# Earth and Environmental Sciences, BS

## **Academic 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.

## Earth and Environmental Sciences, BS

- Earth and Planetary Science Track [p. 1]
- Environmental Bioscience Track [p. 2]
- Environmental Geoscience Track [p. 3]

## **Earth and Planetary Science Track**

Course Academic Care Any Semester	Title er	Hours
GE CLAS Core: Si	ustainability <sup>a</sup>	
	Hours	0
First Year Fall		
CHEM:1110	Principles of Chemistry I <sub>.</sub> b	4
SEES:1050	Introduction to Geology b	4
SEES:1085	Fundamentals of Environmental Science <sup>b</sup>	4
RHET:1030 or ENGL:1200	Rhetoric: Writing and Communication or The Interpretation of Literature	3 - 4
CSI:1600	Success at Iowa	1
	Hours	16-17
Spring	h	
CHEM:1120	Principles of Chemistry II b	4
SEES:1040	Evolution and the History of Life <sup>b</sup>	4
SEES:2200	Historical Geology	4
RHET:1030 or ENGL:1200	Rhetoric: Writing and Communication or The Interpretation of Literature	3 - 4
	Hours	15-16
Second Year Fall		
MATH:1850	Calculus I <sup>b</sup>	4
SEES:2010	Interdisciplinary Environmental Seminar	1
SEES:2410	Mineralogy	4
GE CLAS Core: So	ocial Sciences <sup>c</sup>	3
GE CLAS Core: W Proficiency or ele	orld Languages First Level ective course <sup>d</sup>	4 - 5
	Hours	16-17

Spring		
SEES:1070	Contemporary Environmental Issues	3
SEES:3510	Igneous and Metamorphic Petrology	4
course (prefix SE	planetary science track elective ES, numbered 3000 or above) /orld Languages Second Level	3 - 4 4 - 5
Proficiency or ele	ective course d	
Elective course <sup>e</sup>		1
	Hours	15-17
Summer SEES:2831	Geologic Field Methods	3
	Hours	3
Third Year Fall		
PHYS:1611 or PHYS:1511	Introductory Physics I <sup>b</sup> or College Physics I	4
SEES:3330	Sedimentary Geology	4
GE CLAS Core: U	nderstanding Cultural Perspectives	3
GE CLAS Core: W Proficiency or ele	orld Languages Third Level ective course <sup>d</sup>	4 - 5
	Hours	15-16
Spring		
SEES:2050	Foundations of GIS	4
SEES:3840	Structural Geology	4
GE CLAS Core: H	istorical Perspectives <sup>c</sup>	3
	orld Languages Fourth Level	4 - 5
	Hours	15-16
Summer		
SEES:4832	Geologic Field Analysis	3
	Hours	3
Fourth Year Fall		
STAT:2010 or STAT:3510	Statistical Methods and Computing	3
or CS:1110	or Biostatistics	
	or Introduction to Computer Science	
Major: "one of the course f	ese" earth and planetary track	3 - 4
course (prefix SE	planetary science track elective ES, numbered 3000 or above) <sup>g</sup>	3 - 4
GE CLAS Core: Li	terary, Visual, and Performing Arts <sup>c</sup>	3
Elective course <sup>e</sup>		3
Spring	Hours	15-17
	h or science course <sup>h</sup>	3 - 4
Major: earth and	planetary science track elective ES, numbered 3000 or above) <sup>g</sup>	3 - 4
	alues and Society <sup>c</sup>	3
Elective course e		
Elective comse		3
Elective course <sup>e</sup>		3 2

Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) i

Hours	14-16
Total Hours	127-138

- 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 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.
- d Students who have completed four levels of a single language or two levels of two different languages in high school or college have satisfied the GE CLAS Core World Languages requirement. Students who have completed three levels of a single language may complete a fourth-level course in the same language or may choose an approved World Language and Cultural Exploration course. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course. Contact your academic advisor or CLAS Undergraduate Programs Office with questions concerning the World Languages requirement.
- e 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.
- f Select one course from SEES: 3210, SEES:3608, SEES:4490, SEES:4630, SEES:4790, SEES:4800
- g Students must complete at least 9 s.h. in elective courses from the School of Earth, Environmental, and Sustainability Studies (prefix SEES) numbered 3000 or above. See the General Catalog for list of approved courses.
- h See the General Catalog for additional math or supporting science course options.
- 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.

