ASHLAND UNIVERSITY | Richard E. & Sandra J. Dauch COLLEGE OF BUSINESS & ECONOMICS

AACSB ACCREDITED

Curriculum Guide: B.S. in Industrial & Systems Engineering

Four Year Curriculum Guide (Beginning with the 2026 catalog)

Year 1 - Fall Semester

Course #	Title	CR
MATH 205	Calculus I (Core 1) (FA)	5
IE 203	Intro to Engineering Analysis (FA)	3
ENG 101	English Composition I (Core 2)	3
CHEM 103	General Chemistry I (Core 3) (FA)	4
MATH 223	Discrete Mathematics I (FA)	3
		18

Year 1 - Spring Semester

Course #	Title	CR
MATH 206	Calculus II (SP)	5
ENG 102	English Composition II (Core 4)	3
MFG 201	Manufacturing Processes (SP)	3
ECON 232	Principles of Microeconomics (Core 6)	3
MATH 250	Mathematical Proof	1
		15

Year 2 - Fall Semester

Course #	Title	CR
CORE	Institutional Requirement (Core 6)	3
MATH 305	Calculus III(FA)	4
MATH 317	Probability (odd FA)	3
PHYS 205	University Physics (FA) (Core 7)	4
IE 202	Engineering Economics Analysis	3
		17

Year 2 - Spring Semester

Course #	Title	CR
MATH 307	Linear Algebra (SP)	3
IE 205	Intro to Info Systems Engineering (SP)	3
IE 201	Engineering Management (SP)	3
PHYS 206	University Physics II (SP)	4
		13

Year 3 - Fall Semester

Course #	Title	CR
CORE	Institutional Requirement (Core 8)	3
IE 303	Productivity Analysis (FA)	3
IS 304	Facility Layout & Material Handling (FA)	3
IE 305	Human Factors Engineering (FA)	3
IE 401	Statistical Testing & Regression (FA)	3
		15

Year 3 - Spring Semester

Course #	Title	CR
CORE	Institutional Requirement (Core 9)	3
CORE	Institutional Requirement (Core 10)	3
CORE	Institutional Requirement (Core 11)	3
IE 402	Design of Experiments & Quality Assuranc	3
MATH 308	Operations Research (odd SP)	3
		15

Year 4 - Fall Semester

Course #	Title	CR
IE 406	Simulation Modeling (FA)	3
CORE	Institutional Requirement (Core 12)	3
IE 403	Supply Chain Analysis (FA)	3
MFG 310	Electrical Circuits & Devices (FA)	3
IE 405	Prob. Methods in Op. Research (FA)	3
		15

Year 4 - Spring Semester

Course #	Title	CR
CORE	Institutional Requirement (Core 13)	3
CORE	Institutional Requirement (Core 14)	3
CORE	Institutional Requirement (Core 15)	3
IE 407	Senior Project (SP)	3
MATH 313	Differential Equations (even SP)	3
		15

Total Credit Hours 123

This plan accommodates a 15 credit hour minor.

Refer to program evaluation for verification of program progress.

Institutional Requirements (CORE) - refer to catalog for specific guidelines/course options.

OFFICE OF ADMISSIONS

401 College Avenue Ashland, OH 44805

Phone: 419.289.5052 **Fax**: 419.289.5999

E-Mail: enrollme@ashland.edu