



WICHITA STATE UNIVERSITY AND STERLING COLLEGE
DUAL BACHELOR OF SCIENCE DEGREE
ARTICULATION AGREEMENT
MATHEMATICS/INDUSTRIAL ENGINEERING
September 21, 2018

The purpose of this Articulation Agreement is to provide learning opportunities through a transfer agreement aimed for Sterling College (SC) students to complete a dual degree. By completing the degree plan indicated below, SC students will have the opportunity to complete a Bachelor of Science (B.S.) in Mathematics from SC and a Bachelor of Science (B.S.) in Industrial Engineering from Wichita State University (WSU).

The following SC-WSU 2+2 program: is designed to help students complete a Bachelor of Science in Mathematics at SC providing required prerequisite classes to assist in the preparation for a Bachelor of Science degree in Industrial Engineering in the College of Engineering at WSU. Upon completion of the bachelor's degree at WSU, SC may accept up to 92 credit hours to complete a Bachelor of Science in Mathematics at SC.

SC (2 years): SC courses include basics skills, humanities, social sciences, fine arts, physics, mathematics and other sciences foundation and core courses in addition to pre-engineering required courses. SC students must complete at least 45 hours of upper-division engineering credits including all WSU College of Engineering co-curricular requirements in order to qualify for graduation in Industrial Engineering.

Sterling College:

- SC students must complete at least 32 credit hours at SC and a minimum of 12 credit hours in a student's major must be taken at Sterling College.
- Students must fulfill all graduation requirements as outlined in SC's academic catalog.
- Provide space within math and science departments for materials.
- Inform the WSU College of Engineering concerning course content changes and Technical Elective (if applicable) course number changes or deletions.
- Provide WSU with required official transcripts at time of student's transferring to WSU.
- Work with WSU advisors in the transfer of courses back to SC for the purpose of degree completion at SC.
- SC staff to provide appropriate course scheduling and advising for students based on course catalog/scheduling availability.

Wichita State University:

- Provide academic advising and support to SC students in the transfer process.
- Provide SC with official transcripts for the purpose of SC degree completion, including assistance with students' degree audit processes as per student's request.
- Articulate and promote articulation agreement.



- Assist SC student with all academic, non-academic and co-curricular including internship/co-op requirements.
- Provide options for SC students to take WSU courses (summer or online/hybrid options).
- In order to fulfill degree stipulations, SC students participating in this articulation will work with SC advising to schedule process for transferring institutional assessment and SC graduation requirements.

A handwritten signature in black ink, appearing to read 'Linnea GlenMayer', written over a horizontal line.

Dr. Linnea GlenMayer
Associate Vice President for Academic Affairs
Wichita State University

A handwritten signature in black ink, appearing to read 'Scott Rich', written over a horizontal line.

Dr. Scott Rich
President
Sterling College

A handwritten signature in black ink, appearing to read 'Steven Skinner', written over a horizontal line.

Dr. Steven Skinner
Interim Dean, College of Engineering
Wichita State University

A handwritten signature in black ink, appearing to read 'Ken Brown', written over a horizontal line.

Dr. Ken Brown
Vice President for Academic Affairs
Sterling College

A handwritten signature in black ink, appearing to read 'Krishna Krishnan', written over a horizontal line.

Dr. Krishna Krishnan
Chair,
Industrial, Systems and Manufacturing Engineering
Wichita State University

A handwritten signature in black ink, appearing to read 'Erin Laudermilk', written over a horizontal line.

Dr. Erin Laudermilk
Associate Vice President for Academic Affairs
Sterling College

A handwritten signature in black ink, appearing to read 'Jonathan Conard', written over a horizontal line.

