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 2024 through Spring 2025**

General Requirements	
Minimum Total Credit Hours	**126**
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
Aerospace Engineering **B010** Bachelor of Science

OU encourages students to complete at least hours of applicable coursework each year to have the opportunity to graduate in 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 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 approved elective Core IV-Western Culture [3]		3
World Culture		
Choose one approved elective World Culture (Core IV-WDC) [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 Aerospace Engineering accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org, under the General Criteria and the Aerospace and Similarly Named 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 2223	Introduction to Aerospace Engineering	3
AME 2303	Materials, Design and Manufacturing Processes	3
AME 2533	Dynamics	3
AME 2623	Circuits and Sensors	3
AME 3112	Solid Mechanics Lab	2
AME 3143	Solid Mechanics	3
AME 3253	Aerodynamics	3
AME 3272	Windtunnel Laboratory	2
AME 4383	Control Systems	3
AME 3333	Flight Mechanics	3
AME 3523	Aerospace Structural Analysis	3
AME 4243	Aerospace Propulsion Systems	3
AME 4273	Aerospace Systems Design I	3
AME 4493	Space Sciences and Astrodynamics	3
AME 4513	Flight Controls	3
AME 4373	Aerospace Systems Design II	3
Experimental Elective		
Choose a two hour approved experimental elective [1]		2
Simulation Elective		
Choose a three hour approved simulation elective [2]		3
Total Credit Hours		**59**

1 AME 4802 is recommended for the experimental elective.

2 Refer to the department-maintained list of Technical, Experimental, and Simulation electives for course options.

MAJOR SUPPORT REQUIREMENTS

Code	Title	Credit Hours
Math and Science		
MATH 2924	Differential and Integral Calculus II	4
MATH 2934	Differential and Integral Calculus III	4
MATH 3413	Physical Mathematics I	3
MATH 3401	Numerical Methods With Matlab	1
PHYS 2524	General Physics for Engineering and Science Majors	4
Technical Electives		
Choose 6 hours of technical electives from the list of approved courses maintained by the department [1]		6
Additional College Requirements		
ENGR 2002	Professional Responsibilities and Skills of Engineers and Scientists	2
C S 1313	Programming for Non-Majors with C	3
Total Credit Hours		**27**

1 Refer to the department-maintained list of Technical, Experimental, and Simulation electives for course options.

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

SUGGESTED SEMESTER PLAN OF STUDY

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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.

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	MATH 2924	Differential and Integral Calculus II [2]	4
	MATH 1914	Differential and Integral Calculus I (Core I) [2]	4	PHYS 2514	General Physics for Engineering and Science Majors (Core II)	4
	ENGR 1413	Pathways to Engineering Thinking (Core V-FYE) [3]	3	C S 1313	Programming for Non-Majors with C	3
				HIST 1483 or HIST 1493	United States to 1865 4 or United States, 1865 to the Present[4]	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**17**
SOPHOMORE	MATH 2934	Differential and Integral Calculus III [2]	4	MATH 3413	Physical Mathematics I	3
	PHYS 2524	General Physics for Engineering and Science Majors	4	MATH 3401	Numerical Methods With Matlab	1
	AME 2113	Statics	3	AME 2102	Engineering Design Graphics	2
	AME 2213	Thermodynamics	3	AME 2303	Materials, Design and Manufacturing Processes	3
	AME 2223	Introduction to Aerospace Engineering	3	AME 2533	Dynamics	3
				AME 2623	Circuits and Sensors	3
				ENGR 2002	Professional Responsibilities and Skills of Engineers and Scientists	2
		CREDIT HOURS	**17**		**CREDIT HOURS**	**17**
JUNIOR	AME 3112	Solid Mechanics Lab	2	AME 3333	Flight Mechanics	3
	AME 3143	Solid Mechanics	3	AME 3523	Aerospace Structural Analysis	3
	AME 3253	Aerodynamics	3		AME Approved Experimental Elective [5]	2
	AME 3272	Windtunnel Laboratory	2	P SC 1113	American Federal Government (Core III)	3
	AME 4383	Control Systems	3		AME Approved Simulation Elective [6]	3
		Approved Elective: Artistic Forms (Core IV-AF) [4]	3			
		CREDIT HOURS	**16**		**CREDIT HOURS**	**14**
SENIOR	AME 4243	Aerospace Propulsion Systems	3	AME 4373	Aerospace Systems Design II	3
	AME 4273	Aerospace Systems Design I	3		AME Approved Technical Elective [6]	3
	AME 4493	Space Sciences and Astrodynamics	3		Approved Elective: Western Culture (Core IV) [4]	3
	AME 4513	Flight Controls	3		Approved Elective: World Culture (Core IV) [4]	3
		AME Approved Technical Elective [6]	3		Approved Elective: Social Science (Core III) [4]	3
		CREDIT HOURS	**15**		**CREDIT HOURS**	**15**

1 CHEM 1315 can be substituted with CHEM 1335 (Fall only).

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

3 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.

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

5 It is recommended that a student take AME 4802 for the experimental elective.

6 Refer to the department-maintained list of Technical, Experimental, and Simulation electives for course options.