## **Articulation Agreement**

Between

## **Macomb Community College (MCC)**

Associate of Science (AS) in Pre-Engineering with Michigan Transfer Agreement (MTA) And

## **Wayne State University College of Engineering**

Bachelor of Science (BS) in Mechanical Engineering

This agreement made this 1<sup>st</sup> day of October 2021 is by and between Wayne State University (WSU) and Macomb Community College (MCC).

Wayne State University and Macomb Community College intend by this Agreement to set forth the terms and conditions of engaging in an educational program, to facilitate the transfer of students who earn an Associate of Science (AS) in Pre-Engineering with Michigan Transfer Agreement (MTA) endorsement from Macomb Community College to earn a Bachelor of Science (BS) in Mechanical Engineering from Wayne State University's College of Engineering. Wayne State University and Macomb Community College may be referred to herein as a ("Party") and collectively ("Parties").

## Article I Agreement on Program Integrity

The Parties will maintain the integrity of their separate academic programs and enter into this agreement as equal and cooperating partner institutions.

## Article II Agreement on Principle

This agreement between WSU and MCC is intended to provide a smooth and seamless curriculum transition for MCC students who transfer to Wayne State University to earn a Bachelor of Science in Mechanical Engineering from the College of Engineering. The agreement is designed for students who follow a prescribed plan of study leading to the associate degree. The credits transferred from the associate degree, as outlined in the appendices to this document, will be included in the total credit hours required for the Wayne State University Bachelor of Science in Mechanical Engineering. All other standard admission, curriculum, and graduation requirements of WSU and MCC must also be met.

# Article III Agreement of Program Articulation

The Parties agree that any student, who has earned the prescribed associate degree, may transfer the credits from their program to the WSU Bachelor of Science in Mechanical Engineering, as outlined in the attached appendices.

This agreement specifically allows the transfer of up to sixty-four (64) credits from Macomb Community College to Wayne State University. The purpose of allowing MCC students to transfer credits is to enable them to complete the associate and Michigan Transfer Agreement at MCC in addition to completing the BS requirements without duplication of coursework. The degree requirements for students who follow this articulation agreement are outlined in Attachment A.

## Article IV Agreement on Student Support

The Parties agree to track the progress and success of articulation participants. Responsibility for this tracking rests with the WSU College of Engineering and Macomb Community College.

## Article V Agreement on Communication

The Parties agree to cooperate in communication with each other and with common and respective publics concerning the established relationships between the two institutions. Communication will include the development of various kinds of publications to inform those who might benefit from the opportunities provided by this articulation agreement. The appropriate faculty and staff in both institutions will share the information in this agreement with interested and qualified students. Both institutions will provide academic advising to students and prospective students. Joint efforts in marketing the program and student recruiting will be pursued.

The Parties further agree to communicate annually concerning curriculum changes that may affect the agreed upon program relationship. Responsibility for communication related to this agreement will rest with the individuals appointed under Article VI.

## Article VI Agreement and Review Body Procedures

Each institution will appoint one or more faculty administrators to act as agents for the implementation of this agreement, and communicate changes to respective faculty members, advisors, and others to whom the information is pertinent. Responsibility for the oversight of this agreement rests with the Administration at the WSU College of Engineering and Macomb Community College.

#### **Article VII**

### **Regarding Independent Relationship**

In the performance of their respective duties and obligations under this Agreement, each party is an independent contractor and neither is the agent, employee, or servant of the other, and each is responsible only for its own conduct. Each institution is responsible for the development and design of its own curriculum. Changes on the part of either party will/may necessitate review of this document.

## Article VIII Agreement not to Discriminate

Each party covenants and agrees that it does not discriminate on the basis of race, creed, color, age, sex, or national origin and it complies with the Americans with Disabilities Act of 1990, and that it does not discriminate on the basis of "physical or mental handicap" except where there exists a bona fide academic qualification.

