

Alexandria Technical and Community College
General Engineering AAS to
Arizona State University
[2024-2025 Industrial Engineering, BSE](#)

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ATCC	Semester Hours	Arizona State University Requirements	Semester Hours
CHEM 1500 General Chemistry I	4	CHM 113 General Chemistry I (SCIT)	4
CSCI 1525 C++ for Scientists and Engineers	4	CSE 100 Principles of Programming with C++ (QTRS) (not applicable to the Industrial Engineering, BSE) AND CSE department elective (not applicable to the Industrial Engineering, BSE)	3 +1
ENGL 1410 Composition I	3	ENG 101 First-Year Composition	3
ENGL 1420 Composition II	3	Eng 102 First-Year Composition	3
ENGR 1220 Introduction to Engineering	3	FSE 100 Introduction to Engineering AND FSE department elective (applicable toward 120 hours)	2 +1
ENGR 2101 Statics	3	MAE 201 Mechanics of Particles and Rigid Bodies I: Statics	3
MATH 1425 Precalculus	4	MAT 170 Precalculus (MATH) (not applicable to the Industrial Engineering, BSE) AND MAT department elective (not applicable to the Industrial Engineering, BSE)	3 +1
MATH 1426 Calculus I	4	MAT 270 Calculus with Analytic Geometry I (MATH) (fulfills MAT 265 Calculus for Engineers I requirement)	4*
NAV 101 Naval Ethics and Leadership (separate USNCC transcript required upon transfer)	3	PHI 105 Intro to Ethics (HUAD) (fulfills first Humanities Arts and Design requirement)	3
NAV 102 Modern Naval History (separate USNCC transcript required upon transfer)	3	HST department elective (HUAD) (fulfills second Humanities Arts and Design requirement)	3
NAV 103 Naval Force Design (separate USNCC transcript required upon transfer)	3	POS department elective (CIVI) (fulfills Governance and Civic Engagement requirement)	3
NAV 104 Civilian/Military Relations, Org, & American Gov (separate USNCC transcript required upon transfer)	3	POS 110 American Government and Politics (AMIT) (fulfills American Institutions requirement)	3
NAV 105 Intro to the Geopolitical Environment (separate USNCC transcript required upon transfer)	3	POS 160 Global Politics (GCSI) (fulfills Global Communities, Societies and Individuals requirement)	3
PHYS 1081 Engineering Physics I	4	PHY 121 University Physics I: Mechanics (SCIT) AND PHY 122 University Physics Laboratory I (SCIT)	3 +1
JST credits (To earn JST credit, a separate JST transcript required upon transfer)	13	Reviewed upon transfer to ASU	-
TOTAL CREDITS REQUIRED	60	TOTAL CREDITS	47
		TOTAL CREDITS APPLICABLE TOWARD INDUSTRIAL ENGINEERING BSE	38

*only 3 credits applicable to requirement

Credits Remaining at ASU	Semester Hours
CSE 110 Principles of Programming**	3
CSE 205 Object-Oriented Programming and Data Structures	3
ECN 211 Macroeconomic Principles** OR ECN 212 Microeconomic Principles**	3
IEE 210 Introduction to Industrial Engineering	3
IEE 300 Economic Analysis for Engineers	3
IEE 305 Information Systems Engineering	3
IEE 321 Professional Engineering Practice	1
IEE 369 Work Analysis Design	3
IEE 376 Operations Research Deterministic Techniques/Applications	4
IEE 380 Probability and Statistics for Engineering Problem Solving	3
IEE 385 Engineering Statistics: Probability	3
IEE 461 Production Control	3
IEE 470 Stochastic Operations Research	3
IEE 474 Quality Control	3
IEE 475 Simulating Stochastic Systems	4
IEE 485 Systems Design Capstone I	3
IEE 486 Systems Design Capstone II	3
IEE 400-level Elective	3
IEE 400-level Elective	3
IEE 400-level Elective	3
MAT 266 Calculus for Engineers II**	3
MAT 267 Calculus for Engineers III**	3
MAT 275 Modern Differential Equations**	3
MAT 342 Linear Algebra OR MAT 343 Applied Linear Algebra	3
PHY 131 University Physics II: Electricity and Magnetism** AND PHY 132 University Physics Laboratory II**	3 +1
Sustainability (SUST)	3
Upper Division Industrial Engineering Major Elective	3
TOTAL CREDITS	82

**ATCC has equivalency, but it is not required as part of the General Engineering AAS degree

EVALUATION SUMMARY	Semester
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	Hours
ATCC Credits Applicable to Industrial Engineering, BSE	38
ASU Credits Applicable to Industrial Engineering, BSE	82
TOTAL CREDITS REQUIRED	120