

# Environmental Sciences, B.S.

## Academic Plans

### Four-Year Graduation Plan

The Four-Year Graduation Plan is not available for the environmental sciences major. Students work with their advisors on individual graduation plans.

### Sample Plans of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

### Environmental Sciences, B.S.

- Biosciences (Green) Track [p. 1]
- Chemical Sciences (Yellow) Track [p. 2]
- Geosciences (Brown) Track [p. 3]
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### Biosciences (Green) Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		
	<b>Hours</b>	<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
ENVS:1085	Fundamentals of Environmental Science <sup>b</sup>	4
CHEM:1110	Principles of Chemistry I <sup>b, c</sup>	4
EES:1050	Introduction to Geology	4
ENGL:1200	The Interpretation of Literature or RHET:1030 or Rhetoric	3 - 4
CSI:1600	Success at Iowa	2
	<b>Hours</b>	<b>17-18</b>
<b>Spring</b>		
CHEM:1120	Principles of Chemistry II	4
MATH:1850	Calculus I <sup>b, d</sup>	4
ENGL:1200	The Interpretation of Literature or RHET:1030 or Rhetoric	3 - 4
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
	<b>Hours</b>	<b>14-15</b>
<b>Second Year</b>		
<b>Fall</b>		
ENVS:2010	Interdisciplinary Environmental Seminar	1
ENVS:3020	Earth Surface Processes	3
BIOL:1411	Foundations of Biology	4
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>f</sup>		4 - 5
GE CLAS Core: Values and Culture <sup>e</sup>		3
	<b>Hours</b>	<b>15-16</b>

### Spring

BIOL:1412	Diversity of Form and Function	4
GEOG:1050	Foundations of GIS	4
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
GE CLAS Core: Social Sciences <sup>e</sup>		3
	<b>Hours</b>	<b>15-16</b>

### Summer

Major: biosciences field study course		4
	<b>Hours</b>	<b>4</b>

### Third Year

#### Fall

STAT:4200	Statistical Methods and Computing or CHEM:2021 or STAT:3510	3
	or Fundamentals of Chemical Measurements or Biostatistics	
BIOL:2512	Fundamental Genetics	4
Major: biosciences policy course <sup>g</sup>		3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
	<b>Hours</b>	<b>14-15</b>

#### Spring

ENVS:2673	Ecology	3
BIOL:3172	Evolution	4
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>f</sup>		4 - 5
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
	<b>Hours</b>	<b>14-15</b>

### Fourth Year

#### Fall

GEOG:2374	Biogeography	3
Major: biosciences elective course <sup>g</sup>		3
Major: biosciences "select 9 s.h." foundation course <sup>g</sup>		3
Major: biosciences "select 9 s.h." foundation course <sup>g</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
	<b>Hours</b>	<b>15</b>

#### Spring

ENVS:3010	Interdisciplinary Environmental Seminar	1
Major: biosciences elective course <sup>g</sup>		3
Major: biosciences "select 9 s.h." foundation course <sup>g</sup>		3
GE CLAS Core: International and Global Issues <sup>e</sup>		3
Elective course <sup>h</sup>		3
Elective course <sup>h</sup>		1 - 3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>i</sup>		
	<b>Hours</b>	<b>14-16</b>

**Hours** **14-16**

**Total Hours** **122-130**

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.

- b Fulfills a major requirement and may fulfill a GE requirement.
- c Enrollment in chemistry courses requires completion of a placement exam.
- d Enrollment in math courses requires completion of a placement exam.
- e GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
- f Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
- g Refer to the General Catalog for course options.
- h Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
- i Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.

## Chemical Sciences (Yellow) Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		
<b>Hours</b>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
ENVS:1085	Fundamentals of Environmental Science <sup>b</sup>	4
CHEM:1110	Principles of Chemistry I <sup>b, c</sup>	4
EES:1050	Introduction to Geology	4
ENGL:1200 or RHET:1030	The Interpretation of Literature or Rhetoric	3 - 4
CSI:1600	Success at Iowa	2
<b>Hours</b>		<b>17-18</b>
<b>Spring</b>		
CHEM:1120	Principles of Chemistry II	4
MATH:1850	Calculus I <sup>b, d</sup>	4
RHET:1030 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
<b>Hours</b>		<b>14-15</b>
<b>Second Year</b>		
<b>Fall</b>		
ENVS:2010	Interdisciplinary Environmental Seminar	1
BIOL:1411	Foundations of Biology	4
CHEM:2021	Fundamentals of Chemical Measurements <sup>f</sup>	3
CHEM:2210	Organic Chemistry I	3
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>g</sup>		4 - 5
<b>Hours</b>		<b>15-16</b>

