



2025-2026 Transfer Guide

Associate of Engineering with Core 42

BS-Mechanical Engineering



MCC—Fall Semester 1	Hrs	MCC—Spring Semester 1	Hrs	MCC—Summer Semester 1	Hrs
CHEM 111 General College Chemistry I	5	ENGL 102 or 215 Comp II or Technical Writing	3	COMM 100 Fundamentals of Speech (AE Comm)	3
ENGL 101 Composition & Reading I	3	MATH 190 Analytic Geometry & Calculus II	5	Core 42 Humanities/Arts Requirement	3
ENGR 101 Intro to Engineering Profession	1	PHYS 220 Engineering Physics I	5	AE History and Social Science Course***	3
MATH 180 Analytic Geometry & Calculus I	5	AE History & Social Sciences Course**	3		
AE Humanities Course*	3				

MCC—Fall Semester 2	Hrs	MCC—Spring Semester 2	Hrs	MCC—Summer Semester 2	Hrs
ENGR 229 Statics	3	ENGR 204 Programming for Eng & Sci	3	Core 42 Humanities/Arts Requirement	3
MATH 210 Analytic Geometry & Calculus III	5	ENGR 223 Thermodynamics & Heat Transfer	4	Core 42 Elective (if needed)	3
PHYS 221 Engineering Physics II	5	ENGR 230 Dynamics	3		
Core 42 Social/Behavioral Sciences Requirement	3	ENGR 240 Mechanics of Materials	3		
		MATH 230 Differential Equations	3		

UMKC—Fall Semester 3	Hrs	UMKC—Spring Semester 3	Hrs	UMKC—Summer Semester 3	Hrs
MEC-ENGR 324 Engineering Materials	3	MEC-ENGR 306 Numerical Analysis	3		
MEC-ENGR 351 Fluid Mechanics	3	MEC-ENGR 352 Mechanical Instruments Lab	3		
MEC-ENGR 360 Applied Thermodynamics	3	MEC-ENGR 380 Manufacturing Methods	3		
MEC-ENGR 130 Engineering Graphics^	3	MEC-ENGR 385 System Dynamics	3		
MATH 300 Linear Algebra I	3	MEC-ENGR 399/399L Heat Transfer/Lab	4		

UMKC—Fall Semester 4	Hrs	UMKC—Spring Semester 4	Hrs	UMKC—Summer Semester 4	Hrs
MEC-ENGR 492 Mechanical Design Synth I	3	MEC-ENGR 496WI Mechanical Design Synth II	3		
MEC-ENGR 356 Mech Component Design	3	E&C-ENGR 276 Circuit Theory I^	3		
MEC-ENGR 415 Control Systems Theory	3	E&C-ENGR 277 Circuit Theory I Lab^	1		
MEC-ENGR 4XX ME Design Elective	3	MEC-ENGR 4XX ME Technical Elective	3		
MEC-ENGR 4XX ME Technical Elective	3	MEC-ENGR 4XX ME Technical Elective	3		

*Acceptable courses include ART 108, ART 150, ART 151, ENGL 214, ENGL 216, ENGL 240, ENGL 254, ENGL 262, HIST 133, HIST 134, MUSI 108, MUSI 160, PHIL 100, THEA 106

**Acceptable courses include HIST 120, HIST 121, POLS 136

***Acceptable courses include HIST 120, HIST 121, ECON 210, ECON 211, POLS 136

^ Students may reverse transfer this course back to MCC to complete the Associate of Engineering degree.

Students should consult with an academic advisor to be sure that courses for the MDHE Core 42 satisfy the requirements before enrolling.

UMKC School of Science & Engineering · SS&C Student Services Center
 336 Flarsheim Hall · 5110 Rockhill Road
 816-235-2399 · sse@umkc.edu · sse.umkc.edu

Metropolitan Community College
 Blue River · Longview · Maple Woods · Penn Valley
 816-604-1000 · www.mccckc.edu/advising