prerequisite for RTNL 4776/5776.
- <sup>^</sup> <sup>^</sup> These courses have additional prerequisites as follows:  
 EARTHSCI 3322 has a prerequisite of EARTHSCI 1300.  
 EARTHSCI 3350/5350 has prerequisites of EARTHSCI 1300; junior standing.  
 GEOG 3220 has a prerequisite of GEOG 1120 or GEOG 1210 or GEOG 2210 or GEOG 1110 or consent of instructor.  
 ECON 3225/5225 has prerequisites of ECON 1041, ECON 1051; junior standing.  
 ENGLISH 4785/5785 has prerequisites of ENGLISH 2770 or consent of instructor; junior standing.  
 GEOG 4310/5310 has prerequisites of GEOG 2410; junior standing.  
 GEOG 4320/5320 has prerequisites of GEOG 2410 or consent of instructor; junior standing.  
 POLSCI 3172 has prerequisites of POLSCI 1014; POLSCI 1048.  
 GEOG 3179 has prerequisites of 15 hours of geography at UNI; cumulative GPA of 2.50; junior standing; consent of department.  
 RTNL 4510 has prerequisites of senior standing; consent of Internship Coordinator and a corequisite of RTNL 4520. For

students pursuing the Environmental Resource Management major, the Department of Health Recreation and Community Services will waive this corequisite.  
 PH 4180 has prerequisites of PH 3170; senior standing; 2.50 cumulative GPA; consent of Division of Health Promotion and Education Coordinator of Student Field Experiences.

**Resource Administration Track**

A total of 30 hours are needed for this track, with a minimum of 21 hours from the Primary Focus group and 9 hours from the Secondary Focus group.

**Primary Focus - Content Related Courses** **21**

GEOG 2210	Modern Climate Change: Evidence and Predictions
GEOG 2240	Natural Hazards and Disasters
GEOG 4170/5170	Climate Action Planning
PH 3720	Environmental and Occupational Health Regulations
RTNL 2130	Foundations of the Nonprofit Sector
RTNL 3337	Human Resource Development for Recreation, Tourism and Nonprofit Leadership
RTNL 4310/5310	Areas and Facilities in Recreation, Tourism and Nonprofit Leadership
RTNL 4554/5554	Managing Recreation Impacts on the Natural Environment
RTNL/HIST 4556	Outdoor Recreation History Ethics and Emerging Trends
RTNL 4776/5776	Eco, Adventure and Sport Tourism

**Secondary Focus - Cognates** **9**

BIOL 4167/5167	Conservation Biology <sup>**</sup>
GEOG 4220/5220	Soils and Landscapes
GEOG 4230/5230	Rivers
GEOG 4250/5250	Laboratory Methods in Environmental Geography
GEOG 4270/5270	Science of Scenery
GEOG 4310/5310	GIS Applications: (Variable Topic)
GEOG 4320/5320	Geographic Information Systems II
GEOG 4370/5370	Remote Sensing of the Environment
ENGLISH 4775/5775	Applied Writing: Specialized Documents <sup>^</sup>
or ENGLISH 4785/5785	Applied Writing: Projects, Grants and Careers
PH 3710	Environmental Health Science
RTNL 2120	Foundations of Tourism
RTNL 4552/5552	Outdoor Education and Leadership

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RTNL 4553/5553	Principles and Practice of Adventure Programming	
RTNL 4779/5779	Community Planning Workshop	
MGMT 3185	Project Management ^	
POLSCI 3172	Public Budgeting ^	
GEOG 3179	Cooperative Education in Geography ^	
or BIOL 3179	Cooperative Education	
or EARTHSCI 3430	Internship	
or RTNL 4510	Internship in Recreation, Tourism and Nonprofit Leadership	
or PH 4180	Internship	
Other courses as approved by advisors and program director		
<b>Total Hours</b>		<b>30</b>

\* \* The Biology Department will waive BIOL 3140 as a prerequisite for BIOL 4167/5167.

\*\*\*\* The Geography Department and the Department of Health, Recreation and Community Services will waive RTNL 2120 as a prerequisite for enrollment into RTNL 4310/5310.