Each party shall be separately responsible for compliance with all federal and state laws, including nondiscrimination laws and all applicable sections of the Michigan Handicapper's Civil Rights Act. Illegal discrimination by either party may be considered a material breach of this Agreement.

## Article IX Entire Agreement

This Agreement constitutes the entire agreement between the parties, and all prior discussions, agreements, and understandings, whether verbal or in writing, are hereby merged into this Agreement.

# Article X Amendment/Modifications/or Terminations Provision

The Parties agree to the terms of this Agreement. No amendment or modification to this Agreement, including any modification or amendment of this paragraph, shall be effective unless the same is in writing and signed by all parties or their Successors.

This Agreement will be in effect immediately upon signature and will be subject to review for continuance after a period of four (4) years. Renewal will be for four years unless either party notifies the other in writing by December 31 of the year preceding the last year of the agreement of their intention to renegotiate or of non-renewal of this agreement. In the event that this Agreement must be terminated, all students currently enrolled in the program shall be allowed to complete the program as described.

Signatories for Wayne State University:	Signatories for Macomb Community College:
Mark Lawrence Kornbluh, Ph.D., Provost and Senior Vice President for Academic Affairs	Donald N. Ritzenhein, Ph.D., Provost and Vice President, Learning Unit
Farshad Fotouhi, Ph.D., Dean, College of Engineering, Wayne State University	Marie Pritchett, Ph.D., Dean, Arts and Sciences
Nabil Chalhoub, Ph.D., Professor and Chair, Mechanical Engineering, Wayne State University	Randall Young, Associate Dean, Arts and Sciences
Date:	Date:

Mechanical Engineering, Wayne State University College of Engineering Articulation Guide Macomb Community College (MCC) – Associate of Science (AS) with MTA in Pre-Engineering Wayne State University (WSU) – Bachelor of Science (BS) in Mechanical Engineering Catalog Year 2021-2022

Courses can be completed at Wayne State Advanced Technology Education Center (ATEC) in Warren across from MCC South Campus. Students may also consider enrolling in Wayne Advantage-Macomb to concurrently enroll at MCC and WSU.

MCC Degree and/or Michigan Transfer Agreement	
(MTA) Requirements Credit H	<u>Irs.</u>
*ENG 1180/1210 Communications/Composition I	4
*BCOM 2050 Business Communication	4
(BCOM 2050 course substitution/waiver needed)	
*MATH 1760 Analytical Geometry & Calculus	4
*CHEM 1170 General Chemistry I	4
*PHY 1180 College Physics I	4
*ECON 1160 Principles of Economics (Social Science)	3
Approved Social Science (see MTA requirements)	3
*PHIL 2120 Professional Ethics (Humanities/Arts)	3
Approved Humanities/Arts (see MTA requirements)	3
Subtotal (min. 30)	32

<sup>\*</sup>Meets MTA requirements and satisfies AS and/or Wayne State degree requirement (prerequisites may be required per internal placement exam).

### Associate of Science (AS) Pre-Engineering Requirements

ENGR 1000 Intro to Engineering	3
MATH 2000 Introduction to Linear Algebra	3
MATH 1770 Analytic Geometry & Calculus	4
MATH 2760 Analytic Geometry & Calculus	4
MATH 2770 Differential Equations	4
PHYS 2220 Analytical Physics 1	5
PHYS 2230 Analytical Physics 2	5
CHEM 1180 General Chemistry 2	4
Subtotal	32

Transfers to WSU	Credit Hrs.
ENG 1020 Intro to College Writing	4
ENG 3050 Technical Writing I	4
MAT 2010 Calculus	4
CHM 1100/1130 Gen Chem I (CHM 1220)	4
PHY 2130/31 Physics for Life Sciences	4
ECO 2020 Principles of Macroeconomics	s 3
MTA- Social Science	3
PHI 1120 Professional Ethics	3

