

B.S. in Industrial Engineering

Industrial Engineering

Industrial engineering students at St. Mary's University are trained as productivity and quality enhancement specialists. The industrial engineering program combines science, mathematics, and engineering coursework with laboratories and classes in communications, English, and other humanities and social sciences.

The same techniques used by industrial engineers in the production and manufacturing arenas can be used to improve quality in service industries. Industrial engineers are concerned with improving the interaction between humans and our equipment. They are experts when it comes to saving money and improving the workplace for fellow workers.

They may be found shortening production times, streamlining a hospital operating room, designing a comfortable workstation, distributing products worldwide, or manufacturing superior cars.

The B.S. in Industrial Engineering is accredited by the Engineering Accreditation Commission of ABET.

Code	Title	Semester Hours
St. Mary's University Core ¹		
SMC 1301	Foundations of Civilization	3
SMC 1311	Foundations of Reflection:Self	3
SMC 1312	Foundations of Reflection: Nature	3
SMC 1313	Foundations of Reflection: Others	3
SMC 1314	Foundations of Reflection: God	3
SMC 2301	Foundations of Practice: Ethics	3
SMC 2302	Foundations of Practice: Civic Engagement and Social Action	3
SMC 2303	Foundations of Practice:Fine Arts and Creative Process	3
SMC 2304	Foundations of Practice: Literature	3
EG 4363	Senior Design Project II ²	3
School of Science, Engineering, and Technology Specific Core		
Foreign Languages		
Computer, Electrical, Industrial and Mechanical Engineering majors are exempt from the foreign language requirement.		
Rhetoric & Composition ³		3
EN 1311	Rhetoric and Composition	
Fine Arts		3
EG 1301	Engineering Graphics and Design	
Social Science		3
EG 3334	Engineering Economy	
Speech		3
EG 4362	Senior Design Project I	
Theology		3
Select one of the following:		
Advanced Theology TH 33XX/43XX		
HU 3300	Perspectives and Themes in History, Philosophy and/or Theology	
B.S. Industrial Engineering Major Courses ⁴		
CH 1401	General Chemistry I	4
EG 1101	Introduction to Engineering	1
EG 1302	Programming for Engineers	3
EG 2307	Engineering Mechanics	3
EG 2322	Work Design & Product Measure	3
EG 2325	Industrial Automation and Control	3
EG 3145	Circuits and Systems Lab	1
EG 3316	Human Factors	3
EG 3333	Lean Production Systems	3

EG 3335	Optimization	3
EG 3336	Applied Optimization & Stochastic Analysis	3
EG 3337	Supply Chain Management	3
EG 3345	Circuits and Systems	3
EG 4132	Computer Aided Manufacturing & Robotics Lab	1
EG 4330	Quality Control & Reliability	3
EG 4331	Manufacturing Processes	3
EG 4332	Computer Aided Manufacturing	3
EG 4337	Computer Simulation	3
MT 2412	Calculus I	4
MT 2413	Calculus II	4
MT 3311	Differential Equations	3
MT 4331	Probability Theory	3
MT 4332	Statistics	3
PY 1404	University Physics I	4
PY 2404	University Physics II	4
Industrial Engineering Elective		3
Select one of the following:		
EG 3331	Design & Analysis of Experiments	
EG 3338	Logistics Management	
EG 3339	Facility Layout and Material Handling	
Technical Elective		6
Select two of the following:		
EG 2308	Strength of Materials	
EG 2309	Fluid Mechanics	
EG 2385	Dynamics	
EG 2386	Engineering Thermodynamics I	
EG 3388	Intro to Biomechanical Engineering	

Proficiency in Information Technology and Information Literacy

For this major, this requirement will be fulfilled by passing coursework within the degree plan.

Total Semester Hours 128

- 1 All St. Mary's Core SMC 13XX "Reflection" courses must be completed before registering for SMC 23XX "Practice" courses, unless authorized by student's adviser.
- 2 EG 4363 fulfills SMC 4301 requirement.
- 3 Grade of "C" or better is required. International students may be required to take EN 1313 to fulfill this requirement.
- 4 Engineering students must make a grade of "C" or better in all engineering courses and their prerequisites. One exception applies to the graduating senior who may petition his/her adviser to allow one grade of "D." Students are not permitted to take an engineering, science, or mathematics courses unless all prerequisites are passed with a grade of "C" or better.

This is a recommended degree plan subject to changes. Please meet with your adviser on a regular basis.

First Year

Fall	Semester Spring Hours	Semester Hours
SMC 1301	3 SMC 1311	3
EN 1311	3 SMC 1312	3
EG 1302	3 EG 1301	3
EG 1101	1 MT 2413	4
MT 2412	4 PY 2404	4
PY 1404	4	
ND 0101	0	
18		17

Second Year

Fall	Semester Spring Hours	Semester Hours
CH 1401	4 SMC 1313	3
EG 2307	3 SMC 1314	3
EG 2325	3 SMC 2301	3
MT 4331	3 EG 2322	3
Technical Elective #1	3 MT 4332	3
	16	15

Third Year

Fall	Semester Spring Hours	Semester Hours
EG 3333	3 SMC 2302	3
EG 3335	3 EG 3336	3
EG 4330	3 EG 4132	1
EG 4331	3 EG 4332	3
MT 3311	3 EG 4337	3
	Industrial Engineering Elective #1	3
	15	16

Fourth Year

Fall	Semester Spring Hours	Semester Hours
SMC 2303	3 EG 4363	3
SMC 2304	3 Advanced Theology	3
EG 3337	3 EG 3145	1
EG 3345	3 EG 3316	3
EG 4362	3 EG 3334	3
	Technical Elective #2	3
	15	16

Total Semester Hours 128