### Spring

BIOL:1412	Diversity of Form and Function	4
Major: chemical sciences "select 9 s.h." foundation course <sup>h</sup>		3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>g</sup>		4 - 5
GE CLAS Core: Values and Culture <sup>e</sup>		3
<b>Hours</b>		<b>14-15</b>

### Third Year

#### Fall

ENVS:3020	Earth Surface Processes	3
Major: chemical sciences elective course <sup>i</sup>		3
Major: chemical sciences "select 9 s.h." foundation course <sup>j</sup>		3
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>g</sup>		4 - 5
Elective course <sup>k</sup>		2 - 3
<b>Hours</b>		<b>15-17</b>

#### Spring

CHEM:3120	Analytical Chemistry II	3
CHEM:3250	Inorganic Chemistry	3
Major: chemical sciences policy course <sup>i</sup>		3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>g</sup>		4 - 5
<b>Hours</b>		<b>13-14</b>

### Fourth Year

#### Fall

GEOG:1050	Foundations of GIS	4
Major: chemical sciences elective course <sup>i</sup>		3
Major: chemical sciences "select 9 s.h." foundation course <sup>j</sup>		3
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
GE CLAS Core: Social Sciences <sup>e</sup>		3
<b>Hours</b>		<b>16</b>

#### Spring

ENVS:2673	Ecology	3
ENVS:3010	Interdisciplinary Environmental Seminar	1
CHEM:3430	Analytical Measurements	3
Major: chemical sciences elective course <sup>i</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
GE CLAS Core: International and Global Issues <sup>e</sup>		3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>m</sup>		
<b>Hours</b>		<b>16</b>
<b>Total Hours</b>		<b>120-127</b>

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.

b Fulfills a major requirement and may fulfill a GE requirement.

c Enrollment in chemistry courses requires completion of a placement exam.

- d Enrollment in math courses requires completion of a placement exam.
- e GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
- f This course is required for the statistics requirement in the major for all chemical sciences track students.
- g Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
- h The department recommends taking CHEM:2220.
- i Refer to the General Catalog for course options.
- j The department recommends taking CHEM:3110.
- k Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
- l This course must be a lab course. See the General Catalog for options.
- m Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.

## Geosciences (Brown) Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		0
<b>Hours</b>		
<b>0</b>		
<b>First Year</b>		
<b>Fall</b>		
ENVS:1085	Fundamentals of Environmental Science <sup>b</sup>	4
CHEM:1110	Principles of Chemistry I <sup>b, c</sup>	4
EES:1050	Introduction to Geology	4
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	
CSI:1600	Success at Iowa	2
<b>Hours</b>		
<b>17-18</b>		
<b>Spring</b>		
CHEM:1120	Principles of Chemistry II	4
MATH:1850	Calculus I <sup>b, d</sup>	4
ENGL:1200	The Interpretation of Literature	3 - 4
or RHET:1030	or Rhetoric	
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
<b>Hours</b>		
<b>14-15</b>		
<b>Second Year</b>		
<b>Fall</b>		
ENVS:2010	Interdisciplinary Environmental Seminar	1
EES:2410	Mineralogy	4
BIOL:1411	Foundations of Biology	4
MATH:1860	Calculus II	4

GE CLAS Core: World Languages First Level Proficiency or elective course <sup>f</sup>		4 - 5
<b>Hours</b>		
<b>17-18</b>		
<b>Spring</b>		
BIOL:1412	Diversity of Form and Function	4
GEOG:1050	Foundations of GIS	4
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
GE CLAS Core: Values and Culture <sup>e</sup>		3
<b>Hours</b>		
<b>15-16</b>		
<b>Summer</b>		
Major: geosciences field study course <sup>g</sup>		3
<b>Hours</b>		
<b>3</b>		
<b>Third Year</b>		
<b>Fall</b>		
ENVS:3020	Earth Surface Processes	3
EES:3300	Sedimentary Geology	4
PHYS:1400	Basic Physics	4
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
<b>Hours</b>		
<b>15-16</b>		
<b>Spring</b>		
ENVS:2673	Ecology	3
STAT:3510	Biostatistics	3
or STAT:4200	or Statistical Methods and Computing	
or CHEM:2021	or Fundamentals of Chemical Measurements	
Major: geosciences foundation course <sup>h</sup>		3 - 4
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>f</sup>		4 - 5
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
<b>Hours</b>		
<b>16-18</b>		
<b>Fourth Year</b>		
<b>Fall</b>		
EES:4630	Hydrogeology	4
Major: geosciences foundation course <sup>h</sup>		3 - 4
Major: geosciences elective course <sup>i</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
<b>Hours</b>		
<b>13-14</b>		
<b>Spring</b>		
ENVS:3010	Interdisciplinary Environmental Seminar	1
Major: geosciences policy course <sup>i</sup>		3
Major: geosciences elective course <sup>i</sup>		3
GE CLAS Core: International and Global Issues <sup>e</sup>		3
GE CLAS Core: Social Sciences <sup>e</sup>		3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>j</sup>		
<b>Hours</b>		
<b>13</b>		
<b>Total Hours</b>		
<b>123-131</b>		

