

# Geographical and Sustainability Sciences, BS

## Academic Plans

### Sample Plans

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.

### Geographical and Sustainability Sciences, BS

- Geographic Information Science Track
- Sustainability Science Track

#### Geographic Information Science 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>		
SEES:1020	The Global Environment	3
SEES:1070	Contemporary Environmental Issues <sup>b</sup>	3
SEES:1085	Fundamentals of Environmental Science <sup>b</sup>	4
RHET:1030 or ENGL:1200	Rhetoric: Writing and Communication or Interpreting Literature	3 - 4
CSI:1600	Success at Iowa	1
Elective course <sup>c</sup>		2
	<b>Hours</b>	<b>16-17</b>
<b>Spring</b>		
SEES:1035	Our Digital Earth <sup>b</sup>	3
SEES:1090 or SEES:2110 or SEES:2910	Globalization and Geographic Diversity <sup>b, d</sup> or Eight Billion and Counting: Introduction to Population Dynamics or The Global Economy	3
Major: mathematics and statistics track elective course <sup>e</sup>		3
RHET:1030 or ENGL:1200	Rhetoric: Writing and Communication or Interpreting Literature	3 - 4
Elective course <sup>c</sup>		3
	<b>Hours</b>	<b>15-16</b>
<b>Second Year</b>		
<b>Fall</b>		
SEES:2010	Interdisciplinary Environmental Seminar	1
SEES:2050	Foundations of GIS	4

Major: foundation elective course <sup>f</sup>	3
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>c</sup>	4 - 5
Elective course <sup>c</sup>	2

**Hours 14-15**

#### Spring

CS:1110 or STAT:2010 or STAT:3200	Introduction to Computer Science or Statistical Methods and Computing or Applied Linear Regression	3
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SEES:3540	Geographic Visualization	3
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GE CLAS Core: Understanding Cultural Perspectives <sup>g</sup>	3
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GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>c</sup>	4 - 5
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Elective course <sup>c</sup>	3
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**Hours 16-17**

#### Third Year

##### Fall

SEES:3500	Introduction to Environmental Remote Sensing	3
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Major: computer science track elective course <sup>e</sup>	3 - 4
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GE CLAS Core: Historical Perspectives <sup>g</sup>	3
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GE CLAS Core: World Languages Third Level Proficiency or elective course <sup>c</sup>	4 - 5
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Elective course <sup>c</sup>	2
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**Hours 15-17**

##### Spring

SEES:3050	Geospatial Programming	3
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SEES:3520	GIS for Environmental Applications	3
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Major: society, environment, and sustainability track elective course <sup>e</sup>	3
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GE CLAS Core: Literary, Visual, and Performing Arts <sup>g</sup>	3
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GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>c</sup>	4 - 5
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**Hours 16-17**

#### Fourth Year

##### Fall

SEES:3992 or SEES:3400 or CCP:1201	Undergraduate Research or Iowa Environmental Policy in Practice or Academic Internship	3
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SEES:4580	Introduction to Geographic Databases	3
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Major: GIS track course <sup>h</sup>	3 - 4
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GE CLAS Core: Social Sciences (if SEES:2110 8 Billion & Counting: Intro Pop Dynamics was not previously taken) <sup>g</sup>	3
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Elective course <sup>c</sup>	3
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**Hours 15-16**

SEES:4010	Field Methods in Physical Geography	3
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SEES:4995 or SEES:4030	Honors Thesis or Senior Project Seminar	3
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Major: GIS track course <sup>h</sup>	3 - 4
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Major: track elective course (from any category) <sup>e</sup>	3
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GE CLAS Core: Values and Society <sup>g</sup>	3
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Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>i</sup>	
<b>Hours</b>	<b>15-16</b>
<b>Total Hours</b>	<b>122-131</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 or Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Society.
- b Fulfills a major requirement and may fulfill a GE requirement.
- c 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.
- d Note: SEES:2110 also satisfies the GE CLAS Core Social Sciences requirement.
- e Students complete at least 12 s.h. in track electives including at least 3 s.h. selected from each of three categories: computer science; mathematics and statistics; and society, environment, and sustainability. See the General Catalog for list of approved courses.
- f Complete one course from SEES:2310, SEES:2374, SEES:2930, SEES:2950, SEES:3320.
- g 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.
- h Complete two courses from SEES:3570, SEES:4150, SEES:4500, SEES:4520.
- i Please see Academic Calendar, on 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 Degree Services.

