Bachelor of Science in Mechanical Engineering
McLennan Community College
2+2 Transfer Guide

McLennan Community College & Angelo State University Transfer Plan for Mechanical Engineering, Associate of Science (A.S.) Bachelor of Science in Mechanical Engineering (B.S.M.E.)						
McLennan Community College Fall Semester Year 1		**sch**		**McLennan Community College Spring Semester Year 1**		**sch**
ENGR 1201 (Program Requirement)	Introduction to Engineering *will transfer as ASU's ENGR 1201*	2		ENGR 2304 (Program Requirement)	Programming for Engineers *will transfer as ASU's ENGR 2304*	3
ENGR 1304 (Program Requirement)	Engineering Graphics I *will transfer as ASU's ENGR 1304*	3		PHYS 2425 (Core 030N & Major Support Course)	University Physics I *will transfer as ASU's PHYS 2325* ***AND*** *PHYS 2125*	4
MATH 2413 (Core 020N & Major Support Course)	Calculus I *will transfer as ASU's MATH 2413*	4		MATH 2414 (Major Support Course)	Calculus II *will transfer as ASU's MATH 2414*	4
ENGL 1301 (Core 010N)	Composition I *will transfer as ASU's ENGL 1301*	3		ENGL 2311 (Core 010N)	Technical & Business Writing *will transfer as ASU's ENGL 2311*	3
EDUC 1100 **OR** EDUC 1300[1] (Major Support Course)	Learning Frameworks *will transfer as ASU's USTD NENA (GS 1181)*	1/3		HIST 1302 (Core 060N)	United States History II *will transfer as ASU's HIST 1302*	3
HIST 1301 (Core 060N)	United States History I *will transfer as ASU's HIST 1301*	3				
	TOTAL	**16 /18**			TOTAL	**17**
McLennan Community College Fall Semester Year 2		**sch**		**McLennan Community College Spring Semester Year 2**		**sch**
ENGR 2301 (Program Requirement)	Engineering Mechanics: Statics *will transfer as ASU's ENGR 2301*	3		ENGR 2302 (Program Requirement)	Engineering Mechanics: Dynamics *will transfer as ASU's ENGR 2302*	3
PHYS 2426 (Core 030N & Major Support Course)	University Physics II *will transfer as ASU's PHYS 2326* ***AND*** *2126*	4		ENGR 2305 (Program Requirement)	Electrical Circuits I Lecture *will transfer as ASU's ENGR 2305*	3
MATH 2415[2] (Major Support Course)	Calculus III *will transfer as ASU's MATH NENA*	4		ENGR 2105	Electrical Circuits I Laboratory *will transfer as ASU's ENGR NENA*	1

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MATH 2318[3] (Major Support Course)	Linear Algebra *will transfer as ASU's MATH NENA*	3		CHEM 1409 (Area B 090N & Major Support Course)	Chemistry for Engineers *will transfer as ASU's CHEM 1311* ***AND*** *1111*	4
Creative Arts (Core 050N)	*Will transfer as ASU's Creative Arts*	3		MATH 2320[3] (Major Support Course)	Differential Equations *Will transfer as ASU's MATH NENA*	3
				SPCH 1315 (Area A 091)	Public Speaking *will transfer as ASU's COMM 1315*	3
	TOTAL	**17**			TOTAL	**17**
				TOTAL DEGREE HOURS		**67 / 69**

[1] MCC's EDUC 1100 or EDUC 1300 will transfer as ASU's USTD NENA and is approved to substitute ASU's GS 1181 (Freshman Seminar Course).

[2]MATH 2415 will transfer as MATH NENA. MATH 2415 is approved to substitute MATH 3415 for the purpose of this agreement with the DLH Department of Engineering. If a student changes their major, the substitution will not apply to their new degree plan.

[3]MATH 2318 will transfer as MATH NENA and MATH 2320 will transfer as MATH NENA. Taking both MATH 2318 and MATH 2320 are approved to substitute ASU's MATH 3324. This is approved for the purpose of this agreement with the DLH Department of Engineering. If a student changes their major, the substitution will not apply to their new degree plan.

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ASU Fall Semester Year 1		**sch**		**ASU Spring Semester Year 1**		**sch**
POLS 2305 (Core 070N)	Federal Government (Federal Constitution and Topics)	3		ENGR 3305 (Program Requirement)	Probability and Risk in Engineering	3
MENG 2311 (Program Requirement)	Engineering Thermodynamics	3		ENGR 2332 (Program Requirement)	Mechanics of Materials	3
ENGR 3404 (Program Requirement)	Introduction to Fluid Mechanics	4		ENGR 2318 (Program Requirement)	Sustainable Development Principles	3
MENG 3441 (Program Requirement)	Mechanisms and Dynamics of Machines	4		MENG 3351 (Program Requirement)		3
	TOTAL	**14**			TOTAL	**12**

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ASU Fall Semester Year 2		**sch**		**ASU Spring Semester Year 2**		**sch**
ENGR 3331 (Program Requirement)	Engineering Materials	3		POLS 2306 (Core 070N)	Texas Government (Texas Constitution and Topics)	3
Social and Behavioral Sciences (Core 080N)		3		ENGR 4201 (Program Requirement)	Professional Engineering Practice	2
Mathematics/ Science Elective (Program Requirement)		3		MENG Technical Elective (Program Requirement)		3
MENG Elective (Program Requirement)	Introductory Elective (3352 or 3353)	3		MENG 4279 (Program Requirement)	Mechanical Engineering Senior Design I	2
				MENG 3411 (Program Requirement)	Heat Transfer	4
	TOTAL	**12**			TOTAL	**14**
ASU Fall Semester Year 3		**sch**				
MENG 4380 (Program Requirement)	Mechanical Engineering Senior Design II	3				
MENG Design Elective (Program Requirement)		3				
MENG Design Elective (Program Requirement)		3				
Language, Philosophy, and Culture (Core 040N)		3				
	TOTAL	**12**				
				B.S.M.E. TOTAL DEGREE HOURS		**131 / 133**

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Mechanical Engineering Fundamentals

I. Overall GPA of at least 2.50.
II. Completion of the sequence below with a GPA of at least 2.50:
- Engineering 1201 – Introduction to Engineering
- Engineering 1304 – Engineering Graphics
- Engineering 2301* - Engineering Mechanics – Statics
- Engineering 2302* - Engineering Mechanics – Dynamics
- Engineering 2305 – Electrical Circuits
- Mathematics 2413* - Calculus I
- Mathematics 2414*- Calculus II
- Physics 2325/2125* - Fundamentals of Physics I
- Physics 2326/2126* - Fundamentals of Physics II

III. Successful completion of the advancement exam.

*A grade of "C" or better is required for these courses.

Additional Notes

Please Note: This guide is for students to utilize as a reference of what courses they can take at each institution. It's possible for students to take these courses in a different sequence if they are coming in with prior credit or if there are changes to course offerings and degree plans. Therefore, it is encouraged for students to reach out to their academic advisor at each institution to discuss current course options and sequences.

If students do not take MATH 2318: Linear Algebra at MCC, students will then need to take either MATH 3301 or MATH 3324 at ASU. Students are encouraged to reach out to the Academic Advisor at ASU to determine the best course option to meet the MATH 3324 requirement.