Hours

### **Environmental Bioscience Track**

Title

Course

Course	THE	Hours
Academic Care	er	
Any Semester		
GE CLAS Core: St	ustainability <sup>a</sup>	
	Hours	0
First Year		
Fall		
CHEM:1110	Principles of Chemistry I b	4
SEES:1085	Fundamentals of Environmental Science <sup>b</sup>	4
SEES:1070	Contemporary Environmental Issues <sup>b</sup>	3
ENGL:1200 or RHET:1030	The Interpretation of Literature or Rhetoric: Writing and Communication	3 - 4

CSI:1600	Success at Iowa	1
	Hours	15-16
Spring	h	
CHEM:1120	Principles of Chemistry II b	4
MATH:1850	Calculus I b	4
eNGL:1200 or RHET:1030	Communication	3 - 4
GE CLAS Core: U	nderstanding Cultural Perspectives	3
Elective course d		2
Second Year Fall	Hours	16-17
BIOL:1411	Foundations of Biology <sup>b</sup>	4
SEES:2010	Interdisciplinary Environmental Seminar	1
SEES:3020	Earth Surface Processes	3
Proficiency or ele		4 - 5
Elective course d		3
Carata a	Hours	15-16
Spring BIOL:1412	Diversity of Form and Function b	4
	ental bioscience track elective	3 - 4
course f GE CLAS Core: Se		3 - 4
	ocial Sciences /orld Languages Second Level	2 - 4
Proficiency or ele		4-3
Elective course d		1
	Hours	15-17
Third Year Fall		
STAT:3510 or CS:1110 or STAT:2010	Biostatistics or Introduction to Computer Science or Statistical Methods and Computing	3
SEES:2374 or SEES:2950 or SEES:3070	Biogeography or Environmental Conservation or Marine Ecosystems and Conservation	3 - 4
BIOL:2246 or BIOL:1261 or SEES:3220		4
	istorical Perspectives <sup>c</sup>	3
GE CLAS Core: W Proficiency or ele	orld Languages Third Level ective course <sup>e</sup>	4 - 5
	Hours	17-19
Spring	F 11' (012	
SEES:2050	Foundations of GIS	4
SEES:2310 or SEES:3320	Introduction to Climatology	3
CEEC.2672	or Earth's Climate System	
SEES:2673	or Earth's Climate System Ecology	3
GE CLAS Core: Li	or Earth's Climate System Ecology iterary, Visual, and Performing Arts <sup>c</sup>	3
GE CLAS Core: Li	or Earth's Climate System  Ecology iterary, Visual, and Performing Arts <sup>c</sup> /orld Languages Fourth Level	3

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#### **Fourth Year**

#### Fall

SEES:3315 E	Cosystem Ecology	4
Major: environment course (numbered	3 - 4	
Major: environmental bioscience track elective course <sup>f</sup>		3 - 4
GE CLAS Core: Val	ues and Society <sup>c</sup>	3
Elective course <sup>d</sup>		3
H	lours	16-18
Spring		
Major: environmer course (numbered	ital bioscience track elective 3000 or above) <sup>f</sup>	3 - 4
Major: environmer course (numbered	ital bioscience track elective 3000 or above) <sup>f</sup>	3 - 4
Major: environmer course	ital bioscience track elective	3 - 4
Elective course d		3
Elective course <sup>d</sup>		2
Degree Application	n: apply on MyUI before deadline	

