

Alexandria Technical and Community College
Nuclear Engineering Technology AS to
Arizona State University
[2024-2025 Mechanical 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) (not applicable to the Mechanical Engineering, BSE)	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 Humanities Arts and Design requirement)	3
MATH 1425 Precalculus	4	MAT 170 Precalculus (MATH) (not applicable to the Mechanical Engineering, BSE) AND MAT department elective (not applicable to the Mechanical 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*
MATH 1447 Introduction to Statistics	4	STP 226 Elements of Statistics (QTRS) (not applicable to the Mechanical Engineering, BSE) AND STP department elective (not applicable to the Mechanical 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*
MFGT 2252 Programmable Logic Controls	4	EEE department elective (not applicable to the Mechanical Engineering, BSE)	4
NAV 101 Naval Ethics and Leadership (separate USNCC transcript required upon transfer)	3	PHI 105 Intro to Ethics (HUAD) (not applicable to the Mechanical Engineering, BSE if HUAD fulfilled by ENG DEC HUAD equivalency)	3
NAV 102 Modern Naval History (separate USNCC transcript required upon transfer)	3	HST department elective (HUAD) (not applicable to the Mechanical Engineering, BSE if HUAD fulfilled by ENG DEC HUAD equivalency)	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 Mechanical 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 MECHANICAL ENGINEERING BSE	29

*only 3 credits applicable to requirement

Credits Remaining at ASU	Semester Hours
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CHM 114 General Chemistry for Engineers OR CHM 116 General Chemistry II**	4
EEE 202 Circuits I	4
FSE 100 Introduction to Engineering**	2
Governance and Civic Engagement (CIVI)	3
MAE 201 Mechanics of Particles and Rigid Bodies I: Statics**	3
MAE 202 Mechanics of Particles and Rigid Bodies II: Dynamics**	3
MAE 213 Mechanics of Materials	3
MAE 214 Computer-Aided Engineering I	1
MAE 215 Introduction to Programming in MATLAB	1
MAE 241 Introduction to Thermodynamics**	3
MAE 242 Introduction to Fluid Mechanics	3
MAE 301 Applied Experimental Statistics	3
MAE 318 System Dynamics and Control I	4
MAE 384 Advanced Mathematical Method for Engineers	3
MAE 417 System Dynamics and Control II	3
MAT 242 Elementary Linear Algebra	2
MAT 267 Calculus for Engineers III**	3
MAT 275 Modern Differential Equations**	3
MEE 322 Structural Mechanics	3
MEE 323 Computer-Aided Engineering II	2
MEE 340 Heat Transfer	3
MEE 342 Principles of Mechanical Design	3
MEE 488 Mechanical Engineering Design I	3
MEE 489 Mechanical Engineering Design II	3
MEE 491 Experimental Mechanical Engineering	2
MSE 250 Structure and Properties of Materials	3
Sustainability (SUST)	3
Upper Division HUAD Track Course	3
Upper-Division SOBE Track Course	3
Upper Division Technical Elective	3
Upper Division Technical Elective	3
Upper Division Technical Elective	3
TOTAL CREDITS	91

**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 Mechanical Engineering, BSE	29

ASU Credits Applicable to Mechanical Engineering, BSE	91
TOTAL CREDITS REQUIRED	120