



WICHITA STATE UNIVERSITY AND BUTLER COMMUNITY COLLEGE 2+2 AGREEMENT
Associate in Science Degree/Bachelor's Degree in Product Design and Manufacturing Engineering
March 26, 2020

The purpose of the 2+2 Agreement is to provide Butler Community College's students a four-year coordinated program through the pre-engineering curriculum where students will receive an Associate in Science degree at Butler Community College (BCC) in the first two years and a Bachelor of Science degree in Product Design and Manufacturing Engineering from Wichita State University (WSU) after two additional years. This agreement will provide guidance for both parties in advising students.

This agreement is for Butler Community College students who have:

- Earned an Associates in Science (A.S.) degree according to attached degree plan in Pre-Engineering.
- Achieved a minimum cumulative GPA of 2.0.
- Applied for admission to WSU.

Butler Community College students meeting the above requirements will:

- Be guaranteed admission to WSU with completion of application requirements and receipt of transcripts.
- Enter with junior status toward a baccalaureate degree.
- Be guaranteed to transfer 64 credit hours from Butler Community College to WSU.

This partnership reflects the following objectives, institutional expectations, and operational principles:

- Expanded student program opportunities, course articulation understandings, and transfer coordination considered mutually beneficial in this coordinated partnership.
- Graduates will possess the technical skills and conceptual background, creative mindset and applied experiences to address the workforce needs for achieving the desired economic development in the State of Kansas.
- All students must complete all major, institutional, and required degree requirements appropriate to the program curricula at the degree granting institution in order to graduate.
- Both Butler Community College and Wichita State University College of Engineering program faculty and administrators will promote the program with qualified prospective students and share assessment of learning outcomes toward the goal of program improvement.
- Students can inquire about academic and participation scholarships, financial aid, and grants by contacting the WSU Financial Aid office (316) 978-3430 and the College of Engineering, Engineering Student Success Center at (316) 978-3420.
- Students transferring to WSU from Butler Community College who have not completed an A.S. must meet the necessary requirements for admission to WSU, and will have their transcript evaluated on an individual basis.

In order to ensure a successful transition and completion of the associates' and bachelors' degrees from both institutions in this 2+2 agreement, students should refer to the required degree plans or stipulations of this agreement. Transfer students must complete at least 60 credit hours of four-year college work and no less than 45 credit hours of upper-division work in order to qualify for graduation from Wichita State University. Courses used as prerequisites may have higher grade requirements as described in the WSU undergraduate catalog.

Reverse Transfer

Students, who transfer to Wichita State University from Butler Community College before attainment of the Associate in Science degree, are eligible to reverse transfer courses that have WSU/BCC equivalency back to Butler. This allows for the attainment of the Associate in Science degree provided that at least 45 credit hours are earned at Butler and all other degree requirements are met.

Modification of Agreement

This agreement shall only be modified in writing with the same formality as the original agreement.

Terms of Agreement

The agreement will begin with the 2020-2021 academic year.

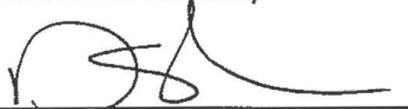
Termination of Agreement

Either party may terminate this agreement for any reason with a written notice from either party. The parties agree that termination shall include an agreement that students currently enrolled in the program at the time of termination shall be permitted to complete the program as described herein.

Wichita State University

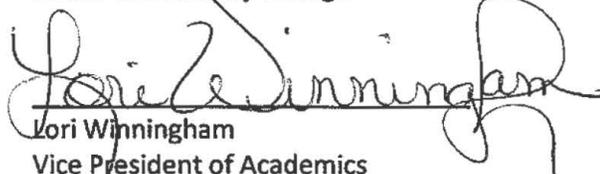


Dr. Richard Muma
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Dr. Dennis Livesay
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Butler Community College



Lori Winningham
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Butler Community College



Mel Whiteside
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Butler Community College

Product Design and Manufacturing Engineering Pathway (2+2)

Butler Community College & Wichita State University

Courses taken at Butler Community College for completion of Associate in Science Degree

