

# REQUIREMENTS FOR THE BACHELOR OF SCIENCE

## GALLOGLY COLLEGE OF ENGINEERING

### THE UNIVERSITY OF OKLAHOMA

Academic Year
For Students Entering the Oklahoma State System for Higher Education <b>Summer 2025 through Spring 2026</b>

General Requirements	
Minimum Total Credit Hours .....	<b>120</b>
<b>Minimum Retention/Graduation Grade Point Averages:</b>	
Overall - Combined and OU .....	<b>2.00</b>
Major - Combined and OU .....	<b>2.00</b>
Curriculum - Combined and OU .....	<b>2.00</b>

Program
<b>Environmental Science</b>
<b>B405</b>
Bachelor of Science

OU encourages students to complete at least 30 hours of applicable coursework each year to have the opportunity to graduate in 4 years.

## GENERAL EDUCATION AND COLLEGE REQUIREMENTS

Courses designated as Core I, II, III, IV, or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list, including at least one upper-division Gen. Ed. course outside of the student's major. **Courses graded P/NP will not apply.**

**A grade of C or better is required in each course in the curriculum, including all prerequisite courses.**

## UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS) AND COLLEGE REQUIREMENTS

Code	Title	Credit Hours
<b>Core Area I: Symbolic and Oral Communication</b>		
<i>English Composition</i>		
ENGL 1113	Principles of English Composition	3
ENGL 1213	Principles of English Composition	3
or EXPO 1213	Expository Writing	
<i>Language (0-10 hours in the same language)</i>		
This requirement can be met by two years of the same language in high school:		0-10
Beginning Course (0-5 hours)		
Beginning Course, continued (0-5 hours)		
<i>Mathematics</i>		
MATH 1823	Calculus and Analytic Geometry I (Core I) <sup>1,2</sup>	3
<b>Core Area II: Natural Science (including one laboratory)</b>		
PHYS 2514	General Physics for Engineering and Science Majors (Core II) <sup>2</sup>	4
or PHYS 2414	General Physics for Life Science Oriented Majors	
CHEM 1315	General Chemistry (Core II-Lab) <sup>2</sup>	5
or CHEM 1335	General Chemistry I: Signature Course	
<b>Core Area III: Social Science</b>		
P SC 1113	American Federal Government	3
Choose one course <sup>3</sup>		3
<b>Core Area IV: Arts &amp; Humanities</b>		
<i>Artistic Forms</i>		
Choose one course <sup>3</sup>		3
<i>Western Culture</i>		
HIST 1483	United States to 1865	3
or HIST 1493	United States, 1865 to the Present	
HSTM 3333	Technology and Society in World History (or approved substitute Core IV-Western Culture) <sup>3</sup>	3
<i>World Culture</i>		
ANTH 4623	Approaches to Cross-Cultural Human Problems (or approved substitute Core IV-World Culture) <sup>3</sup>	3
<b>Core Area V: First-Year Experience</b>		
ENGR 1413	Pathways to Engineering Thinking (Core V-FYE) <sup>4</sup>	3
<b>Total Credit Hours</b>		<b>39-49</b>

<sup>1</sup> MATH 1914, MATH 2924, and MATH 2934 sequence can be substituted with MATH 1823, MATH 2423, MATH 2433, and MATH 2443.

<sup>2</sup> Major support requirements that also satisfy University General Education requirements.

<sup>3</sup> To be chosen from the University-Wide General Education Approved Course List. Three of these hours must be upper-division (3000-4000). See list in the Class Schedule.

<sup>4</sup> Transfer students will need to meet the requirements of the first-year experience course as well as the engineering transfer course. Please see your advisor for your specific enrollment.

## FREE ELECTIVES

Electives to bring total applicable hours to the minimum total required for the degree including a minimum of 40 upper-division hours.

In order to progress in your curriculum in the Gallogly College of Engineering, and as a specific graduation requirement, a **grade of C** or better is required in each course in the curriculum, including all prerequisite courses.

## MAJOR REQUIREMENTS

Code	Title	Credit Hours
<b>Required Courses</b>		
CEES 1000	CEES Seminar (minimum of four semesters required)	0
CEES 1111	Exploring CEES	1
CEES 2213	CADD Fundamentals	3
CEES 2313	Water Quality Fundamentals	3
CEES 2323	Environmental Transport and Fate Process	3
CEES 4114	Aquatic Chemistry	4
CEES 4253	Statistics and Probability	3
CEES 4263	Hazardous and Solid Waste Management	3
CEES 4324	Environmental Biology and Ecology	4
CEES 4843	Hydrology	3
or CEES 5843	Hydrology	
CEES 4911	Introduction to ES Capstone	1
CEES 4913	Environmental Science Capstone	3
CEES 4943	Air Quality Management	3
<b>Professional Electives</b>		
Choose any two 3000-level or higher course in CEES (one three-hour professional elective can be taken outside CEES with advisor approval)		6
<b>Total Credit Hours</b>		<b>40</b>

## MAJOR SUPPORT REQUIREMENTS

Code	Title	Credit Hours
<b>Math and Science</b>		
Choose one of the following:		4
BIOL 1134	Introductory Biology: Evolution, Ecology and Diversity	
or PBIO 1114	General Botany	
Choose one of the following:		3
BIOL 3403	Principles of Ecology	
or PBIO 3453		
CHEM 1415	General Chemistry (Continued)	5
or CHEM 1435	General Chemistry II: Signature Course	
CHEM 3053	Organic Chemistry I: Biological Emphasis	3
CHEM 3153	Organic Chemistry II: Biological Emphasis	3
MATH 2423	Calculus and Analytic Geometry II	3
MBIO 2815		5
PHYS 2524	General Physics for Engineering and Science Majors	4
or PHYS 2424	General Physics for Life Science Oriented Majors	
<b>Track Electives</b>		
Choose three courses (See Student Handbook for the list of Track electives)		9
<b>Additional College Requirements</b>		
ENGR 2002	Professional Responsibilities and Skills of Engineers and Scientists	2
<b>Total Credit Hours</b>		<b>41</b>

More information in the catalog: (<http://ou-public.courseleaf.com/gallogly-engineering/civil-engineering-environmental-science/environmental-science-bachelor-science/>).