^ ^ These courses have additional prerequisites as follows:  
 RTNL 4776/5776 has prerequisites of RTNL 2120 or consent of instructor; junior standing.  
 ENGLISH 4775/5775 has prerequisites of MGMT 2080 or ENGLISH 2770 or consent of instructor; junior standing.  
 ENGLISH 4785/5785 has prerequisites of ENGLISH 2770 or consent of instructor; junior standing.  
 POLSCI 3172 has prerequisites of POLSCI 1014; POLSCI 1048.  
 GEOG 3179 has prerequisites of 15 hours of geography at UNI; cumulative GPA of 2.50; junior standing; consent of department.  
 RTNL 4510 has prerequisites of senior standing; consent of Internship Coordinator and a corequisite of RTNL 4520. For students pursuing the Environmental Resource Management major, the Department of Health, Recreation and Community Services will waive this corequisite.  
 PH 4180 has prerequisites of PH 3170; senior standing; 2.50 cumulative GPA; consent of Division of Health Promotion and Education Coordinator of Student Field Experiences.

## Environmental Compliance Track

A total of 32 hours need for this focus area, with 15 hours of required courses, a minimum of 10 hours from the Primary Focus group and 7 hours from the Secondary Focus group.

### Required

ECON 1041	Principles of Macroeconomics	3
ECON 1051	Principles of Microeconomics	3
ECON 3225/5225	Environmental Economics	3
PH 3720	Environmental and Occupational Health Regulations	3
PHIL 2550	Environmental Ethics	3
<b>Primary Focus - Content Related Courses</b>		<b>10</b>
EARTHSCI 1200	Elements of Weather	

EARTHSCI 1400	Introduction to Environmental Earth Science	
EARTHSCI 3230/5230	Air Quality ^	
EARTHSCI 3345/5345	Environmental Geology *	
or		
GEOG 3220	Environmental Geography: Variable Topic	
EARTHSCI 3350/5350	Environmental Hydrology *	
<b>Secondary Focus - Cognates</b>		<b>7</b>
EARTHSCI 3240/5240	Air Quality Modeling ^	
EARTHSCI 3250/5250	Measurement and Analysis of Air Quality ** ^	
EARTHSCI 3325/5325	Sedimentary Geology ***	
EARTHSCI 3355/5355	Hydrogeology *	
GEOG 4220/5220	Soils and Landscapes	
GEOG 4230/5230	Rivers	
GEOG 4370/5370	Remote Sensing of the Environment	
PH 3710	Environmental Health Science	
RTNL 4554/5554	Managing Recreation Impacts on the Natural Environment	
MGMT 3153	Organizational Management *	
MGMT 3185	Project Management ^	
POLSCI 1048	Introduction to Public Administration	
GEOG 3179	Cooperative Education in Geography ^	
or BIOL 3179	Cooperative Education	
or EARTHSCI 3430	Internship	
or RTNL 4510	Internship in Recreation, Tourism and Nonprofit Leadership	
or PH 4180	Internship	
Other courses as approved by advisors and program director		
<b>Total Hours</b>		<b>32</b>

\* \* The Earth and Environmental Sciences Department will accept GEOG 1210 and GEOG 1211 as a substitute for courses that require EARTHSCI 1300.

\*\*\*\* The Earth and Environmental Sciences Department will waive EARTHSCI 3230/5230 as a prerequisite for enrollment into EARTHSCI 3250/5250.

\*\*\*\*\* The Earth and Environmental Sciences Department will waive the requirement for EARTHSCI 1320 for EARTHSCI 3325/5325.

^ ^ These courses have additional prerequisites as follows:  
 GEOG 3220 has a prerequisite of GEOG 1120 or GEOG 1210 or GEOG 2210 or GEOG 1110 or consent of instructor.  
 EARTHSCI 3240/5240 has prerequisites of EARTHSCI 1200; junior standing.  
 EARTHSCI 3250/5250 has prerequisites of EARTHSCI 1200; junior standing and a prerequisite or corequisite of EARTHSCI 3230/5230.

GEOG 3179 has prerequisites of 15 hours of geography at UNI; cumulative GPA of 2.50; junior standing; consent of department.  
 RTNL 4510 has prerequisites of senior standing; consent of Internship Coordinator and a corequisite of RTNL 4520. For students pursuing the Environmental Resource Management major,

the Department of Health, Recreation and Community Services will waive this corequisite.

