

# Industrial Engineering B.S.I.E.

## Industrial Engineering B.S.I.E. Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Industrial Engineering degree and a suggested sequence. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see the Eight-Semester Degree Policy (<http://catalog.uark.edu/undergraduatecatalog/academicregulations/eightsemesterdegreecompletionpolicy/>) in the Academic Regulations chapter for university requirements of the program.

Students are required to complete 40 hours of upper division courses (3000-4000 level). It is recommended that students consult with their adviser when making course selections.

First Year	Units	
	Fall	Spring
GNEG 1111 Introduction to Engineering I	1	
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) <sup>1</sup>	4	
CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)	3	
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1) <sup>1</sup>	3	
Select one of the following courses to satisfy General Education Outcome 4.2: <sup>1</sup>	3	
HIST 2013 History of the American People, 1877 to Present (ACTS Equivalency = HIST 2123)		
HIST 2003 History of the American People to 1877 (ACTS Equivalency = HIST 2113)		
PLSC 2003 American National Government (ACTS Equivalency = PLSC 2003)		
GNEG 1121 Introduction to Engineering II		1
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)		4
ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2) <sup>1, 2</sup>		3
BIOL 1543/1541L or CHEM 1123/1121L or GEOS 1113/1111L or PHYS 2074		4
PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034) (Satisfies General Education Outcome 3.4) <sup>1</sup>		4
Year Total:	14	16

Second Year	Units	
	Fall	Spring
INEG 2001 Industrial Engineering Seminar	1	

INEG 2103 Introduction to Industrial Engineering	3	
INEG 2214 Computing Methods for Industrial Engineers I	4	
INEG 2314 Statistics for Industrial Engineers I	4	
Math Elective: Choose one of the following	3	
MATH 2574 Calculus III (ACTS Equivalency = MATH 2603)		
MATH 2574C Calculus III		
MATH 2574H Honors Calculus III		
MATH 2584C Elementary Differential Equations		
MATH 2584H Honors Elementary Differential Equations		
MATH 2603 Discrete Mathematics		
MATH 3083 Linear Algebra		
INEG 2223 Computing Methods for Industrial Engineers II		3
INEG 2323 Probability and Stochastic Processes for Industrial Engineers		3
INEG 2413 Engineering Economic Analysis		3
INEG 2613 Introduction to Operations Research		3
ACCT 2403 Accounting Fundamentals for Planning and Control		3
Year Total:	15	15

Third Year	Units	
	Fall	Spring
INEG 3333 Statistics for Industrial Engineers II	3	
INEG 3443 Project Management	3	
INEG 3543 Facility Logistics	3	
INEG 3624 Simulation	4	
Select one of the following two options to satisfy General Education Outcome 3.3: <sup>1</sup>	3	
ECON 2143 Basic Economics: Theory and Practice		
or		
ECON 2013 Principles of Macroeconomics (ACTS Equivalency = ECON 2103) & ECON 2023 Principles of Microeconomics (ACTS Equivalency = ECON 2203)		
INEG 3553 Production Planning and Control		3
INEG 3533 Transportation Logistics		3
INEG 3714 Work Methods and Ergonomics		4
INEG 3833 Introduction to Database Concepts for Industrial Engineers		3
Social Science Elective - Choose a course that satisfies General Education Outcomes 3.3 and 4.1. <sup>1</sup>		3
Year Total:	16	16

Fourth Year	Units	
	Fall	Spring
INEG 4433 Systems Engineering and Management	3	
INEG 4913 Industrial Engineering Capstone Experience I	3	

Two Technical Electives	6	
Social Sciences Elective - Choose a course that satisfies General Education Outcome 3.3. <sup>1</sup>	3	
INEG 4924 Industrial Engineering Capstone Experience II (Satisfies General Education Outcome 6.1) <sup>1</sup>	4	
Two Technical Electives	6	
Fine Arts Elective - Choose a course that satisfies General Education Outcome 3.1. <sup>1</sup>	3	
Humanities Elective - Choose a course that satisfies General Education Outcomes 3.2 and 5.1. <sup>1</sup>	3	
Year Total:	15	16

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**Total Units in Sequence: 123**

<sup>1</sup> Students must complete the State Minimum Core requirements (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnextcatalog.uark.edu%2Fundergraduatecatalog%2Fgened%2Fstateminimum%2F&data=02%7C01%7Cagriffin%40uark.edu%7Ce4e632415f9b49eda9bf08d7f5c20b91%7C79c742c4e61c4fa5be89a3cb566a80d1%7C0%7C0%7C637248086069611524&sdata=4bJ2Oob83N8KftkGD%2F1XG8924jwOx8pTlw8lWNAGp0s%3D&reserved=0>) as outlined in the Catalog of Studies. The courses that meet the state minimum core also fulfill many of the university's General Education requirements (<https://nam03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnextcatalog.uark.edu%2Fundergraduatecatalog%2Fgened%2Fgeneraleducation%2F&data=02%7C01%7Cagriffin%40uark.edu%7Ce4e632415f9b49eda9bf08d7f5c20b91%7C79c742c4e61c4fa5be89a3cb566a80d1%7C0%7C0%7C637248086069621479&sdata=QptR3u0pvU0Z%2BDWRVefAqIMsYNX4KXEgX2JdEJJY7Go%3D&reserved=0>), although there are additional considerations to satisfy the general education learning outcomes. Students are encouraged to consult with their academic adviser when making course selections.

<sup>2</sup> Students who enter the university with credit for ENGL 1023 are not required to complete ENGL 1033. Students who enter the university with exemption from ENGL 1023 are encouraged to take ENGL 1033.