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- b Fulfills a major requirement and may fulfill a GE requirement.
- c Enrollment in chemistry courses requires completion of a placement exam.
- d Enrollment in math courses requires completion of a placement exam.
- e GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
- f Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
- g It is recommended that students take EES:2831 whenever possible.
- h Choose from EES:2200, EES:3360, EES:3500, EES:3840, EES:4790.
- i Refer to the General Catalog for course options.
- j Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.

### Hydrosciences (Blue) Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		
<b>Hours</b>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
ENVS:1085	Fundamentals of Environmental Science <sup>b</sup>	4
CHEM:1110	Principles of Chemistry I <sup>b, c</sup>	4
EES:1050	Introduction to Geology	4
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	
CSI:1600	Success at Iowa	2
<b>Hours</b>		<b>17-18</b>
<b>Spring</b>		
CHEM:1120	Principles of Chemistry II	4
MATH:1850	Calculus I <sup>b, d</sup>	4
ENGL:1200	The Interpretation of Literature	3 - 4
or RHET:1030	or Rhetoric	
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
<b>Hours</b>		<b>14-15</b>
<b>Second Year</b>		
<b>Fall</b>		
ENVS:2010	Interdisciplinary Environmental Seminar	1
BIOL:1411	Foundations of Biology	4
MATH:1860	Calculus II	4
GE CLAS Core: World Languages First Level		4 - 5
Proficiency or elective course <sup>f</sup>		
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
<b>Hours</b>		<b>16-17</b>

<b>Spring</b>		
BIOL:1412	Diversity of Form and Function	4
PHYS:1511	College Physics I	4
Major: hydrosciences elective course <sup>g</sup>		3 - 4
GE CLAS Core: World Languages Second Level		4 - 5
Proficiency or elective course <sup>f</sup>		
<b>Hours</b>		<b>15-17</b>

<b>Third Year</b>		
<b>Fall</b>		
EES:4630	Hydrogeology	4
EES:4790	Applied Environmental Geology	3
PHYS:1512	College Physics II	4
GE CLAS Core: World Languages Second Level		4 - 5
Proficiency or elective course <sup>f</sup>		
<b>Hours</b>		<b>15-16</b>

<b>Spring</b>		
ENVS:2673	Ecology	3
STAT:4200	Statistical Methods and Computing	3
or STAT:3510	or Biostatistics	
or CHEM:2021	or Fundamentals of Chemical Measurements	
GE CLAS Core: World Languages Fourth Level		4 - 5
Proficiency or elective course <sup>f</sup>		
GE CLAS Core: International and Global Issues <sup>e</sup>		3
Elective course <sup>h</sup>		1 - 3
<b>Hours</b>		<b>14-17</b>

<b>Summer</b>		
EES:4680	Field Methods in Hydrologic Science <sup>i</sup>	3
<b>Hours</b>		<b>3</b>

<b>Fourth Year</b>		
<b>Fall</b>		
ENVS:3020	Earth Surface Processes	3
GEOG:1050	Foundations of GIS	4
Major: hydrosciences elective course <sup>g</sup>		3 - 4
Major: hydrosciences "select 6 s.h." foundation course <sup>j</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
<b>Hours</b>		<b>16-17</b>

<b>Spring</b>		
ENVS:3010	Interdisciplinary Environmental Seminar	1
Major: hydrosciences policy course <sup>g</sup>		3
Major: hydrosciences "select 6 s.h." foundation course <sup>j</sup>		3
GE CLAS Core: Social Sciences <sup>e</sup>		3
GE CLAS Core: Values and Culture <sup>e</sup>		3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>k</sup>		
<b>Hours</b>		<b>13</b>
<b>Total Hours</b>		<b>123-133</b>

a Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives;

- International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.
- b Fulfills a major requirement and may fulfill a GE requirement.
  - c Enrollment in chemistry courses requires completion of a placement exam.
  - d Enrollment in math courses requires completion of a placement exam.
  - e GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
  - f Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
  - g Refer to the General Catalog for course options.
  - h Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
  - i This course is offered every other summer. Check MyUI for course availability since offerings are subject to change.
  - j Choose from EES:3380, EES:3390, EES:4490, EES:4640, ENVS:3110.
  - k Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor or Graduation Services.