

# Environmental Sciences, BS

## 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, BS

- 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
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
RHET:1030	Rhetoric	3 - 4
or ENGL:1200	or The Interpretation of Literature	
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		4 - 5
Proficiency or elective course <sup>f</sup>		

GE CLAS Core: Values and Culture <sup>e</sup>		3
<b>Hours</b>		<b>15-16</b>
<b>Spring</b>		
BIOL:1412	Diversity of Form and Function	4
GEOG:2050	Foundations of GIS	4
GE CLAS Core: World Languages Second Level		4 - 5
Proficiency or elective course <sup>f</sup>		
GE CLAS Core: Social Sciences <sup>e</sup>		3
<b>Hours</b>		<b>15-16</b>
<b>Summer</b>		
Major: biosciences field study course <sup>g</sup>		3 - 4
<b>Hours</b>		<b>3-4</b>
<b>Third Year</b>		
<b>Fall</b>		
STAT:4200	Statistical Methods and Computing	3
or STAT:3510	or Biostatistics	
or CHEM:2021	or Fundamentals of Chemical Measurements	
BIOL:2512	Fundamental Genetics	4
Major: biosciences policy course <sup>g</sup>		2 - 3
GE CLAS Core: World Languages Third Level		4 - 5
Proficiency or elective course <sup>f</sup>		
<b>Hours</b>		<b>13-15</b>
<b>Spring</b>		
ENVS:2673	Ecology	3
BIOL:3172	Evolution	4
GE CLAS Core: World Languages Fourth Level		4 - 5
Proficiency or elective course <sup>f</sup>		
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
<b>Hours</b>		<b>14-15</b>
<b>Fourth Year</b>		
<b>Fall</b>		
GEOG:2374	Biogeography	3
Major: biosciences elective course <sup>g</sup>		3
Major: biosciences "select 9 s.h." foundation course <sup>g</sup>		3 - 4
Major: biosciences "select 9 s.h." foundation course <sup>g</sup>		3 - 4
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
<b>Hours</b>		<b>15-17</b>
<b>Spring</b>		
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 - 4
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>14-17</b>
<b>Total Hours</b>		<b>120-133</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 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>		0
<b>First Year</b>		<b>17-18</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 or ENGL:1200	Rhetoric or The Interpretation of Literature	3 - 4
CSI:1600	Success at Iowa	2
<b>Spring</b>		<b>17-18</b>
CHEM:1120	Principles of Chemistry II	4
MATH:1850	Calculus I <sup>b, d</sup>	4
ENGL:1200 or RHET:1030	The Interpretation of Literature or Rhetoric	3 - 4
GE CLAS Core: Diversity and Inclusion <sup>e</sup>		3
<b>Second Year</b>		<b>14-15</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>

**Hours 15-16**

### 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

**Hours 14-15**

### 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		3
GE CLAS Core: World Languages Third Level Proficiency or elective course <sup>g</sup>		4 - 5
Elective course <sup>j</sup>		3

**Hours 16-17**

#### Spring

CHEM:3120	Spectroscopy and Separations	3
CHEM:3250	Inorganic Chemistry <sup>i</sup>	3
Major: chemical sciences policy course <sup>i</sup>		2 - 3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>g</sup>		4 - 5

**Hours 12-14**

### Fourth Year

#### Fall

GEOG:2050	Foundations of GIS	4
Major: chemical sciences elective course <sup>i</sup>		3
Major: chemical sciences "select 9 s.h." foundation course <sup>k</sup>		3
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
GE CLAS Core: Social Sciences <sup>e</sup>		3

**Hours 16**

#### 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>

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>l</sup>

**Hours 16**

**Hours 120-127**

**Total Hours**

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 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.
- k This course must be a lab course. See the General Catalog for options.
- l 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>		
<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
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

**Hours 17-18**

### Spring

BIOL:1412 Diversity of Form and Function 4

GEOG:2050 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

**Hours 15-16**

### Summer

EES:4680 Field Methods in Hydrologic Science 3

or EES:2831 or GEOG:4010 or Geologic Field Methods or Field Methods in Physical Geography

**Hours 3**

**Third Year**

**Fall**

ENVS:3020 Earth Surface Processes 3

EES:3300 Sedimentary Geology 4

PHYS:1400 Basic Physics 4

GE CLAS Core: World Languages Third Level Proficiency or elective course <sup>f</sup> 4 - 5

**Hours 15-16**

**Spring**

ENVS:2673 Ecology 3

STAT:4200 Statistical Methods and Computing 3

or CHEM:2021 or STAT:3510 or Fundamentals of Chemical Measurements or Biostatistics

Major: geosciences foundation course <sup>g</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

**Hours 16-18**

**Fourth Year**

**Fall**

EES:4630 Hydrogeology 4

Major: geosciences foundation course <sup>g</sup> 3 - 4

Major: geosciences elective course <sup>h</sup> 3

GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup> 3

**Hours 13-14**

**Spring**

ENVS:3010 Interdisciplinary Environmental Seminar 1

Major: geosciences policy course <sup>h</sup> 2 - 3

Major: geosciences elective course <sup>h</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>i</sup>

**Hours 12-13**

**Total Hours 122-131**

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 Choose from EES:2200, EES:3360, EES:3500, EES:3840, EES:4790.

h Refer to the General Catalog for course options.

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.

## Hydrosciences (Blue) 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
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
MATH:1860	Calculus II	4
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>f</sup>		4 - 5

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
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>f</sup>		4 - 5
<b>Hours</b>		<b>15-16</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 Third 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:4200 or CHEM:2021 or STAT:3510	Statistical Methods and Computing or Fundamentals of Chemical Measurements or Biostatistics	3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>f</sup>		4 - 5
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 or GEOG:4010	Field Methods in Hydrologic Science or Field Methods in Physical Geography	3
<b>Hours</b>		<b>3</b>
<b>Fourth Year</b>		
<b>Fall</b>		
ENVS:3020	Earth Surface Processes	3
GEOG:2050	Foundations of GIS	4
Major: hydrosciences elective course <sup>g</sup>		3
Major: hydrosciences "select 6 s.h." foundation course <sup>g</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
ENVS:3010	Interdisciplinary Environmental Seminar	1
Major: hydrosciences policy course <sup>g</sup>		2 - 3
Major: hydrosciences "select 6 s.h." foundation course <sup>g</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>i</sup>		
<b>Hours</b>		<b>12-13</b>
<b>Total Hours</b>		<b>122-131</b>

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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.

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- 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.
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