Hours	14-17
Total Hours	125-138

(typically in February for spring, September for fall)

- 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 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.
- d 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.
- e Students who have completed four levels of a single language or two levels of two different languages in high school or college have satisfied the GE CLAS Core World Languages requirement. Students who have completed three levels of a single language may complete a fourth-level course in the same language or may choose an approved World Language and Cultural Exploration course. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course. Contact your academic advisor or CLAS Undergraduate Programs Office with questions concerning the World Languages requirement.
- f Students must complete at least 18 s.h. in elective courses, including at least one course from the field study category and one course from each of three other categories; at least 9 s.h. must be numbered 3000 or above. See the General Catalog for list of approved courses.
- g May also complete an approved organismal course (3-4 s.h.) at the lowa Lakeside Laboratory (prefix IALL).
- h 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.

#### **Environmental Geoscience Track**

C	Tial .	Harres
Course	Title	Hours
Academic Care	er	
Any Semester	rata in a la ilita . a	
GE CLAS Core: Su	Hours	
First Vacu	Hours	0
First Year Fall		
SEES:1070	Contamporary Environmental	2
SEES.10/0	Contemporary Environmental Issues <sup>b</sup>	3
SEES:1085	Fundamentals of Environmental Science b	4
MATH:1850	Calculus I b	4
RHET:1030	Rhetoric: Writing and	3 - 4
or ENGL:1200	Communication or The Interpretation of Literature	
CSI:1600	Success at Iowa	1
	Hours	15-16
Spring		
SEES:1050	Introduction to Geology <sup>b</sup>	4
MATH:1860	Calculus II	4
ENGL:1200	The Interpretation of Literature	3 - 4
or RHET:1030	or Rhetoric: Writing and Communication	
GE CLAS Core: U	nderstanding Cultural Perspectives	3
Elective course d		2
Elective course		2
	Harring	16 17
Second Veer	Hours	16-17
Second Year	Hours	16-17
Fall		
Fall CHEM:1110	Principles of Chemistry I <sup>b</sup>	4
Fall CHEM:1110 SEES:2010	Principles of Chemistry I <sup>b</sup> Interdisciplinary Environmental Seminar	4
Fall CHEM:1110 SEES:2010 SEES:3020	Principles of Chemistry I <sup>b</sup> Interdisciplinary Environmental Seminar Earth Surface Processes	4 1 3
Fall CHEM:1110 SEES:2010 SEES:3020 GE CLAS Core: So	Principles of Chemistry I <sup>b</sup> Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences <sup>c</sup>	4 1 3 3 3
Fall CHEM:1110 SEES:2010 SEES:3020 GE CLAS Core: SG GE CLAS Core: W	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c forld Languages First Level	4 1 3
Fall CHEM:1110 SEES:2010 SEES:3020 GE CLAS Core: So	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences colored Languages First Level ective course e	4 1 3 3 4 - 5
Fall CHEM:1110 SEES:2010 SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c forld Languages First Level	4 1 3 3 3
Fall CHEM:1110 SEES:2010 SEES:3020 GE CLAS Core: SG GE CLAS Core: W Proficiency or ele	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c Orld Languages First Level ective course e Hours	4 1 3 3 4 - 5
Fall CHEM:1110 SEES:2010 SEES:3020 GE CLAS Core: SG GE CLAS Core: W Proficiency or ele Spring CHEM:1120	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c lorld Languages First Level ective course e Hours Principles of Chemistry II	4 1 3 3 4 - 5 <b>15-16</b>
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c orld Languages First Level ective course e Principles of Chemistry II Introduction to Climatology or Earth's Climate System	4 1 3 3 4 - 5
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences colorid Languages First Level ective course e  Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology	4 1 3 3 4-5 <b>15-16</b> 4 3
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673 GE CLAS Core: W Proficiency or ele	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c forld Languages First Level ective course e Hours  Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology forld Languages Second Level	4 1 3 3 4-5 <b>15-16</b> 4 3
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: SG GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673 GE CLAS Core: W	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c forld Languages First Level ective course e Hours  Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology forld Languages Second Level	4 1 3 3 4-5 <b>15-16</b> 4 3
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673 GE CLAS Core: W Proficiency or ele	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c forld Languages First Level ective course e Hours  Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology forld Languages Second Level	4 1 3 3 4 - 5 15-16 4 3 4 - 5
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673 GE CLAS Core: W Proficiency or ele	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c Porld Languages First Level ective course e  Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology Orld Languages Second Level ective course e	4 1 3 3 4-5 <b>15-16</b> 4 3 4-5
Fall CHEM:1110 SEES:2010 SEES:3020 GE CLAS Core: SG GE CLAS Core: W Proficiency or ele Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673 GE CLAS Core: W Proficiency or ele Elective course  Third Year Fall PHYS:1511	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c forld Languages First Level ective course e Hours  Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology forld Languages Second Level ective course e Hours  College Physics I b	4 1 3 3 4-5 <b>15-16</b> 4 3 4-5
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673 GE CLAS Core: W Proficiency or ele Elective course d  Third Year Fall	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c forld Languages First Level ective course e Hours  Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology forld Languages Second Level ective course e Hours  Hours	4 1 3 4 - 5 15-16 4 3 4 - 5 2 16-17
Fall CHEM:1110 SEES:2010  SEES:3020 GE CLAS Core: So GE CLAS Core: W Proficiency or ele  Spring CHEM:1120 SEES:2310 or SEES:3320 SEES:2673 GE CLAS Core: W Proficiency or ele Elective course d  Third Year Fall PHYS:1511 or PHYS:1611	Principles of Chemistry I b Interdisciplinary Environmental Seminar Earth Surface Processes ocial Sciences c orld Languages First Level ective course e Principles of Chemistry II Introduction to Climatology or Earth's Climate System Ecology orld Languages Second Level ective course e Hours  College Physics I b or Introductory Physics I	4 1 3 3 4 - 5 15-16 4 3 4 - 5 2 16-17