### Sustainability Science Track

Course	Title	Hours
<b>Academic Career</b>		
<b>Any Semester</b>		
GE CLAS Core: Sustainability <sup>a</sup>		<b>0</b>
<b>First Year</b>		
<b>Fall</b>		
SEES:1070	Contemporary Environmental Issues <sup>b</sup>	3
SEES:1085	Fundamentals of Environmental Science <sup>b</sup>	4
RHET:1030 or ENGL:1200	Rhetoric: Writing and Communication or Interpreting Literature	3 - 4
CSI:1600	Success at Iowa	1
GE CLAS Core: World Languages First Level Proficiency or elective course <sup>c</sup>		4 - 5
<b>Hours</b>		<b>15-17</b>
<b>Spring</b>		
SEES:1090 or SEES:2910	Globalization and Geographic Diversity <sup>b</sup> or The Global Economy	3
SEES:2013	Introduction to Sustainability <sup>b</sup>	3

ENGL:1200 or RHET:1030	Interpreting Literature or Rhetoric: Writing and Communication	3 - 4
GE CLAS Core: World Languages Second Level Proficiency or elective course <sup>c</sup>		4 - 5
Elective course <sup>c</sup>		2
<b>Hours</b>		<b>15-17</b>

### Second Year

<b>Fall</b>		
SEES:2010	Interdisciplinary Environmental Seminar	1
SEES:2050	Foundations of GIS	4
SEES:2110	Eight Billion and Counting: Introduction to Population Dynamics <sup>b</sup>	3
Major: communications track elective course <sup>d</sup>		3
GE CLAS Core: Understanding Cultural Perspectives <sup>e</sup>		3
GE CLAS Core: World Languages Third Level Proficiency or elective course <sup>c</sup>		4 - 5
<b>Hours</b>		<b>18-19</b>
<b>Spring</b>		
SEES:2310	Introduction to Climatology	3
SEES:4770 or POLI:2417	Environmental Justice or Comparative Environmental Policy	3
Major: methods track elective course <sup>d</sup>		3 - 4
GE CLAS Core: Historical Perspectives <sup>e</sup>		3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course <sup>c</sup>		4 - 5
<b>Hours</b>		<b>16-18</b>

### Third Year

<b>Fall</b>		
STAT:3200 or CS:1110 or STAT:2010	Applied Linear Regression <sup>b, f</sup> or Introduction to Computer Science or Statistical Methods and Computing	3
SEES:2374 or SEES:3320 or SEES:2930	Biogeography <sup>g</sup> or Earth's Climate System or Water Resources	3
Major: integrated natural and human systems track elective course <sup>d</sup>		3 - 4
GE CLAS Core: Values and Society <sup>e</sup>		3
Elective course <sup>c</sup>		3
<b>Hours</b>		<b>15-16</b>
<b>Spring</b>		
SEES:2673 or SEES:3315	Ecology or Ecosystem Ecology	3 - 4
SEES:3800	Environmental Policy	3
Major: human systems track elective course <sup>d</sup>		3
GE CLAS Core: Literary, Visual, and Performing Arts <sup>e</sup>		3
Elective course <sup>c</sup>		3
<b>Hours</b>		<b>15-16</b>

**Fourth Year****Fall**

SEES:3400 or CCP:1201 or SEES:3992	Iowa Environmental Policy in Practice or Academic Internship or Undergraduate Research	3
SEES:4210	Sustainability as a System Science	3
Major: natural systems track elective course <sup>d</sup>		2 - 4
Major: track elective course (from any category) <sup>d</sup>		3
GE CLAS Core: Natural Sciences without Lab <sup>e</sup>		3
GE CLAS Core: Quantitative or Formal Reasoning (if either CS:1110 Introduction to Computer Science or STAT:2010 Statistical Methods and Computing not previously taken)		3

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<b>Hours</b>	<b>17-19</b>
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**Spring**

SEES:3350 or SEES:2950	Urban Ecology <sup>h</sup> or Environmental Conservation	3 - 4
SEES:4030 or SEES:4995	Senior Project Seminar or Honors Thesis	3
Major: track elective course (from any category) <sup>d</sup>		3
Elective course <sup>c</sup>		3
Elective course <sup>c</sup>		3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) <sup>i</sup>		

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<b>Hours</b>	<b>15-16</b>
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<b>Total Hours</b>	<b>126-138</b>
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- 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 or Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Society.
- b Fulfills a major requirement and may fulfill a GE requirement.
- c 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.
- d Students complete at least 21 s.h. in track electives including at least 3 s.h. selected from each of five categories: communications; human systems; integrated natural and human systems; methods; and natural systems. See the General Catalog for list of approved courses.
- 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 Note: CS:1110 or STAT:2010 can be taken to also satisfy the GE CLAS Core Quantitative or Formal Reasoning requirement.
- g Students may take SEES:2950 to satisfy this foundation requirement if not planning to take the course later and count it toward the track requirements.
- h Students must take SEES:3350 to satisfy this track requirement if they previously completed SEES:2950 as a foundation course.
- i Please see Academic Calendar, on 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 Degree Services.