

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN INDUSTRIAL  
AND SYSTEMS ENGINEERING/MASTER OF BUSINESS ADMINISTRATION**  
**GALLOGLY COLLEGE OF ENGINEERING**  
**THE UNIVERSITY OF OKLAHOMA**

Academic Year	General Requirements	Program
For Students Entering the Oklahoma State System for Higher Education <b>Summer 2019 through Spring 2020</b>	Minimum Total Credit Hours ..... 154 <b>Minimum Retention/Graduation Grade Point Averages:</b> Overall - Combined and OU ..... 3.00 Major - Combined and OU ..... 3.00	<b>Industrial and Systems Engineering/ Business Administration</b>  <b>A530/F140 Q340</b>  Bachelor of Science in Industrial and Systems Engineering/Master of Business Administration
OU encourages students to complete at least 31 hours of applicable coursework each year to have the opportunity to graduate in 5 years.		

**2019 CHANGES PENDING APPROVAL**

**THIS PAGE DOES NOT REFLECT CHANGES CURRENTLY UNDER REVIEW FOR THE 2019-20 CATALOG YEAR.**

**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.

Students must take the GMAT and apply for the MBA program during the third year; minimum OU GPA and combined GPA of 3.0 is required. Students should submit an application to the School of Industrial and Systems Engineering for the accelerated program during the fall 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 must maintain a 3.0 GPA from the time of entering the accelerated program until graduation.

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 ) <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	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	PHYS 2514	General Physics for Engineering and Science Majors ( Core II )	4
	ENGR 1411	Freshman Engineering Experience <sup>3</sup>	1			
	CREDIT HOURS		16	CREDIT HOURS		14
SOPHOMORE	MATH 2934	Differential and Integral Calculus III <sup>2</sup>	4	CEES 2153	Mechanics of Materials	3
	PHYS 2524	General Physics for Engineering and Science Majors	4	ISE 3293	Applied Engineering Statistics	3
	CEES 2113	Statics	3	ISE 2303	Design and Manufacturing Process	3
	ENGR 2002	Professional Development	2	ISE 2311	Computer Aided Design and Graphics Laboratory for Industrial Engineers	1
	ISE 2823	Enterprise Engineering	3	C S 1323 or C S 1313	Introduction to Computer Programming for Programmers or Programming for Non-Majors with C MATH Elective	3
	CREDIT HOURS		16	CREDIT HOURS		16
JUNIOR	ISE 3304	Design and Manufacturing II	4	ISE 4223	Fundamentals of Engineering Economy	3
	ISE 4113	Spreadsheet Dec Support Sys	3	ISE 4633	Probabilistic Systems Models	3
	ISE 4553	Data-Driven Decision Making I	3	ISE 4804	Ergonomics in Systems Design <sup>5</sup>	4
	ISE 4623	Deterministic Systems Models	3	ISE 5563	Quality & Reliability Engineering <sup>5</sup>	3
	ENGR 2431	Electrical Circuits	1	ENGR 2461	Thermodynamics	1
		Approved Elective: Social Science (Core III) <sup>4</sup>	3	ENGR 3441	Fluid Mechanics	1
	CREDIT HOURS		17	CREDIT HOURS		15
SENIOR	ISE 4333	Production Systems/Operations <sup>5</sup>	3	MKT 5402	Marketing Management	2
	ISE 4663	Systems Analysis Using Simulation	3	FIN 5312	Corporate Finance	2
	ISE 5383	Systems Evaluation (Slashlisted with 4383)	3	ISE 4393	Capstone Design Project ( Capstone )	3
	ISE 5853	Data-Driven Decision Making II <sup>5</sup>	3		Approved Elective: Non-Western Culture (Core IV) <sup>4</sup>	3
	ACCT 5202	Financial Accounting	2		Approved Elective: Artistic Forms (Core IV) <sup>4</sup>	3
	FIN 5302	Financial Markets and Securities	2		Approved Elective: Western Civ. & Culture (Core IV) <sup>4</sup>	3
	B AD 5010	Foundations of MBA Success <sup>6</sup>	0	B AD 5812	Global Business Experience	2
	B AD 5101	MBA - Professional Development	1	B AD 5201	MBA - Professional Development II	1
	CREDIT HOURS		17	CREDIT HOURS		19
FIFTH YEAR	B AD 5001	Quantitative Methods and Modeling I	1	ACCT 5212	Managerial Accounting	2
	B AD 5102	Managerial Economics	2	B AD 5822	Business Consulting Practicum	2
	MGT 5702	Organizational Behavior	2	B AD 5902	Strategic Management	2
	MIT 5602	Management Information Systems	2	L S 5802	Business Ethics/Legal	2
	B AD 5832	Applied Field Project	2		MBA Elective <sup>7</sup>	2
		MBA Elective <sup>7</sup>	2		MBA Elective <sup>7</sup>	1
		MBA Elective <sup>7</sup>	2			
	CREDIT HOURS		13	CREDIT HOURS		11

<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.

<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> These courses are dual-counted, fulfilling requirements for both the undergraduate degree and the graduate business degree.

<sup>6</sup> A student who actively and satisfactorily participates in all Prelude activities will receive a grade of 'S' for B AD 5010. A student who does not satisfactorily participate in 75% of Prelude Week will be required to participate in a make-up session within the first two weeks of the semester. Failure to complete a make-up session will result in a grade of 'U' for B AD 5010, resulting in cancellation of the student's enrollment in the MBA program.

<sup>7</sup> To be chosen from an approved list of MBA electives available in the ISE office, CEC 116.

<sup>8</sup> To be chosen from an approved list of ISE electives available in the ISE office, CEC 116.

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.

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.

**APPROVED MATH ELECTIVE**

<b>Code</b>	<b>Title</b>	<b>Credit Hours</b>
MATH 2513	Discrete Mathematical Structures	3
MATH 3113	Introduction to Ordinary Differential Equations	3
MATH 3333	Linear Algebra I	3
MATH 3413	Physical Mathematics I	3
MATH 3513	Foundations of Analysis	3
MATH 3613	Modern Geometry	3
MATH 4433	Introduction to Analysis I	3