GE CLAS Core: W Proficiency or ele	4 - 5	
	Hours	16-17
Spring		
PHYS:1612 or PHYS:1512	Introductory Physics II <sup>b</sup> or College Physics II	4
SEES:3360	Soil Genesis and Geomorphology	3
Major: environme course <sup>f</sup>	ental geoscience track elective	3 - 4
GE CLAS Core: H	istorical Perspectives <sup>c</sup>	3
GE CLAS Core: W Proficiency or ele	orld Languages Fourth Level ective course <sup>e</sup>	4 - 5
	Hours	17-19
Fourth Year		
Fall		
SEES:4630	Hydrogeology	4
SEES:4790	Applied Environmental Geology	3
course (numbere	ental geoscience track elective d 3000 or above) <sup>f</sup>	3 - 4
	terary, Visual, and Performing Arts <sup>c</sup>	3
Elective course <sup>a</sup>		3
	Hours	16-17
Spring		_
STAT:2010 or STAT:3510	Statistical Methods and Computing	3
or CS:1110	or Biostatistics or Introduction to Computer Science	
Major: environmental geoscience track elective course (numbered 3000 or above) <sup>f</sup>		
Major: environme course (numbere	3 - 4	
GE CLAS Core: Values and Society <sup>c</sup>		3
Elective course d		2
	on: apply on MyUI before deadline uary for spring, September for fall)	
	Hours	14-16
	Total Hours	125-135

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- Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course. Contact your academic advisor or CLAS Undergraduate Programs Office with questions concerning the World Languages requirement.
- f Students must complete at least 12 s.h. in elective courses, including at least one course from the field study category and one course from each of three other categories; at least 9 s.h. must be numbered 3000 or above. See the General Catalog for list of approved courses.
- g 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.