

# REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN ENVIRONMENTAL SUSTAINABILITY

## COLLEGE OF ATMOSPHERIC AND GEOGRAPHIC SCIENCES

### THE UNIVERSITY OF OKLAHOMA

For Students Entering the Oklahoma State System for Higher Education:

**Summer 2010 through  
Spring 2011**

#### GENERAL REQUIREMENTS

Total Credit Hours . . . . .	120*
Total Upper-Division Credit Hours . . . . .	40
<b>Minimum Retention/Graduation Grade Point Averages:</b>	
Minimum in OU Coursework . . . . .	2.00
Minimum in Major Coursework – Combined and OU . . . . .	2.00
Overall – Combined and OU . . . . .	2.00

Environmental Sustainability:  
**Science & Natural Resources**

**B410 P591**

Bachelor of Science in  
Environmental Sustainability

**OU encourages students to complete at least 30 hours of applicable coursework each year to have the opportunity to graduate in four years.**

GENERAL EDUCATION AND COLLEGE REQUIREMENTS Courses graded P/NP will not apply.	Courses required for the major or major support may <u>not</u> also fulfill University-Wide General Education Requirements	
<p>Courses for fulfillment of General Education and College of Atmospheric &amp; Geographic Sciences requirements must be from the approved General Education course list at <a href="http://www.ou.edu/enrollment/home/classes_offered/general_education.html">http://www.ou.edu/enrollment/home/classes_offered/general_education.html</a>.</p> <p style="text-align: center;"><b>University-Wide General Education (minimum 40 hours) and College of Atmospheric and Geographic Sciences Requirements</b> Courses graded P/NP will not apply</p> <p><b>Core Area I: Symbolic and Oral Communication</b> (9-22 hours, 3-6 courses)</p> <p>A. <b>English Composition</b> (6 hours, 2 courses)</p> <ol style="list-style-type: none"> <li>1. English 1113, Principles of English Composition</li> <li>2. English 1213, Principles of English Composition, <b>or</b> EXPO 1213, Expository Writing</li> </ol> <p>B. <b>Foreign Language</b> (0-10 hours in the same language) Students who have not completed two years of the same foreign language in high school are required to take two college courses in the same foreign language.</p> <ol style="list-style-type: none"> <li>1. Beginning Course (0-5 hours) _____</li> <li>2. Beginning Course, continued (0-5 hours) _____</li> </ol> <p>C. <b>Mathematics</b> (3 hours, 1 course). *<b>MATH 1823</b>, Calculus &amp; Analytic Geometry I</p> <p><b>Core Area II: Natural Science</b> (7 hours, 2 courses) including one laboratory component.</p> <ol style="list-style-type: none"> <li>1. <b>Biological Science</b>: *<b>CHEM 1315</b>, General Chemistry</li> <li>2. <b>Physical Science</b>: *<b>PHYS 2514</b>, General Physics for Engr. &amp; Science Majors</li> </ol> <p><b>Core Area III: Social Science</b> (6 hours, 2 courses)</p> <ol style="list-style-type: none"> <li>1. Political Science 1113, American Federal Government</li> <li>2. _____</li> </ol> <p><b>Core Area IV: Humanities</b> (12 hours, 4 courses)</p> <p>a. <b>Understanding Artistic Forms</b> (3 hours, 1 course) _____</p> <p>b. <b>Western Civilization and Culture</b> (6 hours, 2 courses)</p> <ol style="list-style-type: none"> <li>1. History 1483, U.S., 1492-1865, <b>or</b> History 1493, U.S., 1865-Present,</li> <li>2. _____ (excluding HIST 1483 and 1493)</li> </ol> <p>c. <b>Non-Western Culture</b> (3 hours, 1 course): _____</p> <p><b>Core Area V: Senior Capstone Experience</b> (3 hours, 1 course): _____</p> <p>At least three hours of Upper-Division General Education coursework must be completed outside the major.</p> <p>* College of Atmospheric and Geographic Sciences requirements</p>	MAJOR REQUIREMENTS	MAJOR SUPPORT REQUIREMENTS
	<p style="text-align: center;"><b>CORE (22 hours, 7 courses)</b></p> <p>GEOG 1203, Global Environmental Issues 3                  GEOG 3233, Principles of Sustainability 3                  GEOG 3443, Environment &amp; Society 3                  GEOG 3924, Analytic Methods in Geog. 4                  GEOG 4453, Intro. to GIS Technologies 3                  GEOG 4543, Life Cycle Analysis 3                  GEOG 4953, Proseminar in Geography (Capstone) 3</p> <p style="text-align: center;"><b>Science &amp; Natural Resources (12 hours)</b></p> <p>A minimum of 12 hours, to be chosen from the following courses, with no more than two courses from one department.</p> <p>BOT 3453, Principles of Plant Ecology 3                  BOT 4623, Ecosystem Ecology 3                  CEES 4243, Water Technologies for Emerging Regions 3                  GEOG 3023, Principles of Physical Geography 3                  GEOG 3253, Environmental Conservation 3                  GEOG 3563, Geography of Natural Resources 3                  GEOG 3890, Selected Studies: Water &amp; Society 3                  GEOG 4200, Internship in Geography 3                  GEOG 4283, Biogeography 3                  GEOG 4293, Hydrologic Science 3                  GEOG 4343, Climate, History &amp; Society 3                  GEOG 4583, Renewable Energy Resources 3                  GEOL 3154, Environmental Geology 3                  METR 4553, Climate &amp; Renewable Energy 3                  RCPL 4863, Environmental Assessment Methodologies 3                  SOC 3643, Population &amp; Society 3                  ZOO 4423, Stream Ecology 3                  ZOO 4563, Biological Conservation 3</p> <p>_____ 3                  _____ 3                  _____ 3                  _____ 3</p>	<p style="text-align: center;"><b>Additional College Requirements</b></p> <p style="text-align: center;"><b>Upper-Division Science Electives</b></p> <p>A minimum of 15 hours of 3000-4000-level courses to be chosen from chemistry, computer science, engineering, geology, geophysics, mathematics, management information systems, meteorology, or physics; or statistics courses from botany, microbiology, political science, psychology, or sociology.</p> <p>_____ 3                  _____ 3                  _____ 3                  _____ 3                  _____ 3</p> <p style="text-align: center;"><b>Free Electives</b></p> <p>Electives to bring total applicable hours to 124 including 48 upper-division hours.</p>
<p><b>Additional College of Atmospheric and Geographic Sciences Bachelor of Arts Requirements:</b></p> <p><b>Additional College of Atmospheric and Geographic Sciences Bachelor of Science Requirements:</b></p> <ol style="list-style-type: none"> <li>1. <b>MATH 2423</b>, Calculus &amp; Analytic Geometry II (carries General Educ. credit)</li> <li>2. <b>MATH 2433</b>, Calculus &amp; Analytic Geometry III</li> <li>3. <b>MATH 2443</b>, Calculus &amp; Analytic Geometry IV</li> <li>4. <b>PHYS 2524</b>, General Physics for Engr. &amp; Science Majors</li> <li>5. <b>C S 1313</b>, Programming for Non-Majors (fulfills Computer Literacy requirement)</li> </ol> <p>MATH 1914, 2924, and 2934 will also fulfill the College's calculus requirement.</p>		

