



**Program Agreement**  
**Western Michigan University**  
 Bachelor of Science, Engineering Management Technology, B.S.  
**Grand Rapids Community College**  
 Associate of Arts, Pre-Engineering Mangement Technology, A.A.



I. GRAND RAPIDS COMMUNITY COLLEGE, ASSOCIATE OF ARTS (60 credits)			
GRCC Course	GRCC Course Title	WMU Equiv.	Transfer Credit Hours
BA 256	Principles of Accounting I	ACTY 2100	4 HRS
CHM 130 & 131	General Chemistry I with lab	CHEM 1100 & 1110	5 HRS
EC 252	Principles of Microeconomics	ECON 2010	3 HRS
EG 110	Industrial Graphics with CAD	EDMM 1420	3 HRS
EL 144	Basic Electricity and Electronics	EDMM 2001	4 HRS
MA 131	Precalculus	MATH 1180	5 HRS
MA 133	Calculus with Analytic Geometry I	MATH 1220	5 HRS
MN 100 or DR 180	Manufacturing Principles or Introduction to Mechanical Concepts	EDMM 1500	2-3 HRS
PH 125	College Physics I	PHYS 1130 & 1140	5 HRS
PH 126	College Physics II	PHYS 1150 & 1160	5 HRS
TE 114	Material Science	EDMM 2560	4 HRS
EN 101	English Composition I	ENGL 1050	3 HRS
EN 102, COM 131, OR COM 135	English Composition II, Fundamentals of Public Speaking, Interpersonal Communication	ENGL CR, COM 1040, COM 1700	3 HRS
Social Science- One course needed (Choose <b>one</b> non EC course from the options listed to the right)	Choose <b>one</b> from the list below:		3-4 HRS
	AN 201, 205, 210, 280	ANTH 1500, 2100, 1200, HIST CR	
	EC 251, 252	ECON 2020, 2010	
	GST 200	GWS 2000	
	GE 135, 210, 253, 281	GEOG 1020, 2050, 3800, HIST CR	
	HS 101, 102, 120, 121, 160, 161, 215, 230, 251, 290	HIST 100, 1010, 3020, 3030, 2100, 2110, HIST CR	
	PS 110, 200, 201, 202, 215	PSCI 2000, 2020, 2400, 2500, CR	
	PY 201	PSY 1000	
SO 251, 254, 260	SOC 2000, 2100, 3140		
Humanities - Two courses needed (Choose <b>two</b> different subject areas from the options listed to the right)	Choose <b>two</b> from the list below:		6-8 HRS
	AT 105, 106, 270	ART 2200, 2210, CR	
	EN 118, 233, 235, 242, 247, 248, 251, 252, 261, 262, 270, 271, 272, 278, 284	ENGL 1100, 1100, 2070, 2070, 2660, 2660, 2070, 2520, 3200, 3210, 2220, 2230, 2230, 2070	
	ARA 101, 102	ARAB 1000, 1010	
	CHI 101, 102	CHIN 1000, 1010	
	FR 101, 102, 231, 232	FREN 1000, 1010, 2000, 2010	
	GR 101, 102, 231, 232	GER 1000, 1010, 2000, 2010	
	SP 101, 102, 231, 232	SPAN 1000, 1010, 2000, 2010	
	HS 101, 102, 120, 121, 160, 161, 215, 230, 251, 290	HIST 1000, 1010, 3020, 3030, 2100, 2110, CR	
	HU 204, 205, 210, 212, 219, 220, 245, 273, 274, 281	TGE D1, TGE D1, TGE D2, CLAS 2350, CBDRO, DGE D7, TGE D1, COM 2410, REL 1000	
	MUS 110, 111, 130	TGE D1, MUS 1510, TGE D3	
	PL 201, 202, 205, 207, 209	PHIL 2000, 2250, 2010, 3140, 3140	
	TH 248	THEA 1000	
Approved Major Electives	Choose <b>two</b> from this list:	BA 103, 284, 270, 282, MN 102, MN 116, MN 119 or 199, MN 165, MN 200, MN 218, MN 223, MN 234, MN 238, MN 242, MN 244, MA 134, MA 255, MA 257	6 HRS
<b>TOTAL CREDIT HOURS</b>			<b>66-70 CREDIT HOURS AT GRCC</b>

II. WESTERN MICHIGAN UNIVERSITY, (60 credits)		
WMU Course	WMU Course Title	WMU Credit Hours
EDMM 2460	CAD – Solid Modeling	3 HRS
EDMM 2810	Statics and Strength of Materials	4 HRS
EDMM 3020	Engineering Teams: Theory and Practice	3 HRS
EDMM 3050	Work Analysis	3 HRS
EDMM 3120	Systems Decision Making	3 HRS
EDMM 3150	Work Analysis and Design Lab	1 HRS
EDMM 3200	Engineering Cost Analysis	3 HRS
EDMM 3260	Operations and Planning Control	3 HRS
EDMM 3280	Quality Assurance and Control	3 HRS
EDMM 4020	Supervision of Industrial Operations	3 HRS
EDMM 4040	Plan Layout & Material Handling	4 HRS
EDMM 4120	Industrial Systems Management	3 HRS
EDMM 4870	Manufacturing Productivity Techniques	3 HRS
EDMM 4910	Multidisciplinary Senior Proposal	3 HRS
EDMM 4920	Multidisciplinary Senior Project	2 HRS
EDMM 4930	Multidisciplinary Senior Project Consultation	1 HRS
IEE 2610	Engineering Statistics	3 HRS
IEE 3160	Report Preparation	3 HRS
Approved Electives	Any approved course to be chosen with your academic advisor	9 HRS
<b>TOTAL CREDIT HOURS</b>		<b>60 CREDIT HRS AT WMU</b>

<b>TOTAL CREDITS (I –II)</b>
66-70 GRCC Credits
60 WMU Credits
<b>126-130 Total Credits</b>

#### Advising Notes

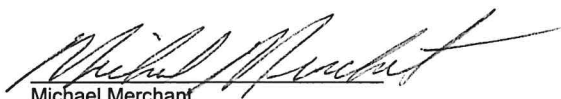
This degree is designed with the intent that students can take classes and be advised at the WMU Grand Rapids- Downtown location via the AMP lab.

#### Program Agreement

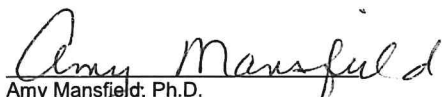
This agreement shall commence as of Feb 13<sup>th</sup>, 2020. This program agreement shall abide by all language of the Articulation Agreement between Grand Rapids Community College and Western Michigan University.

#### Signatures

##### Grand Rapids Community College



Michael Merchant  
Department Head, Mechanical & Architectural Design  
Grand Rapids Community College



Amy Mansfield, Ph.D.  
Dean, School of Workforce Development  
Grand Rapids Community College

##### Western Michigan University



Timothy Greene, Ph.D.  
Acting Chair Engineering Design, Manufacturing &  
Management Systems  
Western Michigan University



Steve E. Butt, Ph.D  
Interim Dean, College of Engineering & Applied Sciences  
Western Michigan University