PH 4180 has prerequisites of PH 3170; senior standing; 2.50 cumulative GPA; consent of Division of Health Promotion and Education Coordinator of Student Field Experiences.

## Four-Year Plan

### Environmental Resource Management: Ecosystems, B.A.

This is a sample plan of study with a suggested sequencing of classes for the major. University electives may be applied to earn additional academic majors, minors, or certificates. Students should regularly meet with their academic advisor to plan their specific semester schedule to include UNIFI/General Education program and/or university elective hours required.

Course	Title	Hour
<b>Freshman</b>		
<b>Fall</b>		
BIOL 2051	General Biology: Organismal Diversity	4
EARTHSCI 1300	Introduction to Geology (or GEOG 1210 Physical Geography and GEOG 1211 Physical Geography Lab)	4
STAT 1772	Introduction to Statistical Methods	3
UNIFI/General Education or University Electives		3
<b>Hours</b>		<b>14</b>
<b>Spring</b>		
CHEM 1110	General Chemistry I	4
GEOG 2410	Geographic Information Systems I	3
UNIFI/General Education or University Electives		6
<b>Hours</b>		<b>13</b>
<b>Sophomore</b>		
<b>Fall</b>		
BIOL 3100	Evolution, Ecology and the Nature of Science	3
GEOG 2260	Environmental Resource Management	3
CHEM 1120	General Chemistry II	4
UNIFI/General Education or University Electives		3
<b>Hours</b>		<b>13</b>
<b>Spring</b>		
Major Electives		4
UNIFI/General Education or University Electives		12
<b>Hours</b>		<b>16</b>
<b>Junior</b>		
<b>Fall</b>		
BIOL 4168/5168	Ecology	4
EARTHSCI 3330/5330	Geomorphology	4
RTNL 4320	Financial Resource Management in Recreation, Tourism and Nonprofit Leadership	3
UNIFI/General Education or University Electives		3
<b>Hours</b>		<b>14</b>
<b>Spring</b>		
HIST 4170/5170	U.S. Environmental History	3
Major Electives		4

UNIFI/General Education or University Electives	9
<b>Hours</b>	<b>16</b>
<b>Senior</b>	
<b>Fall</b>	
Major Electives	8
UNIFI/General Education or University Electives	9
<b>Hours</b>	<b>17</b>
<b>Spring</b>	
Major Electives	4
UNIFI/General Education or University Electives	13
<b>Hours</b>	<b>17</b>
<b>Total Hours</b>	<b>120</b>

### Environmental Resource Management: Geosystems, B.A.

This is a sample plan of study with a suggested sequencing of classes for the major. University electives may be applied to earn additional academic majors, minors, or certificates. Students should regularly meet with their academic advisor to plan their specific semester schedule to include UNIFI/General Education program and/or university elective hours required.

Course	Title	Hour
<b>Freshman</b>		
<b>Fall</b>		
BIOL 2051	General Biology: Organismal Diversity	4
EARTHSCI 1300	Introduction to Geology (or GEOG 1210 Physical Geography and GEOG 1211 Physical Geography Lab)	4
UNIFI/General Education or University Electives		6
<b>Hours</b>		<b>14</b>
<b>Spring</b>		
CHEM 1110	General Chemistry I	4
GEOG 2410	Geographic Information Systems I	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>16</b>
<b>Sophomore</b>		
<b>Fall</b>		
BIOL 3100	Evolution, Ecology and the Nature of Science	3
GEOG 2260	Environmental Resource Management	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
Major Electives		9
UNIFI/General Education or University Electives		6
<b>Hours</b>		<b>15</b>
<b>Junior</b>		
<b>Fall</b>		
EARTHSCI 3330/5330	Geomorphology	4
RTNL 4320	Financial Resource Management in Recreation, Tourism and Nonprofit Leadership	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
HIST 4170/5170	U.S. Environmental History	3
Major Electives		6

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UNIFI/General Education or University Electives	6
<b>Hours</b>	<b>15</b>
<b>Senior</b>	
<b>Fall</b>	
Major Electives	9
UNIFI/General Education or University Electives	6
<b>Hours</b>	<b>15</b>
<b>Spring</b>	
Major Electives	6
UNIFI/General Education or University Electives	8
<b>Hours</b>	<b>14</b>
<b>Total Hours</b>	<b>120</b>

### Environmental Resource Management: Resource Administration, B.A.

This is a sample plan of study with a suggested sequencing of classes for the major. University electives may be applied to earn additional academic majors, minors, or certificates. Students should regularly meet with their academic advisor to plan their specific semester schedule to include UNIFI/General Education program and/or university elective hours required.

