



## Mechanical Engineering Program Agreement

Western Michigan University

Bachelor of Science (B.S.)

Kellogg Community College

Associate in Science (A.S.)

Catalog Year 2023 - 2024

### I. KCC COURSES for GENERAL EDUCATION/Michigan Transfer Agreement (MTA) (30 credits minimum)

See attached KCC MTA guide for specific courses from KCC that will fulfill the MTA requirements

KCC Course	WMU WES Equivalent	Transfer Credit Hours
English Composition – ENGL 151/151 H & COMM 110	ENGL 1050 & COM 1000	6
Humanities - 1 course from: ART 210 ART 211 ART 212 ART 213 ART 214 HUMA 151 LITE 105 MUSI 211 SERV 200 THEA 121 and 1 course in a different subject than above from: ART 210 ART 211 ART 212 ART 213 ART 214 HUMA 151 LITE 105 LITE 205 LITE 206 LITE 211 LITE 212 LITE 213 LITE 223 LITE 230 LITE 285 MUSI 130 MUSI 141 MUSI 211 MUSI 240 MUSI 250 PHIL 230 PHIL 240 SERV 200 THEA 121	Varies	6
Mathematics - MATH 141	MATH 1220	5
Science – CHEM 110 and PHYS 221	CHEM 1100/1110 and PHYS 2050/2060	8
Social Sciences – 1 course from: HIST 103/103H HIST 104/104H HIST 151/151H HIST 152/152H HIST 201 HIST 202 PHIL 202 POSC 201/201H and 1 course in a different subject than above from: ANTH 200 ECON 201 ECON 202 HIST 103/103H HIST 104/104H HIST 151/151H HIST 152/152H HIST 201 HIST 202 HIST 211 HIST 212 HIST 240 HIST 250 HIST 260 PHIL 201/201H PHIL 202 POSC 201/201H POSC 202 POSC 210 POSC 211 PSYC 201/201H PSYC 220 PSYC 250 PSYC 290 SOCI 201/201H SOCI 202 SOCI 205 SOCI 206	Varies	6
<b>TOTAL CREDIT HOURS</b>		<b>31 CREDIT HOURS AT KCC</b>

### II. KCC required COURSES for PROGRAM - (39 credits)

KCC Course	WMU Equivalent	Transfer Credit Hours
<b>Program Prerequisites</b>		
DRAF 101	EDMM 1420	4
MATH 142	MATH 1230	4
MATH 241	MATH 2720	4
PHYS 222	PHYS 2070/80	5
PHYS 241	ME 2560	3

MATH 242	MATH 3740	4
PHYS 243	ME 2580	3
CHEM 111	CHEM 1120/30	4
FYS 101	FYE credit	1
ENGR 256	ME 2560	3
ENGR 258	ME 2580	4
<b>TOTAL CREDIT HOURS</b>		<b>39 CREDIT HOURS AT KCC</b>

<b>III. WMU COURSES REQUIRED FOR PROGRAM DEGREE (60 credits)</b>		
<b>WMU Course</b>	<b>WMU Course Title</b>	<b>WMU Credit Hours</b>
ME 2615	Intro to Mechanical Engineering	3
ME 2320	Thermodynamics I	3
ME 2500	Materials Science	3
ECE 2100	Circuit Analysis	4
ME 3560	Fluid Mechanics	3
ME 3580	Mechanism Analysis	3
ME 3620	Engineering Experimentation	3
ME 3650	Machine Design I	3
ME 3350	Instrumentation	3
ME 3600	Control Systems	3
ME 4310	Heat Transfer	3
ME 4320	Thermodynamics II	3
ECE 2110	Machine and Electronic Circuits	3
ME 4790	Mechanical Eng. Project Planning	1
ME 4800 <sup>†††</sup>	Mechanical Engineering Project	3
ME Design Electives		6
ME Electives		9
WES Global Perspective		3
<b>WMU Elective Credits to Reach 60</b>		
Varies	Varies	
<b>TOTAL CREDIT HOURS</b>		<b>62 CREDIT HOURS AT WMU</b>

<b>TOTAL CREDITS (I – III)</b>
70 KCC Credits
62 WMU Credits
<b>135 Total Credits</b>

Minimum credits required for KCC associate degree: 60 Minimum credits required at WMU: 60

Total required credits: 120

<sup>†</sup> Professional level courses that require acceptance into the WMU program<sup>GP</sup> WES level 3 courses satisfying Global Perspective<sup>†††</sup> WES level 3 courses satisfying National Perspective**Advising Notes**

KCC Academic Advisor

269-965-4124

advising@kellogg.edu

WMU Academic Advisor- Kyle Manninen

269-387-3260

kyle.m.manninen@wmich.edu

**Program Agreement**

This agreement shall commence as of April 17, 2023. This program agreement shall abide by all language of the Institutional Agreement between Kellogg Community College and Western Michigan University.

Kellogg Community College is fully accredited by the [Higher Learning Commission](#). Candidates for a degree or certificate from Kellogg Community College must meet specific requirements including the completion of a minimum of sixty (60) credits hours with a cumulative GPA of 2.0 or higher. All degree requirements are listed in the Kellogg Community College Academic Catalog.

All first-time, degree-seeking, kcc students must complete the FYS 101- First-Year Seminar course with a grade of c or higher. Students who obtain an Associate degree or an Associate of Applied Science degree will be required to complete a service-learning experience.

Candidates for a degree or certification from Kellogg Community College must successfully meet the Bruin Standard of General Education which is the combination of academic General Education outcomes and outcomes met through co-curricular experiences.

Students should meet with a KCC Academic Advisor for course planning and questions regarding this agreement.

#### Signatures

##### Kellogg Community College

A handwritten signature in black ink, appearing to read "Michael Goldin", with a horizontal line underneath.

Dr. Michael Goldin, Chair, Math and Science  
Kellogg Community College

A handwritten signature in black ink, appearing to read "Dawn Larsen", with a horizontal line underneath.

Dawn Larsen, Interim Dean, Arts and Sciences  
Kellogg Community College

##### Western Michigan University

A handwritten signature in blue ink, appearing to read "William Liou", with a horizontal line underneath.

William Liou, Chair, Mechanical & Aerospace Engineering  
Western Michigan University

A handwritten signature in black ink, appearing to read "Steven Butt", with a horizontal line underneath.

Steven Butt, Dean, College of Engineering & Applied  
Sciences  
Western Michigan University