

**TRANSFER ARTICULATION AGREEMENT**  
**Wichita State Univeristy**  
**Butler Community College**  
**Associate in Science in Pre-Engineering**  
**B.S. Manufacturing Engineering or B.S. Industrial Engineering**

Butler AS Pre-Engineering Requirements			Recommended AS Classes Transferable to WSU for BSIE or BSMfgE			Wichita State University BS MfgE Requirements			Wichita State University BS IE Requirements		
Course	Course Name	Cr Hrs	Course	Course Name	Cr Hrs	Course	Course Name	Cr Hrs	Course	Course Name	Cr Hrs
EG 101	English Composition I	3	EG 101	English Composition I	3	ENGL 101	College English I	3	ENGL 101	College English I	3
EG 112	Technical Writing	3	EG 102	English Composition II	3	ENGL 102	College English II	3	ENGL 102	College English II	3
SP 100	Public Speaking	3	SP 100	Public Speaking	3	COMM 111	Public Speaking	3	COMM 111	Public Speaking	3
	Fine Arts Elective	3		Fine Arts Elective	3		Fine Arts Elective	3		Fine Arts Elective	3
						PHIL 385	Engineering Ethics	3	PHIL 385	Engineering Ethics	3
	Humanities Elective	3		Humanities Elective	3		Humanities Elective	3-6		Humanities Elective	3-6
	SS/BSci Electives (1 each)	6		Social/Behavioral Sci Electives	6		Social/Behavioral Sci Electives	6-9		Social/Behavioral Sci Electives	6-9
MA 151	Calc I w/Analytical Geometry	5	MA 151	Calc I w/Analytical Geometry	5	MATH 242	Calculus I	5	MATH 242	Calculus I	5
MA 152	Calc II w/Analytical Geometry	5	MA 152	Calc II w/Analytical Geometry	5	MATH 243	Calculus II	5	MATH 243	Calculus II	5
MA 253	Calc III w/ Analytical Geometry	3	MA 253	Calc III w/ Analytical Geometry	3	MATH 344	Calculus III	3	MATH 344	Calculus III	3
MA 260	Differential Equations	3	MA 260	Differential Equations	3	MATH 555	Differential Equations	3	*If have credit for Diff Eq, qualify for Math minor		
									MATH 511	Linear Algebra	3
						IME 254	Engr Probability & Statistics I	3	IME 254	Engr Probability & Statistics I	3
PH 251	Physics I	5	PH 251	Physics I	5	PHYS 313	University Physics I	4	PHYS 313	University Physics I	4
PH 252	Physics II	5	PH 252	Physics II	5	PHYS 314	University Physics II	4	PHYS 314	University Physics II	4
CH 110	College Chemistry I	5	CH 110	College Chemistry I	5	CHEM 211	General Chemistry	5	CHEM 211	General Chemistry	5
EN 260	Statics	3	EN 260	Statics	3	AE 223	Statics	3	AE 223	Statics	3
						ECE 282	Circuits I	4	ECE 282	Circuits I	4
						IME 255	Engr Economy	3	IME 255	Engr Economy	3
						ME 398	Thermodynamics I	3	ME 398	Thermodynamics I	3
						ME 325*	Computer Applications	3	MIS 310*	Fundamentals of Programming	3
						ME 250/251	Materials Engineering w/ Lab	4	ME 250	Materials Engineering	3
						IME 258	Mfg Methods & Materials I	3	IME 258	Mfg Methods & Materials I	3
	Related Elective	3	EN 214	3D Modeling & CAD (prereq EN 101)	3	IME 222	Eng Graphics	3	IME 222	Eng Graphics	3
						AE 333	Mechanics of Materials	3	IME 452	Work Systems	3
EN 101	Eng Graphics I (Prereq for EN 214)	3	Required for AS but does not count towards WSU IME or MfgE degree			IME 524	Engr Probability & Statistics II	3	IME 524	Engr Probability & Statistics II	3
						IME 439	Mech Engr Design I	3	IME 549	Industrial Ergonomics	3
						IME 558	Mfg Methods & Materials II	4	IME 550	Operations Research	3
						IME 553	Production Systems	3	IME 553	Production Systems	3
						IME 554	Statistical Quality Control	3	IME 554	Statistical Quality Control	3
						IME 576	Composites Manufacturing	3	IME 556	Information Systems	3
						IME 664	Engineering Management	3	IME 563	Facilities Planning	2
						IME 676	Aircraft Mfg & Assembly	3	IME 565	Systems Simulation	3
						IME 590	IME Design I	3	IME 590	IME Design I	3
						IME 690	IME Design II	3	IME 690	IME Design II	3
EN 115	Engineering Concepts	2	EN 115	Engineering Concepts	2	IME XXX	Technical Elective	3	IME XXX	Technical Elective	3
						IME XXX	Technical Elective	3	IME XXX	Technical Elective	3
						??? XXX	Out-of-Dept Tech Elective	3	??? XXX	Out-of-Dept Tech Elective	3
									??? XXX	Out-of-Dept Tech Elective	3
	Physical Education	1									
	<b>TOTAL REQD BUTLER HRS</b>	<b>64</b>		<b>BUTLER to WSU IE HRS</b>	<b>60</b>		<b>TOTAL WSU MFGE HRS</b>	<b>128</b>		<b>TOTAL WSU IE HRS</b>	<b>128</b>

**BUTLER to WSU MfgE HRS**                      **60**  
**TOTAL BUTLER HRS TAKEN**                      **64**

Upper Division @ WSU                      46  
\* = OR CS 211- Problem Solving & Programming in C

Upper Division @ WSU                      50  
\* = OR CS 211- Problem Solving & Programming in C