Course	Title	Hour
<b>Freshman</b>		
<b>Fall</b>		
BIOL 2051	General Biology: Organismal Diversity	4
EARTHSCI 1300	Introduction to Geology ( or GEOG 1210 Physical Geography and GEOG 1211 Physical Geography Lab)	4
UNIFI/General Education or University Electives		6
<b>Hours</b>		<b>14</b>
<b>Spring</b>		
CHEM 1110	General Chemistry I	4
GEOG 2410	Geographic Information Systems I	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>16</b>
<b>Sophomore</b>		
<b>Fall</b>		
BIOL 3100	Evolution, Ecology and the Nature of Science	3
GEOG 2260	Environmental Resource Management	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
Major Electives		9
UNIFI/General Education or University Electives		6
<b>Hours</b>		<b>15</b>
<b>Junior</b>		
<b>Fall</b>		
EARTHSCI 3330/5330	Geomorphology	4
RTNL 4320	Financial Resource Management in Recreation, Tourism and Nonprofit Leadership	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
HIST 4170/5170	U.S. Environmental History	3
Major Electives		6

UNIFI/General Education or University Electives	6
<b>Hours</b>	<b>15</b>
<b>Senior</b>	
<b>Fall</b>	
Major Electives	9
UNIFI/General Education or University Electives	6
<b>Hours</b>	<b>15</b>
<b>Spring</b>	
Major Electives	6
UNIFI/General Education or University Electives	8
<b>Hours</b>	<b>14</b>
<b>Total Hours</b>	<b>120</b>

### Environmental Resource Management: Environmental Compliance, B.A.

This is a sample plan of study with a suggested sequencing of classes for the major. University electives may be applied to earn additional academic majors, minors, or certificates. Students should regularly meet with their academic advisor to plan their specific semester schedule to include UNIFI/General Education program and/or university elective hours required.

Course	Title	Hour
<b>Freshman</b>		
<b>Fall</b>		
BIOL 2051	General Biology: Organismal Diversity	4
EARTHSCI 1300	Introduction to Geology ( or GEOG 1210 Physical Geography and GEOG 1211 Physical Geography Lab)	4
UNIFI/General Education or University Electives		6
<b>Hours</b>		<b>14</b>
<b>Spring</b>		
CHEM 1110	General Chemistry I	4
GEOG 2410	Geographic Information Systems I	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>16</b>
<b>Sophomore</b>		
<b>Fall</b>		
BIOL 3100	Evolution, Ecology and the Nature of Science	3
GEOG 2260	Environmental Resource Management	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
Major Electives		10
UNIFI/General Education or University Electives		6
<b>Hours</b>		<b>16</b>
<b>Junior</b>		
<b>Fall</b>		
EARTHSCI 3330/5330	Geomorphology	4
RTNL 4320	Financial Resource Management in Recreation, Tourism and Nonprofit Leadership	3
UNIFI/General Education or University Electives		9
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
HIST 4170/5170	U.S. Environmental History	3
Major Electives		6

UNIFI/General Education or University Electives	6
<b>Hours</b>	<b>15</b>
<b>Senior</b>	
<b>Fall</b>	
Major Electives	9
UNIFI/General Education or University Electives	6
<b>Hours</b>	<b>15</b>
<b>Spring</b>	
Major Electives	7
UNIFI/General Education or University Electives	6
<b>Hours</b>	<b>13</b>
<b>Total Hours</b>	<b>120</b>

## Learning Outcomes

### Environmental Resource Management: Ecosystems Track, B.A.

**Goals:** Students will gain an understanding of major themes in biology related to ecosystems (organization of life, diversity and its causes) along with deeper exposure to and advanced competency in topics related to ecosystems and their management. Students will be able to think critically and communicate effectively on these discipline-specific topics.

