INDUSTRIAL ENGINEERING - BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING

Requirements (121 credits)

In addition to the university requirements for graduation, a student must have at least a 2.0 grade-point average in all departmental courses.

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 121 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
Area I: Communications		
English Composition - Level 1		
ENGL 1110G	Composition I	4
English Composition - Level 2		
ENGL 2210G	Professional and Technical Communication Honors	3
Oral Communication		
COMM 1115G	Introduction to Communication	3
Area II: Mathematics		
MATH 1511G	Calculus and Analytic Geometry I [1]	4
Area III/IV: Laboratory Sciences and Social/Behavioral Sciences		
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	4
PHYS 1310G & PHYS 1310L	Calculus -Based Physics I and Calculus -Based Physics I Lab	4
ECON 2110G	Macroeconomic Principles	3
or ECON 2120G	Principles of Microeconomics	
Area V: Humanities [2]		*3*
Area VI: Creative and Fine Arts [2]		*3*
General Education Elective		
MATH 1521G	Calculus and Analytic Geometry II	4
Viewing A Wider World [3]		**6**
Departmental/College Requirements		
Program Specific Requirements		
Mathematics		
MATH 1521G will count towards both the General Education Elective requirement and the Mathematics requirement for the department		
MATH 2530G	Calculus III	3
MATH 3160	Introduction to Ordinary Differential Equations	3
MATH 4230	Applied Linear Algebra	3
or MATH 2415	Introduction to Linear Algebra	
Natural Science Electives		*7-8*
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	
or PHYS 1320G/1320L	Calculus -Based Physics II	
Choose one from the following (3-4 credits):		
GEOL 1110G	Physical Geology	
BIOL 2110G	Principles of Biology: Cellular and Molecular Biology	
PHYS 2120	Heat, Light, and Sound	
Engineering Core		
ENGR 110	Introduction to Engineering Design	3
ENGR 190	Introduction to Engineering Mathematics	4
ENGR 233	Engineering Mechanics I	3
CHME 361	Engineering Materials	3
Capstone Course		
ENGR 401	Engineering Capstone I	3
ENGR 402	Engineering Capstone II	3
Industrial Engineering Topics Electives		
Choose two 3 credit Industrial Engineering topics courses, consisting of engineering and computer sciences and engineering design, and utilizing modern engineering tools: At least one course must be numbered 300 and above [4]		6
Industrial Engineering		
I E 151	Computational Methods in Industrial Engineering	3
I E 217	Manufacturing Processes	3
I E 311	Engineering Data Analysis	3
I E 316	Methods Engineering	3
I E 351	Applied Problem Solving in Industrial Engineering	3
I E 365	Quality Control	3
I E 413	Engineering Operations Research I	3
I E 423	Engineering Operations Research II	3
I E 424	Manufacturing Systems	3
I E 451	Engineering Economy	3
I E 460	Evaluation of Engineering Data	3
I E 467	Discrete-Event Simulation Modeling	3
I E 478	Facilities Planning and Design	3
Second Language: (not required)		
Electives, to bring the total credits to 121		**0**
Total Credits		**121-122**

1. MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1511G first.
2. See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses
3. See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses
4. Students are required to see the advisor for more detailed information about selecting the Industrial Engineering Topics Elective Courses that are approved to fulfill this requirement.