

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

Created: February 2025

ATCC	Semester Hours	Arizona State University Requirements	Semester Hours
COMM 1437 Intercultural Communication	3	COM 263 Intercultural Communication (GCSI) (fulfills Global Communities, Societies and Individuals requirement)	3
CHEM 1500 General Chemistry I	4	CHM 113 General Chemistry I (SCIT)	4
ENGL 1410 Composition I	3	ENG 101 First-Year Composition	3
ENLG 1420 Composition II	3	Eng 102 First-Year Composition	3
ENGL 1495 Environmental Literature	3	ENG department elective (HUAD) (fulfills first Humanities Arts and Design requirement)	3
MATH 1425 Precalculus	4	MAT 170 Precalculus (MATH) (not applicable to the Industrial Engineering, BSE) AND MAT department elective (applicable toward 120 hours)	3 +1
MATH 1426 Calculus I	4	MAT 270 Calculus with Analytic Geometry I (MATH) (fulfills MAT 265 Calculus for Engineers I requirement)	4*
MATH 1447 Introduction to Statistics	4	STP 226 Elements of Statistics (QTRS) (not applicable to the Industrial Engineering, BSE) AND STP department elective (not applicable to the Industrial Engineering, BSE)	3 +1
MATH 2232 Calculus II	4	MAT 271 Calculus with Analytic Geometry II (MATH) (fulfills MAT 266 Calculus for Engineers II requirement)	4*
MFGE 2252 Programmable Logic Controls	4	EEE department elective (not applicable to the Industrial Engineering, BSE)	4
NAV 101 Naval Ethics and Leadership (separate USNCC transcript required upon transfer)	3	PHI 105 Intro to Ethics (HUAD) (fulfills second Humanities Arts and Design requirement)	3
NAV 102 Modern Naval History (separate USNCC transcript required upon transfer)	3	HST department elective (HUAD) (not applicable to the Industrial Engineering, BSE if HUAD fulfilled by ENG DEC HUAD and PHI 105 equivalencies)	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) (not applicable to the Industrial Engineering, BSE if GCSI fulfilled by COM 263 equivalency)	3
NUCP Nuclear Technical Elective	4	Non-transferable	0
PHYS 1081 Engineering Physics I	4	PHY 121 University Physics I: Mechanics (SCIT) AND PHY 122 University Physics Laboratory I (SCIT)	3 +1
PHYS 1082 Engineering Physics II	4	PHY 131 University Physics II: Electricity and Magnetism (SCIT) AND PHY 121 University Physics Laboratory II (SCIT)	3 +1
TOTAL CREDITS REQUIRED	60	TOTAL CREDITS	56
		TOTAL CREDITS APPLICABLE TOWARD INDUSTRIAL ENGINEERING BSE	37

*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
FSE 100 Introduction to Engineering **	2
Governance and Civic Engagement (CIVI)	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
MAE 201 Mechanics of Particles and Rigid Bodies I: Statics	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
Sustainability (SUST)	3
Upper Division Industrial Engineering Major Elective	3
TOTAL CREDITS	83

**ATCC has equivalency, but it is not required as part of the Nuclear Engineering Technology AS degree

EVALUATION SUMMARY		Semester Hours
ATCC Credits Applicable to Industrial Engineering, BSE		37
ASU Credits Applicable to Industrial Engineering, BSE		83
TOTAL CREDITS REQUIRED		120