## INFORMATION CONCERNING GENERAL RULES, REGULATIONS AND MINIMUM REQUIREMENTS

**TOTAL HOURS:** A minimum of 120 semester hours acceptable toward graduation must be completed.

**UPPER-DIVISION HOURS:** A minimum of 48 upper-division semester hours acceptable toward graduation must be completed. OU courses numbered 3000 or above are upper-division. Transfer work is counted as lower-division or upper-division credit depending on the level at which it was offered at the institution where it was earned. Two-year college work is accepted only as lower-division credit.

**SENIOR INSTITUTION HOURS:** A minimum of 60 semester hours applied toward graduation must be earned at senior (4-year) institutions.

**RESIDENCY:**

- A minimum of two semesters must be spent in residence in the College of Atmospheric and Geographic Sciences.
- At least 36 of the last 48 hours must be completed in residence at OU.

**INDIVIDUAL STUDIES:** No more than six hours of independent study or directed readings may be applied toward degree requirements.

**GRADE POINT AVERAGES:** Students must earn a minimum overall 2.50 for each of the following: Combined Retention GPA (all college grades), OU Retention GPA, GPA for all major courses, and GPA for all major courses taken at OU.

**Refer to the OU General Catalog for more complete information.**

### Suggested Semester Plan of Study — Bachelor of Science in Environmental Sustainability: Science & Natural Resources (B410 P591)

This plan shows one possible grouping of courses that would allow students to graduate in four years. Please refer to the front of the degree checklist for official requirements. Students must consult with College of Atmospheric and Geographic Sciences and/or Department of Geography academic advisers to verify that courses selected each semester fulfill the recommended plan and satisfy university, College of Atmospheric & Geographic Sciences, and Environmental Sustainability major requirements.

