

**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 2021 through Spring 2022

General Requirements	
Minimum Total Credit Hours .....	128
<b>Minimum Retention/Graduation Grade Point Averages:</b>	
Overall - Combined and OU .....	2.00
Major - Combined and OU .....	2.00

Program
<b>Chemical Engineering (Bioengineering)</b>
<b>B164</b>
Bachelor of Science

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

**ACCREDITED BY THE ENGINEERING ACCREDITATION COMMISSION OF ABET, [HTTP://WWW.ABET.ORG](http://www.abet.org)**

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. Chemical engineering courses are sequential and usually offered only in the semester shown; note prerequisites. (Exception: CH E 5243 is taught alternate spring semesters).

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.

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.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
<b>FRESHMAN</b>	ENGL 1113	Principles of English Composition ( Core I )	3	ENGL 1213 or EXPO 1213	Principles of English Composition ( Core I ) or Expository Writing	3
	CHEM 1315	General Chemistry ( Core II-Lab ) <sup>1</sup>	5	CHEM 1435	General Chemistry II: Signature Course ( Core II-Lab ) <sup>1</sup>	5
	MATH 1914	Differential and Integral Calculus I ( Core I ) <sup>2</sup>	4	MATH 2924	Differential and Integral Calculus II <sup>2</sup>	4
	ENGR 1411	Freshman Engineering Experience <sup>3</sup>	1	PHYS 2514	General Physics for Engineering and Science Majors ( Core II )	4
		Approved Elective: First-Year Experience (Core V) <sup>4</sup>	3			
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>16</b>
<b>SOPHOMORE</b>	MATH 2934	Differential and Integral Calculus III <sup>2</sup>	4	MATH 3113	Introduction to Ordinary Differential Equations	3
	PHYS 2524	General Physics for Engineering and Science Majors	4	ENGR 2002	Professional Development	2
	CH E 2033	Chemical Engineering Fundamentals	3	CH E 2003	Chemical Engineering Computing/Statistics	3
	CHEM 3053	Organic Chemistry I: Biological Emphasis	3	CH E 3113	Momentum, Heat and Mass Transfer I	3
	BIOL 1124	Intro Biol: Molecule/Cell/Phys	4	CHEM 3152	Organic Chemistry Laboratory: Biological Emphasis	2
				CHEM 3423	Physical Chemistry I	3
	<b>CREDIT HOURS</b>		<b>18</b>	<b>CREDIT HOURS</b>		<b>16</b>
<b>JUNIOR</b>	CHEM 3421	Physical Chemistry Laboratory	1	CH E 3333	Separation Processes	3
	CH E 3123	Momentum, Heat and Mass Transfer II	3	CH E 3432	Unit Operations Laboratory	2
	CH E 3473	Chemical Engineering Thermodynamics	3	CH E 4473	Kinetics	3
	CH E 3723	Numerical Methods for Engineering Computation	3		Bioengineering Core Electives <sup>6</sup>	3
	HIST 1483 or HIST 1493	United States to 1865 ( Core IV ) or United States, 1865 to the Present	3		Approved Elective, Western Culture (Core IV) <sup>4</sup>	3
		Approved Elective, Social Science (Core III) <sup>4</sup>	3			
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>14</b>
<b>SENIOR</b>		Technical Elective I <sup>7</sup>	3		Technical Elective II <sup>7</sup>	3
	CH E 4153	Process Dynamics and Control	3	ENGR 2411	Applied Engineering Statics <sup>5</sup>	1
	CH E 4253	Process Design & Safety	3	CH E 3313	Structure and Properties of Materials	3
	CH E 4262	Chemical Engineering Design Laboratory	2	CH E 4273	Advanced Process Design	3
	ENGR 2431	Electrical Circuits <sup>5</sup>	1		Approved Elective, Artistic Forms (Core IV) <sup>4</sup>	3
	ENGR 3431	Electromechanical Systems <sup>5</sup>	1		Approved Elective, World Culture (Core IV) <sup>4</sup>	3
	P SC 1113	American Federal Government ( Core III )	3			
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>16</b>

<sup>1</sup> CHEM 1315 can be substituted with CHEM 1335 or CHEM 1425 (H) (Fall only). CHEM 1435 can be substituted with CHEM 1415.

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

<sup>3</sup> Engineering transfer students may take ENGR 3511 in place of ENGR 1411.

<sup>4</sup> To be chosen from the University-Wide General Education Approved Course List. Three of these 12 hours must be upper-division (3000-4000). See list in the Class Schedule.

<sup>5</sup> It is recommended that ENGR 2431 and ENGR 3431 be taken in the same semester. The courses are offered in sequential five-week blocks during the semester.

<sup>6</sup> Choose between CH E 4203 or CH E 5243.

<sup>7</sup> Choose between CHEM 3653, MBIO 3813, BIOL 3103, BIOL 3113, BIOL 3333, BIOL 4843, CH E 5243, CH E 4203, CH E 5293, CH E 5373, CHEM 3753.