**Transfer Subtotal** 

3

32

#### **Transfers to WSU**

**Wayne State University** 

MTA -Humanities and Fine Arts

Transfer Subtotal	32
CHM 1140 General Chemistry II (CHM 1080)	4
PHY 2185 University Physics for Engineers	5
PHY 2175 University Physics for Engineers	5
MAT 2350 (MAT 2150 satisfied)	5
MAT 2030 Calculus III	4
MAT 2020 Calculus II	4
MAT 2250 (combined w/ MATH 2770)	3
BE 1200 Basic Engineering I	3

<sup>\*</sup>Meets MTA requirements and satisfies ABA and/or Wayne State degree requirement (prerequisites may be required per internal placement exam).

Mechanical Engineering, Wayne State University College of Engineering Articulation Guide Macomb Community College (MCC) – Associate of Science (AS) with MTA in Pre-Engineering Wayne State University (WSU) – Bachelor of Science (BS) in Mechanical Engineering Catalog Year 2021-2022

Courses can be completed at Wayne State Advanced Technology Education Center (ATEC) in Warren across from MCC South Campus. Students may also consider enrolling in Wayne Advantage-Macomb to concurrently enroll at MCC and WSU.

# Wayne State University Bachelor of Science (BS) in Mechanical Engineering Requirements

BE 1300 Basic Engineering II: Materials Science	3
BE 1310 Materials Science Engineering Lab	1
BE 1500 Intro Programming and Computation	3
BE 2100 Basic Engineering III: Prob and Stats	3
ECE 3300 Intro to Electrical Circuits	4
ME 2200 Thermodynamics	3
ME 2410 Statics	3
ME 2420 Elementary Mechanics of Materials	3
ME 2500 Numerical Methods (MATLAB)	2
ME 3300 Fluid Mechanics: Theory and Lab	4
ME 3400 Dynamics	3
ME 3450 Manufacturing Processes I	3
ME 4150 Design of Machine Elements	4
ME 4210 Heat Transfer: Theory and Lab	4
ME 4300 Thermal Fluid Sys Design (or ME 5330)	4
ME 4410 Vibrations: Theory and Lab	4
ME 4420 Dynamic Modeling/Control	4
ME 4500 Mech Engineering Design II (or ME 5500)	4
ME 5990 Directed Studies	1
ME Technical Elective (ME 5XXX)	8
ENG 3060 Tech Comm II: Presentations	3
Subtotal	71

Macomb Community College	Credit Hrs.
Michigan Transfer Agreement (MTA)	32
Pre-Engineering Major	<u>32</u>
<b>Total Transferable Credits from MCC</b>	64

Wayne State University	Credit Hrs.
Mechanical Engineering Major	<u>71</u>
<b>Total Credits</b>	71
Total Degree Requirements (min. 123)	135

### **Bachelor of Science (BS) in Mechanical Engineering**

The BS in mechanical engineering at Wayne State University is accredited by the Engineering Accreditation Commission of ABET.

Mechanical engineering is one of the broadest and most versatile of the engineering professionals. Students in undergraduate study in ME have abundant career opportunities, even if they choose not to pursue advanced degrees. With our emphasis on humancentered design as well as the multidisciplinary nature of the curriculum and the university-wide initiative on sustainability, Wayne State's ME program prepares graduates for changing industry needs.

# Accelerated Graduate Program (AGRADE) What is AGRADE?

AGRADE is Wayne State University's Accelerated Graduate Enrollment program. It is designed to provide our top students with a jump-start on graduate school. Students, in conjunction with their undergraduate and graduate advisors, develop a plan of work that counts up to 16 credits of coursework toward both the BS and MS degrees.

### Who is eligible for AGRADE?

Students who have completed at least 90 credits of coursework may apply to the AGRADE program- which is generally during the junior year. To be accepted into AGRADE, a student must have achieved a 3.3 overall (college and university) grade point average and a 3.45 GPA for the courses taken within their undergraduate department of specialization (Major department).

To set up an appointment with WSU advisor: 313-577-5939.