Dr. Jonathan Conard
Chair, Natural Sciences and Mathematics
Sterling College



**WICHITA STATE
UNIVERSITY**



**Dual Degree Pathway in Mathematics
and Industrial Engineering
Sterling College & Wichita State University**

Freshman – 1st Semester (taken at Sterling) 15 Credit Hours		
Wichita State University Equivalent	Sterling College	Hours
ENGL 101 College English I	LL 101 College Composition I	3
CS 211 Intro to Programming OR General Education (Social and Behavioral Science). Recommended PSY 111 General Psychology OR SOC 111 Introduction to Sociology OR ECON 201 Principles of Macroeconomics	CS 150 CIS I OR Approved General Education (Social and Behavioral Science) as found on the WSU Transfer Equivalency Table. Recommended BS 125 Gen Psychology OR BS 115 Prin of Sociology OR BU 200 Macroeconomics (<i>must have CIS 150 in this or in Sophomore 1st semester</i>)	3
CHEM 211 General Chemistry I	CH 151/Lab General Chemistry I	5
REL 115 New Testament (General Education - Humanities)	TM 103 Intro to New Testament	3
LASI 2000 Elective	GD 105 Foundations of Servant Leadership (Required for BS degree at Sterling College)	1
REL 2000 Elective	GD 190 Chapel/Convocation (Required for BS degree at Sterling College)	0
Freshman – 2nd Semester (taken at Sterling) 16 Credit Hours		
ENGL 102 College English II	LL 102 College Composition II	3
COMM 111 Public Speaking	CM 101 Public Speaking	3
MATH 242 Calculus I	MA 200 Calculus I	5
CHEM 212 General Chemistry II (Technical Elective)	CH 152/Lab General Chemistry II	5
REL 2000 Elective	GD 190 Chapel/Convocation (Required for BS degree at Sterling College)	0
Freshman- 2nd Semester INTERTERM (taken at Sterling) 3 Credit Hours		
REL 110 Old Testament	TM 102 Intro to Old Testament	3
Sophomore – 1st Semester (taken at Sterling) 17 Credit Hours		
Credit awarded after successful completion of PH 210, PH 220, PH 211 & PH 221	PH 210 Physics I	5
Credit awarded after successful completion of PH 210, PH 220, PH 211 & PH 221	PH 220 Applications of Calc to Physics I	1
MATH 243 Calculus II	MA 210 Calculus II	5
CS 211 Intro to Programming OR General Education (Social and Behavioral Science). Recommended PSY 111 General Psychology OR SOC 111 Introduction to Sociology OR ECON 201 Principles of Macroeconomics	CS 150 CIS I OR Approved General Education (Social and Behavioral Science) as found on the WSU Transfer Equivalency Table. Recommended BS 125 Gen Psychology OR BS 115 Prin of Sociology OR BU 200 Macroeconomics (<i>must have CIS 150 in this or in Freshman 1st semester</i>)	3

REL 2000 Elective	GD 190 Chapel/Convocation (Required for BS degree at Sterling College)	0
General Education (Fine Arts) OR MATH 511 Linear Algebra	Approved General Education (Fine Arts) as found on the WSU Transfer Equivalency Table OR MA 330 Linear Algebra	3
Sophomore – 1st Semester INTERTERM (taken at Sterling) 3 Credit Hours		
General Education (Further Studies in Humanities or Social and Behavioral Science). Recommended ECON 202 Principles of Microeconomics OR PSY 325 Developmental Psychology	Approved General Education (Further Studies in Humanities or S&BS). Recommend BU 201 Microeconomics OR BS 225 Developmental Psychology as found on the WSU Transfer Equivalency Table	3
Sophomore – 2nd Semester (taken at Sterling) 17 Credit Hours		
General Education (Social and Behavioral Science)	Approved General Education (Social and Behavioral Science) as found on the WSU Transfer Equivalency Table	3
MATH 344 Calculus III	MA 220 Calculus III (Multivariable)	3
Credit awarded after successful completion of PH 210, PH 220, PH 211 & PH 221	PH 211 Physics II	5
PHYS 313 Physics for Scientist I PHYS 315 University Physics Lab I (Technical Elective) PHYS 314 Physics for Scientist II PHYS 316 University Physics Lab II (Technical Elective)	PH 221 Applications of Calc to Physics II	1
REL 4000 Elective	TM 366 Basic Christian Doctrine (Required for BS degree at Sterling College)	3
HPS 2000 Elective	ES 101 Concepts of Physical Fitness/Health (Required for BS degree at Sterling College)	2
REL 2000 Elective	GD 190 Chapel/Convocation (Required for BS degree at Sterling College)	0

Junior – 1st Semester (taken at WSU) 18 Credit Hours	
Wichita State University Requirement	Hours
IME 254 Engineering Probability and Statistics I	3
MATH 555 Differential Equations I (Math & Science Elective)	3
MATH 511 Linear Algebra OR IME 222/L Engineering Graphics/L (MATH 511 taken at WSU if not taken at Sterling College)	3
IME 258 Manufacturing Methods I	3
IME 556 Information Systems	3
IME 255 Engineering Economy	3
Engineer of 2020 (1 of 3)	
Junior – 2nd Semester (taken at WSU) 18 Credit Hours	
IME 452 Work Systems	3
IME 524 Engineering Probability and Statistics II	3

IME 553 Production Systems	3
IME 554 Statistical Quality Control	3
MATH 415 Intro to Advance Mathematics (Technical Elective)	3
IME 550 Operations Research I	3
Engineer of 2020 (2 or 3)	
Senior – 1st Semester (taken at WSU) 17 Credit Hours	
IME 650 Operations Research II	3
IME 222/L Engineering Graphics/Lab (not needed if MATH 511 taken at Sterling College) OR General Education (Fine Arts)	3
IME 563 Facilities Planning	3
IME 590 Industrial Engineering Design I	3
MATH 513 Fund Concepts of Algebra OR MATH 547 Advance Calculus I (Technical Elective)	3
Technical Elective	2
Senior – 2nd Semester (taken at WSU) 15 Credit Hours	
IME 549 Industrial Ergonomics	3
IME 565 System Simulations	3
IME 690 Industrial Engineering Design II	3
PHIL 385 Engineering Ethics	3
Technical Elective	3
Engineer of 2020 (3 or 3)	

Courses transferring to Sterling College from Wichita State University will satisfy requirements for Bachelors of Science Degree in Mathematics while completing BS degree requirements for Industrial Engineering at Wichita State University