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 2025 through Spring 2026**

General Requirements	
Minimum Total Credit Hours	**130**
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
Mechanical Engineering - Premedical Option
B676
Bachelor of Science

OU encourages students to complete at least 33 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)

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 1914	Differential and Integral Calculus I (Core I) [1, 2]	4
Core Area II: Natural Science (including one laboratory)		
PHYS 2514	General Physics for Engineering and Science Majors (Core II) [2]	4
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	
Choose one Western Culture elective [3]		3
World Culture		
Choose one World Culture elective [3]		3
Core Area V: First Year Experience		
ENGR 1413	Pathways to Engineering Thinking (Core V-FYE) [4]	3
Total Credit Hours		**40-50**

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

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).

4 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.

Bachelor of Science in Mechanical Engineering accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Mechanical and Similarly Named Engineering Programs Program Criteria.

MAJOR REQUIREMENTS

Code	Title	Credit Hours
Required Courses		
AME 2102	Engineering Design Graphics	2
AME 2113	Statics	3
AME 2213	Thermodynamics	3
AME 2402	Engineering Computing	2
AME 2303	Materials, Design and Manufacturing Processes	3
AME 2533	Dynamics	3
AME 3112	Solid Mechanics Lab	2
AME 3143	Solid Mechanics	3
AME 3153	Fluid Mechanics	3
AME 3723	Numerical Methods For Engineering Computation	3
AME 3122	Heat Transfer and Fluid Mechanics Lab	2
AME 3173	Heat Transfer	3
AME 3353	Design of Mechanical Components	3
AME 3363	Design of Thermal-Fluid Systems	3
AME 4163	Principles of Engineering Design	3
AME 4553	Design Practicum	3
Simulation Elective		
Choose a 3 hour simulation elective from the list of approved courses [1]		3
Total Credit Hours		**47**

1 Refer to the department-maintained list of Simulation, Math/Science electives for course options.

MAJOR SUPPORT REQUIREMENTS

Code	Title	Credit Hours
Math and Science		
BIOL 1124	Intro Biol: Molecule/Cell/Phys	4
CHEM 1415	General Chemistry (Continued)	5
CHEM 3053	Organic Chemistry I: Biological Emphasis	3
CHEM 3153	Organic Chemistry II: Biological Emphasis	3
CHEM 3152	Organic Chemistry Laboratory: Biological Emphasis	2
MATH 2924	Differential and Integral Calculus II	4
MATH 2934	Differential and Integral Calculus III	4
MATH 3113	Introduction to Ordinary Differential Equations	3
PHYS 2524	General Physics for Engineering and Science Majors	4
Math/Science Elective		
Choose a 3 hour Math/Science elective from the list of approved courses [1]		3
Biology Elective		
Choose one approved Biology elective [2]		3
Additional College Requirements		
ENGR 2002	Professional Responsibilities and Skills of Engineers and Scientists	2
ENGR 2431	Electrical Circuits	1
ENGR 2531	Electrical Circuits II	1
ENGR 3431	Electromechanical Systems	1
Total Credit Hours		**43**

1 Refer to the department-maintained list of Simulation, Math/Science electives for course options.

2 Biology elective to be chosen from BIOL 3113, BIOL 3333 or BIOL 4843

More information in the catalog: (http://ou-public.courseleaf.com/gallogly-engineering/aerospace-mechanical-engineering/mechanical-engineering-premedical-option-bachelor-science/).

SUGGESTED SEMESTER PLAN OF STUDY

Bachelor of Science in Mechanical Engineering accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Mechanical and Similarly Named Engineering Programs Program Criteria.

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. AME courses are sequential and usually offered only in the semester shown; note prerequisites.

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.

Students who wish to take the MCAT in their junior year are encouraged to take the required biology elective and the organic chemistry during their junior year. Some may also wish to take an additional biology elective (not required in the curriculum).

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
FRESHMAN	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) [1]	5	CHEM 1415	General Chemistry (Continued) (Core II-Lab) [1,4]	5
	MATH 1914	Differential and Integral Calculus I (Core I) [2]	4	MATH 2924	Differential and Integral Calculus II [2]	4
	ENGR 1413	Pathways to Engineering Thinking (Core V-FYE)	3	PHYS 2514	General Physics for Engineering and Science Majors (Core II)	4
		CREDIT HOURS	**15**		**CREDIT HOURS**	**16**
SOPHOMORE	MATH 2934	Differential and Integral Calculus III [2]	4	MATH 3113	Introduction to Ordinary Differential Equations	3
	PHYS 2524	General Physics for Engineering and Science Majors	4	AME 2102	Engineering Design Graphics	2
	CHEM 3053	Organic Chemistry I: Biological Emphasis [4]	3	AME 2303	Materials, Design and Manufacturing Processes	3
	AME 2113	Statics	3	AME 2533	Dynamics	3
	AME 2213	Thermodynamics	3	ENGR 2431	Electrical Circuits	1
	AME 2402	Engineering Computing	2	ENGR 2531	Electrical Circuits II	1
				ENGR 3431	Electromechanical Systems	1
				ENGR 2002	Professional Responsibilities and Skills of Engineers and Scientists	2
		CREDIT HOURS	**19**		**CREDIT HOURS**	**16**
JUNIOR	BIOL 1124	Intro Biol: Molecule/Cell/Phys	4	AME 3122	Heat Transfer and Fluid Mechanics Lab	2
	AME 3112	Solid Mechanics Lab	2	AME 3173	Heat Transfer	3
	AME 3143	Solid Mechanics	3	AME 3353	Design of Mechanical Components	3
	AME 3153	Fluid Mechanics	3	HIST 1483 or HIST 1493	United States to 1865 (Core IV) or United States, 1865 to the Present	3
	AME 3723	Numerical Methods For Engineering Computation	3		Simulation Elective [7]	3
					BIOL Elective [5]	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**17**
SENIOR	P SC 1113	American Federal Government (Core III)	3	AME 4553	Design Practicum	3
	AME 3363	Design of Thermal-Fluid Systems	3	CHEM 3152	Organic Chemistry Laboratory: Biological Emphasis	2
	AME 4163	Principles of Engineering Design	3	CHEM 3153	Organic Chemistry II: Biological Emphasis	3
		Approved Math/Science Elective [7]	3		Approved Elective: Western Culture (Core IV) [6]	3
		Approved Elective: Social Science (Core III) [6]	3		Approved Elective: World Culture (Core IV) [6]	3
					Approved Elective: Artistic Forms (Core IV) [6]	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**17**

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

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

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

4 Pre-med students are required to consult the OU Pre-Med Advisor, Cate 1, Room 416, or call (405) 325-2457, and their Mechanical Engineering advisor each semester prior to enrolling. NOTE: Most medical schools also require PHYS 1311 and PHYS 1321.

5 Biology elective to be chosen from BIOL 3113, BIOL 3333, or BIOL 4843.

6 To be chosen from the University-Wide General Education Approved Course List. Three of these hours must be upper-division (3000-4000).

7 Refer to the department-maintained list of Simulation, Math/Science electives for course options.