

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE  
IN AEROSPACE ENGINEERING/MASTER OF SCIENCE**  
**GALLOGLY COLLEGE OF ENGINEERING**  
**THE UNIVERSITY OF OKLAHOMA**

Academic Year
For Students Entering the Oklahoma State System for Higher Education Summer 2019 through Spring 2020

General Requirements	
Minimum Total Credit Hours .....	152-158
<b>Minimum Retention/Graduation Grade Point Averages:</b>	
Overall - Combined and OU .....	3.25
Major - Combined and OU .....	3.25

Program
<b>Aerospace Engineering</b>
<b>A010/F010</b>
Bachelor of Science in Aerospace Engineering/Master of Science

OU encourages students to complete at least 31 hours of applicable coursework each year to have the opportunity to graduate in 5 years.

**B.S. Portion of the Program Accredited by the Engineering Accreditation Commission of ABET, <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. AME courses are sequential and usually offered only in the semester shown; note prerequisites.

In order to progress into 2nd year courses in AME, students must successfully complete (grade C or better) MATH 1914; MATH 2924; PHYS 2514 and CHEM 1315 with 3.0 Combined Retention GPA, and possess a minimum 3.0 Combined Retention GPA in 24 or more credit hours. AP credit is acceptable for any of these required courses.

Approval for admission to the accelerated BS/MS program must be initiated at the beginning of the second semester of the junior year. Students may enter the accelerated program based on the undergraduate degree pattern offered in the year they first enrolled in the Oklahoma State System of Higher Education or later. Students are eligible for graduate status upon graduation with the Bachelor of Science in Aerospace Engineering.

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

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 ) <sup>1</sup>	5	MATH 2924	Differential and Integral Calculus II <sup>2</sup>	4
	MATH 1914	Differential and Integral Calculus I ( Core I ) <sup>2</sup>	4	PHYS 2514	General Physics for Engineering and Science Majors ( Core II )	4
	HIST 1483 or HIST 1493	United States, 1492 to 1865 ( Core IV ) or United States, 1865 to the Present	3	P SC 1113	American Federal Government ( Core III )	3
	ENGR 1411	Freshman Engineering Experience <sup>3</sup>	1	C S 1313	Programming for Non-Majors with C	3
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>17</b>
<b>SOPHOMORE</b>	MATH 2934	Differential and Integral Calculus III <sup>2</sup>	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 2303	Materials, Design and Manufacturing Processes	3
	AME 2213	Thermodynamics	3	AME 2533	Dynamics	3
	AME 2223	Introduction to Aerospace Engineering	3	AME 2623	Circuits and Sensors	3
				Approved Elective: Artistic Forms (Core IV) <sup>4</sup>	3	
	<b>CREDIT HOURS</b>		<b>17</b>	<b>CREDIT HOURS</b>		<b>16</b>
<b>JUNIOR</b>	AME 3112	Solid Mechanics Lab	2	AME 3103	Interactive Engineering Design Simulation	3
	AME 3143	Solid Mechanics	3	AME 3333	Flight Mechanics	3
	AME 3253	Aerodynamics	3	AME 3523	Aerospace Structural Analysis	3
	AME 3272	Windtunnel Laboratory	2	AME 3623	Embedded Real-Time Systems	3
	AME 4383	Control Systems	3	ENGL 3153	Technical Writing	3
ENGR 2002	Professional Development	2		Approved Experimental Elective <sup>5</sup>	2	
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>17</b>
<b>SENIOR</b>	AME 4243	Aerospace Propulsion Systems	3	AME 4373	Aerospace Systems Design II ( Capstone )	3
	AME 4273	Aerospace Systems Design I	3	COMM 3513	Intercultural Communication ( or an advisor-approved substitution ) (Western Civ. & Culture - Core IV) <sup>4</sup>	3
	AME 5493	Space Sciences and Astrodynamics	3	ANTH 4623	Approaches to Cross-Cultural Human Problems ( or an advisor-approved substitution ) (Non-Western Culture - Core IV) <sup>4</sup>	3
	AME 4513	Flight Controls	3		Approved Elective: Social Science (Core III) <sup>4</sup>	3
		AME Graduate Elective <sup>6</sup>	3		AME Graduate Elective <sup>6</sup>	3
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>15</b>
<b>FOURTH YEAR</b>	AME 5990	Special Projects ( Non-thesis students only ) <sup>7</sup>	0-3			
		<b>CREDIT HOURS</b>		<b>0-3</b>		
<b>FIFTH YEAR</b>	AME 5573	Advanced Engineering Analysis I ( or MATH Elective )	3		Choose one of the following: <sup>7</sup>	3-4
		Choose one of the following: <sup>7</sup>	2-3	AME 5980	Research for Master's Thesis ( Thesis Option )	
	AME 5980	Research for Master's Thesis ( Thesis Option )			Graduate-level Elective (Non-Thesis Option) <sup>6</sup>	
		Graduate-level Elective (Non-Thesis Option) <sup>6</sup>			AME Graduate Elective <sup>6,7</sup>	3
		AME Graduate Elective <sup>6</sup>	3		AME Graduate Elective <sup>6</sup>	3
	AME Graduate Elective <sup>6</sup>	3		AME Graduate Elective <sup>6</sup>	3	
	<b>CREDIT HOURS</b>		<b>11-12</b>	<b>CREDIT HOURS</b>		<b>12-13</b>

<sup>1</sup> CHEM 1315 can be substituted with CHEM 1335 (Fall only).

<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.

2 *Requirements for the Bachelor of Science in Aerospace Engineering/Master of Science*

<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 online.

<sup>5</sup> It is recommended that a student take AME 4802 for the experimental elective.

<sup>6</sup> Fourth and fifth year graduate electives must satisfy MS in aerospace engineering requirements.

<sup>7</sup> Dependent upon whether a student chooses the thesis or non-thesis option. Non-thesis option additionally requires: AME 5990 (3 hrs.) to be taken in the Summer between the Senior and the Fifth Year, and **Comprehensive Exam** to be taken in the last semester of study.

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