



**WICHITA STATE UNIVERSITY AND COWLEY COLLEGE 2+2 AGREEMENT**  
**Associates of Science Degree/Bachelor's Degree in Manufacturing Engineering**  
**August 3, 2017**

The purpose of the 2+2 Agreement is to provide Cowley College's students a four-year coordinated program through the pre-engineering curriculum where students will receive an Associates of Science degree at Cowley College (CC) in the first two years and a Bachelor of Science degree in 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 Cowley College students who have:

- Earned an Associates of 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.

Cowley 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 65 credit hours from Cowley 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 Cowley 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 Cowley 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 including 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 Cowley College before attainment of the Associates of Science degree, are eligible to reverse transfer courses that have WSU/CC equivalency back to Cowley. This allows for the attainment of the Associates of Science degree provided that at least 45 credit hours are earned at Cowley 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 2017-2018 academic year.

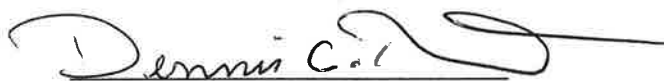
**Termination of Agreement**

Either party may terminate this agreement for any reason with a written notice from either party.

This agreement is a collaboration between Wichita State University and Cowley College. Any changes, corrections, or additions to this agreement shall be in writing and signed by all necessary parties between both academic institutions.

**Wichita State University**

**Cowley College**



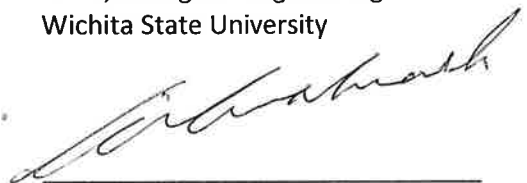
Dr. Anthony J. Vizzini  
Provost and Senior Vice President  
Wichita State University

Dr. Dennis C. Rittle  
President  
Cowley College



Dr. Royce Bowden  
Dean, College of Engineering  
Wichita State University

Dr. Harold Arnett  
Vice President of Academic Affairs  
Cowley College



Dr. Krishna Krishnan  
Department Chair  
Industrial, Systems and Manufacturing Engineering

Dr. Michelle Schoon  
Instructor/Chair  
Natural Science Department  
Cowley College

**Manufacturing Engineering Pathway (2+2)**  
**Cowley College & Wichita State University**  
**Courses taken at Cowley College for completion of Associates Degree of Science**

<b>Freshman – 1st Semester (Taken at Cowley) 16 Credit Hours</b>		
<b>Wichita State University Equivalent</b>	<b>Cowley College</b>	<b>Hours</b>
ENGL 101 College English I	ENG 2211 Composition I	3
MATH 242 Calculus I	MTH 4435 Calculus I	5
CHEM 211 General Chemistry I	CHM 4220 Chemistry I	5
ENGR 101 Introduction to Engineering	PHS 4545 Intro to Engineering	2
HPS 2000 Elective (not transferable to B.S. degree)	Heath & Physical Education Elective	1
<b>Freshman – 2nd Semester (Taken at Cowley) 17 Credit Hours</b>		
ENGL 102 College English II	ENG 2212 Composition II	3
General Education (Social and Behavioral Science)	Approved General Education (Social and Behavioral Science) as found on the WSU Transfer Guide	3
MATH 243 Calculus II	MTH 4440 Calculus II	5
General Education (Fine Arts)	Approved General Education (Fine Arts) as found on the WSU Transfer Guide	3
CS 211 Introduction to Programming	CIS 1876 C Programming	3
<b>Sophomore – 1st Semester (Taken at Cowley) 16 Credit Hours</b>		
COMM 111 Public Speaking	COM 2711 Public Speaking	3
IME 255 Engineering Economy	PHS 4555 Engineering Economy	3
MATH 344 Calculus III	MTH 4455 Calculus III	5
PHYS 313 Physics for Scientists I and PHYS 315 University Physics Lab I	PHS 4560 Engineering Physics I	5
<b>Sophomore – 2nd Semester (Taken at Cowley) 17 Credit Hours</b>		
General Education (Social & Behavioral Science)	Approved General Education (Social and Behavioral Science) as found on the WSU Transfer Guide	3
IME 254 Engineering Probability and Statistics I	MTH 4445 Engineering Probability and Statistics I	3
PHYS 314 Physics for Scientists II and PHYS 316 University Physics Lab II	PHS 4561 Engineering Physics II	5
AE 223 Statics	PHS 4570 Statics	3
General Education (Humanities)	Approved General Education (Humanities) as found on the WSU Transfer Guide	3

A total of 66 credit hours taken at Cowley College for completion of Associates Degree of Science  
65 credit hours will transfer to WSU towards B.S. degree in Manufacturing Engineering

**Manufacturing Engineering Pathway (2+2)**  
**Cowley College & Wichita State University**  
**Courses taken at Wichita State for completion of B.S. in Manufacturing Engineering**

<b>Junior – 1<sup>st</sup> Semester (Taken at WSU) 17 Credit Hours</b>	
<b>Wichita State University Requirement</b>	<b>Hours</b>
EE 282 Circuits I	4
MATH 555 Differential Equations I	3
ME 250 Materials Engineering	3
ME 251 Materials Engineering Laboratory	1
AE 333 Mechanics of Materials	3
IME 258 Manufacturing Methods I	3
<b>Junior – 2nd Semester (Taken at WSU) 16 Credit Hours</b>	
ME 439 Mechanical Engineering Design I	3
IME 222 Engineering Graphics	3
PHIL 385 Engineering Ethics	3
IME 524 Engineering Probability & Statistics II	3
IME 558 Manufacturing Methods II	4
<b>Senior – 1st Semester (Taken at WSU) 18 Credit Hours</b>	
ME 672 Manufacturing of Composites	3
IME 664 Engineering Management	3
IME 676 Aircraft Manufacturing & Assembly	3
ME 665 Selection of Materials for Design and Manufacturing	3
ME 398 Thermodynamics I	3
Technical Elective	3
<b>Senior – 2nd Semester (Taken at WSU) 18 Credit Hours</b>	
General Education-Further Studies	3
IME 553 Production Systems	3
ME 637 Computer-Aided Engineering <u>OR</u> ME 639 Finite Element Methods <u>OR</u> IME 410/ENGT 410 Robotics Technology	3
IME 590 Industrial Engineering Design I	3
IME 554 Statistical Quality Control	3
Technical Elective	3

A total of 69 credit hours taken at Wichita State for the completion of the B.S. degree in Manufacturing Engineering