

Alexandria Technical and Community College
General Engineering AAS to
Arizona State University
2024-2025 Mechanical Engineering, BSE

Created: February 2025

ATCC	Semester Hours	Arizona State University Requirements	Semester Hours
CHEM 1500 General Chemistry I	4	CHM 113 General Chemistry I (SCIT) (not applicable to the Mechanical Engineering, BSE)	4
CSCI 1525 C++ for Scientists and Engineers	4	CSE 100 Principles of Programming with C++ (QTRS) (not applicable to the Mechanical Engineering, BSE) AND CSE department elective (not applicable to the Mechanical 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 (not applicable to the Mechanical Engineering, BSE)	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 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*
NAV 101 Naval Ethics and Leadership (separate USNCC transcript required upon transfer)	3	PHI 105 Intro to Ethics (HUAD) (fulfills 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 Mechanical Engineering, BSE if HUAD fulfilled by PHI 105 equivalency)	3
NAV 103 Naval Force Design (separate USNCC transcript required upon transfer)	3	POS department elective (CIVL) (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 MECHANICAL ENGINEERING BSE	30

*only 3 credits applicable to requirement

Credits Remaining at ASU	Semester
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	Hours
CHM 114 General Chemistry for Engineers OR CHM 116 General Chemistry II**	4
EEE 202 Circuits I	4
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 266 Calculus for Engineers II**	3
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
PHY 131 University Physics II: Electricity and Magnetism** AND PHY 132 University Physics Laboratory II**	3 +1
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	90

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

EVALUATION SUMMARY		Semester Hours
ATCC Credits Applicable to Mechanical Engineering, BSE		30
ASU Credits Applicable to Mechanical Engineering, BSE		90
TOTAL CREDITS REQUIRED		120