Curriculum - Industrial Engineering, BSE

Catalog Year: 2025 - 2026 **General Studies Gold**

Degree: Bachelor of Science in Engineering, BSE

College/School: Ira A. Fulton Schools of Engineering

Plan Code: ESIEEBSE

Minimum credit hours: 120

Upper division minimum credit hours: 54

Requirement	Minimum Grade	Credit Hours
Industrial Engineering Lower Division Requirements		
IEE 210 Introduction to Industrial Engineering	C	3
FSE 100 Introduction to Engineering	C	2
Industrial Engineering Upper Division Requirements		
IEE 300 Economic Analysis for Engineers	C	3
IEE 305 Information Systems Engineering	C	3
IEE 321 Professional Engineering Practice	C	1
IEE 369 Work Analysis and Design	C	3
IEE 376 Operations Research Deterministic Techniques/Applications	C	4
IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)	C	3
IEE 385 Engineering Statistics: Probability	C	3
IEE 461 Production Control	C	3

Requirement	Minimum Grade	Credit Hours
IEE 470 Stochastic Operations Research	C	3
IEE 474 Quality Control	C	3
IEE 475 Simulating Stochastic Systems (QTRS)	C	4
IEE 485 Systems Design Capstone I	C	3
IEE 486 Systems Design Capstone II	C	3
400-Level IEE 4 Elective**		
IEE 412 Introduction to Financial Engineering	C	9
IEE 421 Urban Operations Research		
IEE 426 Operations Research in Healthcare		
IEE 431 Engineering Administration		
IEE 437 Human Factors Engineering		
IEE 454 Risk Management		
IEE 458 Project Management		
IEE 461 Production Control		
IEE 470 Stochastic Operations Research		
IEE 474 Quality Control		
IEE 475 Simulating Stochastic Systems (QTRS)		
IEE 477 System Dynamics and Thinking		
Industrial Engineering Major Electives	C	3
CEE 400 Earth Systems Engineering and Management (SUST)		
CSE 310 Data Structures and Algorithms		
CSE 330 Operating Systems		

Requirement	Minimum Grade	Credit Hours
CSE 360 Introduction to Software Engineering		
CSE 494 Topic: Data Mining		
EEE 352 Properties of Electronic Materials		
EEE 435 Fundamentals of CMOS and MEMS		
EEE 436 Fundamentals of Solid-State Devices		
FSE 301 Entrepreneurship and Value Creation		
FSE 404 EPICS Gold: EPICS in Action		
STP 425 Stochastic Processes		
STP 429 Applied Regression (QTRS)		
AND 300-Level IEE 3** Elective		
IEE 300 Economic Analysis for Engineers		
IEE 305 Information Systems Engineering		
IEE 320 Extreme Excel		
IEE 321 Professional Engineering Practice		
IEE 369 Work Analysis and Design		
IEE 376 Operations Research Deterministic Techniques/Applications		
IEE 376 Operations Research Deterministic Techniques/Applications		
IEE 380 Probability and Statistics for Engineering Problem Solving (QTRS)		
IEE 381 Lean Six Sigma Methodology		
IEE 385 Engineering Statistics: Probability		
AND 400-Level IEE 4** Elective		

Requirement	Minimum Grade	Credit Hours
IEE 412 Introduction to Financial Engineering		
IEE 421 Urban Operations Research		
IEE 426 Operations Research in Healthcare		
IEE 431 Engineering Administration		
IEE 437 Human Factors Engineering		
IEE 454 Risk Management		
IEE 458 Project Management		
IEE 461 Production Control		
IEE 470 Stochastic Operations Research		
IEE 474 Quality Control		
IEE 475 Simulating Stochastic Systems (QTRS)		
IEE 477 System Dynamics and Thinking		

Industrial Engineering Major GPA

Check: Minimum 2.0 Major GPA

Interdisciplinary Requirements

CHM 114 General Chemistry for Engineers (SCIT) **OR** CHM 116 General Chemistry II (SCIT)	C	4
PHY 121 University Physics I: Mechanics (SCIT) **AND** PHY 122 University Physics Laboratory I (SCIT)	C	4
PHY 131 University Physics II: Electricity and Magnetism (SCIT) **AND** PHY 132 University Physics Laboratory II (SCIT)	C	4
CSE 110 Principles of Programming (QTRS)	C	3

CSE 205 Object-Oriented Programming and Data Structures (QTRS)	C	3
ECN 211 Macroeconomic Principles (SOBE) OR ECN 212 Microeconomic Principles (SOBE)	C	3
MAE 201 Mechanics of Particles and Rigid Bodies I: Statics		3
MAT 342 Linear Algebra OR MAT 343 Applied Linear Algebra	C	3
MAT 265 Calculus for Engineers I (MATH)	C	3
MAT 266 Calculus for Engineers II (MATH)	C	3
MAT 267 Calculus for Engineers III (MATH)	C	3
MAT 275 Modern Differential Equations (MATH)	C+	3

ASU 101 or College-Specific First-Year Seminar

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

ASU 101-CAI The ASU Experience		1

First-Year Composition

ENG 101 First-Year Composition AND ENG 102 First-Year Composition OR ENG 105 Advanced First-Year Composition OR ENG 107 First-Year Composition AND ENG 108 First-Year Composition	C	6

Notes

All baccalaureate degree students must fulfill university graduation requirements, including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses.
https://catalog.asu.edu/undergraduatereq

All undergraduate students must complete General Studies requirements. https://catalog.asu.edu/ug_gsr

Mathematics Placement Assessment score determines placement in first mathematics course.

Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2025 - 2026 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.