Year	FIRST SEMESTER	Hours	SECOND SEMESTER	Hours
<b>FRESHMAN</b>	ENGL 1113, Principles of English Composition (Core I)	3	ENGL 1213, Principles of English Composition (Core I), <b>or</b>	3
	HIST 1483 or 1493, U.S. (Core IV)	3	EXPO 1213, Expository Writing (Core I)	3
	GEOG 1203, Global Environmental Issues	3	P SC 1113, American Federal Government (Core III)	3
	MATH 1823, Calculus and Analytic Geometry I (Core I)	3	MATH 2423, Calculus and Analytic Geometry II	3
	Elective	3	CHEM 1315, General Chemistry (Core II)	5
			Elective	1
	<b>TOTAL CREDIT HOURS</b>	<b>15</b>	<b>TOTAL CREDIT HOURS</b>	<b>15</b>
<b>SOPHOMORE</b>	MATH 2433, Calculus and Analytic Geometry III	3	MATH 2443, Calculus and Analytic Geometry IV	3
	C S 1313, Programming for Non-Majors	3	PHYS 2524, General Physics for Engr. & Science Majors	4
	PHYS 2514, General Physics for Engr. & Science Majors (Core II)	4	GEOG 3924, Analytic Methods in Geography	4
	<sup>1</sup> General Education Social Science (Core III)	3	<sup>1</sup> General Education Understanding Artistic Forms (Core IV)	3
	Elective	2	Elective	1
	<b>TOTAL CREDIT HOURS</b>	<b>15</b>	<b>TOTAL CREDIT HOURS</b>	<b>15</b>
<b>JUNIOR</b>	GEOG 3233, Principles of Sustainability	3	GEOG 3443, Environment and Society	3
	<sup>2</sup> Science & Natural Resources Concentration Elective	3	<sup>2</sup> Science & Natural Resources Concentration Elective	3
	<sup>3</sup> Science Elective	3	<sup>3</sup> Science Elective	3
	<sup>1</sup> General Education Western Civ. & Culture (Core IV)	3	<sup>3</sup> Science Elective	3
	Elective	3	Elective	3
	<b>TOTAL CREDIT HOURS</b>	<b>15</b>	<b>TOTAL CREDIT HOURS</b>	<b>15</b>
<b>SENIOR</b>	GEOG 4453, Intro. to GIS Technologies	3	GEOG 4953, Proseminar in Geography (Capstone)	3
	GEOG 4543, Life Cycle Analysis	3	<sup>2</sup> Science & Natural Resources Concentration Elective	3
	<sup>2</sup> Science & Natural Resources Concentration Elective	3	<sup>3</sup> Science Elective	3
	<sup>3</sup> Science Elective	3	Elective	3
	<sup>1</sup> General Education Non-Western Culture (Core IV)	3	Elective	3
	<b>TOTAL CREDIT HOURS</b>	<b>15</b>	<b>TOTAL CREDIT HOURS</b>	<b>15</b>

<sup>1</sup> = To be chosen from the University-Wide General Education Approved Course List. Three hours of general education must be upper-division outside the major.

<sup>2</sup> = A minimum of 12 hours, to be chosen from the following **concentration**, with no more than two courses from one department:

**Science and Natural Resources:** BOT 3453, 4623; CEES 4243; GEOG 3023, 3253, 3563, 3890 (Water and Society), 4200, 4283, 4293, 4343, 4583; GEOL 3154; METR 4553; RCPL 4863; SOC 3643; ZOO 4423, 4563.

<sup>3</sup> = A minimum of 15 hours of 3000-4000 -level courses to be chosen from chemistry, computer science, engineering, geology, geophysics, mathematics, management information systems, meteorology, or physics; or statistics courses from botany, microbiology, political science, psychology, or sociology.

<sup>4</sup> = This course fulfills the Computer Literacy Requirement for graduation as required by the Oklahoma State Regents for Higher Education.

**Bachelor's degrees require a minimum of 48 hours of upper-division (3000-4000) coursework.**

This plan of study should not be used in lieu of academic advisement.

#### Upper-Division Science Electives (15 hours)

A minimum of 15 hours of 3000-4000 -level courses to be chosen from chemistry, computer science, engineering, geology, geophysics, mathematics, management information systems, meteorology, or physics; or statistics courses from botany, microbiology, political science, psychology, or sociology.

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