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 **Summer 2023 through Spring 2024**

General Requirements	
Minimum Total Credit Hours	**121**
Minimum Retention/Graduation Grade Point Averages:	
Overall - Combined and OU	**2.00**
Major - Combined and OU	**2.00**
Curriculum - Combined and OU	**2.00**

Program
Environmental Science
B405
Bachelor of Science

OU encourages students to complete at least 31 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
Core Area I: Symbolic and Oral Communication		
English Composition		
ENGL 1113	Principles of English Composition	3
ENGL 1213	Principles of English Composition	3
or EXPO 1213	Expository Writing	
Language (0-10 hours in the same language)		
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)		
Mathematics		
MATH 1823	Calculus and Analytic Geometry I (Core I) [1, 2]	3
Core Area II: Natural Science (including one laboratory)		
PHYS 2514	General Physics for Engineering and Science Majors (Core II) [2]	4
or PHYS 2414	General Physics for Life Science Oriented Majors	
CHEM 1315	General Chemistry (Core II-Lab) [2]	5
or CHEM 1335	General Chemistry I: Signature Course	
Core Area III: Social Science		
P SC 1113	American Federal Government	3
Choose one course [3]		3
Core Area IV: Arts & Humanities		
Artistic Forms		
Choose one course [3]		3
Western Culture		
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) [3]	3
World Culture		
ANTH 4623	Approaches to Cross-Cultural Human Problems (or approved substitute Core IV-World Culture) [3]	3
Core Area V: First-Year Experience		
Choose one course [3]		3
Total Credit Hours		**39-49**

[1] MATH 1914, MATH 2924, and MATH 2934 sequence can be substituted with MATH 1823, MATH 2423, MATH 2433, and MATH 2443.

[2] Major support requirements that also satisfy University General Education requirements.

[3] 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.

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
Required Courses		
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
Professional Electives		
Choose any two 3000-level or higher course in CEES (one three-hour professional elective can be taken outside CEES with advisor approval)		6
Total Credit Hours		**40**

MAJOR SUPPORT REQUIREMENTS

Code	Title	Credit Hours
Math and Science		
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	Principles of Plant Ecology	
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	Introduction to Microbiology	5
PHYS 2524	General Physics for Engineering and Science Majors	4
or PHYS 2424	General Physics for Life Science Oriented Majors	
Track Electives		
Choose three courses (See Student Handbook for the list of Track electives)		9
Additional College Requirements		
ENGR 1410	Freshman Engineering Orientation [1]	0
ENGR 1411	Pathways to Engineering Thinking [1]	1
ENGR 2002	Professional Development	2
Total Credit Hours		**42**

[1] Engineering transfer students may take ENGR 3410 in place of ENGR 1410 and ENGR 3511 in place of ENGR 1411.

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) [1]	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) [2]	3	CHEM 1415	General Chemistry (Continued) (Core II-Lab) [1]	5
	ENGR 1410	Freshman Engineering Orientation [3]	0	MATH 2423	Calculus and Analytic Geometry II [2]	3
	ENGR 1411	Pathways to Engineering Thinking [3]	1	CEES 1111	Exploring CEES	1
		Approved Elective: First-Year Experience (Core V) [5]	3			
		CREDIT HOURS	**15**		**CREDIT HOURS**	**16**
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	Introduction to Microbiology (Core II-Lab)	5
	CEES 2313	Water Quality Fundamentals	3	CEES 2323	Environmental Transport and Fate Process	3
	CEES 1000	CEES Seminar [4]	0	CEES 1000	CEES Seminar [4]	0
	CEES 2213	CADD Fundamentals	3	ENGR 2002	Professional Development	2
	BIOL 3403 or PBIO 3453	Principles of Ecology or Principles of Plant Ecology	3	HIST 1483 or HIST 1493	United States to 1865 (Core IV) or United States, 1865 to the Present	3
		CREDIT HOURS	**16**		**CREDIT HOURS**	**16**
JUNIOR	CEES 1000	CEES Seminar [4]	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) [5]	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 [7]	3	CEES 1000	CEES Seminar [4]	0
		CEES Track Elective [7]	3	CEES 4253	Statistics and Probability	3
				CEES 4943	Air Quality Management	3
		CREDIT HOURS	**13**		**CREDIT HOURS**	**15**
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 [4]	0	CEES 1000	CEES Seminar [4]	0
	CEES 4911	Introduction to ES Capstone	1		CEES Track Elective [7]	3
		CEES Professional Elective [6]	3		CEES Professional Elective [6]	3
	CEES 4114	Aquatic Chemistry	4		Approved Elective: Social Science (Core III) [5]	3
	CEES 4324	Environmental Biology and Ecology	4	P SC 1113	American Federal Government (Core III)	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**15**

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

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

3 Engineering transfer students may take ENGR 3410 in place of ENGR 1410 and ENGR 3511 in place of ENGR 1411.

4 Students must complete a minimum of four semesters of CEES 1000.

5 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.

6 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.

7 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.