#### Outcomes:

- Students will show proficiency in advanced content from the fields of ecology, evolution, and organismal biology that will allow students to evaluate issues important to modern ecosystem management.
- Students will communicate effectively using discipline-specific vocabulary and standard written and oral scientific communication skills.
- Students will think critically about discipline-specific content as evidenced by an ability to interpret data, to effectively critique arguments, and/or to solve problems relating to natural systems.

### Environmental Resource Management: Geosystems, B.A.

**Goal 1 - Critical Thinking & Data Analysis: Our students will use concepts from Earth, Space, or Environmental Science to critically analyze and interpret scientific data.**

- **Outcome 1.1** - Analyze and interpret scientific data to formulate an evidence-based conclusion
- **Outcome 1.2** - Use a variety of mathematical tools and computer software to describe scientific phenomena and answer scientific questions

**Goal 2 - Communication: Our students will be able to communicate concepts from Earth, Space, or Environmental Science.**

- **Outcome 2.1** - Create a well-written report or paper that summarizes scientific data and draws evidence-based conclusions
- **Outcome 2.2** - Create and deliver a well-constructed oral report that summarizes scientific data and draws evidence-based conclusions

**Goal 3 - Content Knowledge and Skills: Our students will apply concepts and theories from Earth, Space, or Environmental Science to the real world.**

- **Outcome 3.1** - Describe fundamental theories and concepts in Earth, Space, or Environmental Science
- **Outcome 3.2** - Use concepts and theories from Earth, Space, or Environmental Science to create a model of a complex system
- **Outcome 3.3** - Use concepts and theories from Earth, Space, or Environmental Science to solve a real-world problem
- **Outcome 3.4** - Use scientific equipment to collect valid scientific data.

### Environmental Resource Management: Resource Administration, B.A.

#### Communication

- **SLO 3:** Demonstrate effective written and oral communication skills related to geographic knowledge.

#### Critical Thinking

- **SLO 2:** Demonstrate abilities in critical thinking and intellectual synthesis including synthesis of Geography's multidisciplinary focus. This includes, but is not limited to, examples of human-environmental interaction, location theory, and transition models along with their past, present, and future impacts.
- **SLO 4:** Display evidence of professional, career skills such as independent problem solving, exhibiting professional judgment, and dependability.
- **SLO 5:** Conduct research through the development of a research question, identification and integration of relevant literature, select appropriate research methods, and execution of data collection, analysis, and interpretation.

#### Content Knowledge & Skills

- **SLO 1:** Identify patterns and processes of spatial relationships and interactions, movement, diffusion, and scale to explain their causes and significance, and to understand analytical methods to study them.

### Environmental Resource Management: Environmental Compliance, B.A.

**Goal 1 - Critical Thinking & Data Analysis: Our students will use concepts from Environmental Science to critically analyze and interpret scientific data.**

- **Outcome 1.1** - Analyze and interpret scientific data to formulate an evidence-based conclusion
- **Outcome 1.2** - Use a variety of mathematical tools and computer software to describe scientific phenomena and answer scientific questions

**Goal 2 - Communication: Our students will be able to communicate concepts from Environmental Science.**

- **Outcome 2.1** - Create a well-written report or paper that summarizes scientific data and draws evidence-based conclusions

## **Environmental Resource Management B.A.**

- **Outcome 2.2** - Create and deliver a well-constructed oral report that summarizes scientific data and draws evidence-based conclusions

### **Goal 3 - Content Knowledge and Skills: Our students will apply concepts and theories from Environmental Science to the real world.**

- **Outcome 3.1** - Describe fundamental theories and concepts in Environmental Science
- **Outcome 3.2** - Use concepts and theories from Environmental Science to create a model of a complex system
- **Outcome 3.3** - Use concepts and theories from Environmental Science to solve a real-world problem
- **Outcome 3.4** - Describe the interactions of a variety of societal institutions on the environment, and develop solutions to address the issues that arise.

## **Related Programs**

- Biology Minor
- Earth Science Minor