### SUGGESTED SEMESTER PLAN OF STUDY

In order to progress in your curriculum in the Gallogly College of Engineering, and as a specific graduation requirement, a grade of C or better is required in each course in the curriculum, including all prerequisite courses.

Two college-level courses in a single world language are required; this may be satisfied by successful completion of 2 years in a single world language in high school. Students who must take a language at the University will have an additional 6-10 hours of coursework.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
FRESHMAN	ENGL 1113	Principles of English Composition ( Core I )	3	BIOL 1134 or PBIO 1114	Introductory Biology: Evolution, Ecology and Diversity ( Core II-Lab ) or General Botany	4
	CHEM 1315	General Chemistry ( Core II-Lab ) <sup>1</sup>	5	ENGL 1213 or EXPO 1213	Principles of English Composition ( Core I ) or Expository Writing	3
	MATH 1823	Calculus and Analytic Geometry I ( Core I ) <sup>2</sup>	3	CHEM 1415	General Chemistry (Continued) ( Core II-Lab ) <sup>1</sup>	5
	ENGR 1413	Pathways to Engineering Thinking ( Core V-FYE ) <sup>3</sup>	3	MATH 2423	Calculus and Analytic Geometry II <sup>2</sup>	3
				CEES 1111	Exploring CEES	1
	<b>CREDIT HOURS</b>		<b>14</b>	<b>CREDIT HOURS</b>		<b>16</b>
SOPHOMORE	CHEM 3053	Organic Chemistry I: Biological Emphasis	3	CHEM 3153	Organic Chemistry II: Biological Emphasis	3
	PHYS 2514 or PHYS 2414	General Physics for Engineering and Science Majors ( Core II ) or General Physics for Life Science Oriented Majors	4	MBIO 2815	Core II-Lab	5
	CEES 2313	Water Quality Fundamentals	3	CEES 2323	Environmental Transport and Fate Process	3
	CEES 1000	CEES Seminar <sup>4</sup>	0	CEES 1000	CEES Seminar <sup>4</sup>	0
	CEES 2213	CADD Fundamentals	3	ENGR 2002	Professional Responsibilities and Skills of Engineers and Scientists	2
	BIOL 3403 or PBIO 3453	Principles of Ecology or	3	HIST 1483 or HIST 1493	United States to 1865 ( Core IV ) or United States, 1865 to the Present	3
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>16</b>
JUNIOR	CEES 1000	CEES Seminar <sup>4</sup>	0	ANTH 4623	Approaches to Cross-Cultural Human Problems ( or approved substitute) (Core IV, World Culture )	3
	CEES 4263	Hazardous and Solid Waste Management	3		Approved Elective: Artistic Forms (Core IV) <sup>5</sup>	3
	PHYS 2524 or PHYS 2424	General Physics for Engineering and Science Majors or General Physics for Life Science Oriented Majors	4	CEES 4843/5843	Hydrology	3
		CEES Track Elective <sup>7</sup>	3	CEES 1000	CEES Seminar <sup>4</sup>	0
		CEES Track Elective <sup>7</sup>	3	CEES 4253	Statistics and Probability	3
				CEES 4943	Air Quality Management	3
	<b>CREDIT HOURS</b>		<b>13</b>	<b>CREDIT HOURS</b>		<b>15</b>
SENIOR	HSTM 3333	Technology and Society in World History ( or approved substitute) (Core IV, West. Culture )	3	CEES 4913	Environmental Science Capstone	3
	CEES 1000	CEES Seminar <sup>4</sup>	0	CEES 1000	CEES Seminar <sup>4</sup>	0
	CEES 4911	Introduction to ES Capstone	1		CEES Track Elective <sup>7</sup>	3
		CEES Professional Elective <sup>6</sup>	3		CEES Professional Elective <sup>6</sup>	3
	CEES 4114	Aquatic Chemistry	4		Approved Elective: Social Science (Core III) <sup>5</sup>	3
	CEES 4324	Environmental Biology and Ecology	4	P SC 1113	American Federal Government ( Core III )	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>

<sup>1</sup> CHEM 1315 and CHEM 1415 can be substituted with CHEM 1335 (Fall only) and CHEM 1435 (Spring only), respectively.

<sup>2</sup> MATH 1914, MATH 2924, and MATH 2934 sequence can be substituted for MATH 1823, MATH 2423, MATH 2433, and MATH 2443.

<sup>3</sup> Transfer students will need to meet the requirements of the first-year experience course as well as the engineering transfer course. Please see your advisor for your specific enrollment.

<sup>4</sup> Students must complete a minimum of four semesters of CEES 1000.

<sup>5</sup> To be chosen from the University-Wide General Education Approved Course List. Three of these hours must be upper-division (3000-4000). See list in the Class Schedule.

<sup>6</sup> Professional electives can be chosen from any 3000-level or higher course in CEES. One three-hour professional elective can be taken outside CEES with advisor approval.

<sup>7</sup> See CEES Undergraduate Student Handbook for the list of Track electives.

Courses designated as Core I, II, III, IV or V are part of the General Education curriculum. Students must complete a minimum of 40 hours of General Education courses, chosen from the approved list.

Track electives are covered by footnote #7 and professional electives are covered by footnote #6.