Freshman – 1st Semester (Taken at Butler) 16 Credit Hours		
Wichita State University Equivalent	Butler Community College	Hours
ENGL 101 College English I	EG 101 English Composition I	3
MATH 242 Calculus I	MA 151 Calculus I w/Analytic Geometry	5
CHEM 211 General Chemistry I	CH 110 College Chemistry I	5
General Education (Social & Behavioral Science)	Approved General Education (Social & Behavioral Science) as found on the WSU Transfer Guide	3
Freshman – 2nd Semester (Taken at Butler) 14 Credit Hours		
ENGL 102 College English II	EG 102 English Composition II	3
MATH 243 Calculus II	MA 152 Calculus II w/Analytic Geometry	5
IME 258 Manufacturing Methods & Materials I	IT 204 OR EN 201 Materials & Processes of Industry	3
General Education (Fine Arts)	Approved General Education (Fine Arts) as found on the WSU Transfer Guide	3
Sophomore – 1st Semester (Taken at Butler) 17 Credit Hours		
COMM 111 Public Speaking	SP 100 Public Speaking	3
MATH 344 Calculus III	MA 253 Calculus III w/Analytic Geometry	3
PHYS 313 Physics for Scientists I (4 hours) and PHYS 315 University Physics Lab I (1 hour)	PH 251 Physics I	5
Credit awarded after successful completion of EN 102 (TE*)	EN 101 Engineering Graphics I	3
IME 255 Engineering Economy	EC 250 Engineering Economics	3
Sophomore – 2nd Semester (Taken at Butler) 17 Credit Hours		
General Education (Humanities)	Approved General Education (Humanities) as found on the WSU Transfer Guide	3
AE 223 Statics	EN 260 Statics	3
PHYS 314 Physics for Scientists II (4 hours) and PHYS 316 University Physics Lab II (1 hour)	PH 252 Physics II	5
IME 222 Engineering Graphics & IME 222L Graphics Lab	EN 102 Engineering Graphics II	3
MATH 350 Modeling Differential Equations (Satisfies MATH 555 Differential Equations I requirement)	MA 260 Differential Equations	3

*TE: Transferred as Technical Elective credits

A total of 64 credit hours taken at Butler Community College for completion of Associate in Science degree
64 credit hours will transfer to WSU towards B.S. degree in Product Design and Manufacturing Engineering

Product Design and Manufacturing Engineering Pathway (2+2)

Butler Community College & Wichita State University
Courses taken at Wichita State for completion of B.S. in Product Design and Manufacturing Engineering

Junior – 1st Semester (Taken at WSU) 14 Credit Hours	
Wichita State University Requirement	Hours
EE 282 Circuits I	4
IME 254 Engineering Probability & Statistics I	3
ME 250 Materials Engineering	3
ME 251 Materials Engineering Laboratory	1
Technical Elective	3
Junior – 2nd Semester (Taken at WSU) 16 Credit Hours	
AE 333 Mechanics of Materials	3
Technical Elective	3
IME 558 Manufacturing Methods II	4
PHIL 385 Engineering Ethics	3
MATH 451 Computational Mathematics Using MATLAB	3
Junior – Summer Semester (Taken at WSU) 3 Credit Hours	
IME 676 Aircraft Manufacturing and Assembly	3
Senior – 1st Semester (Taken at WSU) 16 Credit Hours	
IME 561 Industrial Controls and Instrumentation	4
IME 553 Production Systems	3
Technical Elective	3
IME 554 Statistical Quality Control	3
IME 425 Kinematic and Dynamic Design	3
Senior – 2nd Semester (Taken at WSU) 15 Credit Hours	
Technical Elective	3
IME 761 Robotics Tech	3
ME 672 Manufacturing of Composites	3
IME 590 Industrial Engineering Design I	3
IME 625 Robust Product Design	3

The plan above requires 45 hours of upper-division course work.
A total of 64 credit hours taken at Wichita State for the completion of the B.S.
degree in Product Design and Manufacturing Engineering