

PRODUCT DESIGN & DEVELOPMENT ARTICULATION AGREEMENT GUIDE

Monroe County Community College–AAS in Product and Process Technology

Eastern Michigan University – BS in Product Design and Development

Monroe County Community College Courses:	Transfers to Eastern Michigan University as:
Michigan Transfer Agreement Requirements (30-32 credits)	
Students with the MTA endorsement on their community college transcript have satisfied EMU's General Education Core Requirements and will be required to complete only the EMU General Education Application Requirements of one Perspectives on a Diverse World course, one Learning Beyond the Classroom experience, and one writing intensive course in the major. <u>Courses listed below for the MTA also satisfy major requirements at MCC and/or EMU.</u> Students who started before Fall 2014 may continue to follow the MACRAO Agreement until the end of summer 2019. The MACRAO versions of this articulation guide is available at www.emich.edu/ccr . For courses approved to satisfy the MTA go to the MCCC website http://www.monroeccc.edu/academicadv-transfer/PDF%201%20MCCC%20MTA%20Table.pdf	
1. A Course in English Composition	
ENGL 151, 152, or 254 3	University Elective..... 3
2. A Course in English Composition or Communication	
ENGL 152, 254; COMM 151; SPCH 151, 152, 155, or 255 3	University Elective..... 3
3. A Course in Mathematics	
* Complete one math option: 4-6	MATH 105 College Algebra and MATH 107 Trigonometry 4-6
MATH 157 College Algebra (3) and MATH 159 Trig (3) OR	
MATH 164 Precalculus (4)	
4. Two Natural Science Courses from different disciplines	
* CHEM 150 Intro to General Chemistry..... 4	CHEM 117&118 Fundamentals of Chemistry 4
* PHY 151 General Physics 1..... 4	PHY 221 Mechanics, Sound, and Heat..... 4
5. Two Humanities Courses from different disciplines	
Choose from the approved MTA list..... 6	Two courses:..... 6
6. Two Social Science Courses from different disciplines	
POLSC 151 Introduction to Political Science 3	PLSC 112 American Government 3
Choose from the approved MTA list..... 3	One course: 3
If needed, complete an additional course in any of the above categories to meet the 30 credit minimum for the MTA.	
EMU's Perspectives on a Diverse World requirement: Complete <u>one</u> course from the following list: Courses on this list may be used to satisfy an MTA requirement above: Humanities: ENGL 240, 255, 266 Social Science: ANTHR 152; GEOG 152; HIST159, 255, 256; POLSC 211, 252; SOC 153.	
MCCC Product and Process Technology Requirements (50 credit)	
ELEC 125 Fundamentals of Electricity..... 3	University Elective..... 3
* MATL 101 Industrial Materials..... 3	PDD 111 Materials..... 3
* MDTC 160 Mechanical Drafting and CAD I 4	PDD 122 Engineering Graphics I..... 4
* MDTC 226 Geometric Dimensioning and Tolerancing..... 3	PDD 220 Geometric Dimensioning and Tolerancing 3
* MECH 102 Manufacturing Processes 4	PDD 123 Manufacturing Processes..... 4
MECH 103 Machining Basics and CNC 4	University Elective..... 4
MECH 104 CNC II 3	University Elective..... 3
MECH 105 CNC III..... 3	University Elective..... 3
MECH 131 Introduction to Automated Manufacturing..... 3	University Elective..... 3
MECH 201 CAD/CAM I 3	University Elective..... 3
* MECH 221 CAD/CAM II 3	PDD 433 Advanced Tool Development 3
* MECH 231 CAD/CAM III 3	PDD 350 Prototyping 3
* METC 220 Statics & Strength of Materials 4	PDD 325 Applied Statics & Strength of Materials..... 4
* METC 170 Intro to Parametric CAD/CATIA (Res Elective)..... 3	PDD 432 3D Surface Modeling..... 3
* MDTC 161 Mechanical Drafting and CAD II (Res Elective)..... 4	PDD 224 Solid Modeling (3)+1 4
EMU Requirements that May be Taken at MCCC or EMU (10 credits)	
* Choose one course: QSTC 111 or QSTC 115 3	QUAL 320 Industrial Quality Control 3
* QSTC 160 Team Problem Solving 3	PDD 156 Teamwork in Product Design 3
* PHY 152 General Physics II..... 4	PHY 222 Electricity and Light..... 4
Credits at MCCC: 90-92	Credits that transfer to EMU 90-92

* Required for EMU's Product Design and Development program.

Sign up with us: If you let us know you are using this articulation agreement we can stay in touch with you and provide information and advising to you while you are still at your community college. Sign up at: www.emich.edu/ccr/trackingssystem/Enter.php

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Completion of EMU's Program		
Major Requirements	(39 credits)	Suggested Sequence for completing the program:
ARTS 122 Three-dimensional Design	3	Semester 1 Fall (12 credits)
PDD 157 Introduction to Product Design	3	ARTS 122 Three-dimensional Design
PDD 212 Molding Materials & Processes	3	PDD 157 Introduction to Product Design
PDD 309 Molded Product Design	3	PDD 212 Molding Materials & Processes
PDD 310 Formed Product Design	3	SET 350W (pre-req: ENGL 121)
PDD 316 Concept Development Studio	3	Semester 2 Winter (9 credits)
PDD 331 Product Design Data Management	3	PDD 310 (pre-reqs: PDD 156,157, 212, 220, & 224)
PDD 380 Engineering Cost Estimating	3	PDD 316 (pre-reqs: ARTS 122, PDD 156,157, 220, & 224)
¹ PDD 387L4 Coop. Education in PDD	3	PDD 435 (pre-req: PDD 325)
PDD 435 Finite Element Analysis	3	Semester 3 Fall (12 credits)
PDD 491 Computer-Aided Design Studio	3	PDD 309 (pre-reqs: PDD 156,157, 212, 220, & 224)
PDD 492 Product Realization Studio	3	PDD 331 (pre-reqs: PDD 224)
² SET 350W Engineering Communication	3	PDD 380 (pre-reqs: PDD 309, 310, & QUAL 320)
Credits at EMU:	39	PDD 492 (pre-req: PDD 380)
Credits from MCC	90	Semester 4 Winter (6 credits)
*Credits to Graduate:	129	¹ PDD 387L4 (pre-req dept permission)
		PDD 491 (pre-reqs: PDD 435, 432 and 433)

¹ Satisfies EMU's "Learning beyond the Classroom" requirement.² Satisfies EMU's "Writing Intensive in the major" requirement

*A minimum of 124 credits is required to graduate.

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Additional Information:

1. In completing the coordinated program of study for this articulation agreement, course substitutions should be made with the guidance of the advisors (indicated below) at both institutions to assure that all requirements are satisfied. Each institution will determine the satisfaction of their individual program and degree requirements. MCCC courses indicated with an * are required for EMU's Product Design and Development Program.
2. Students with the MTA endorsement on their community college transcript have satisfied EMU's General Education Core Requirements and will be required to complete only the General Education Application Requirements of one Perspectives on a Diverse World course, one "Learning beyond the Classroom" experience, and a Writing Intensive course in their major. The Perspectives on a Diverse World requirement may be transferred from the community college.

To use the Michigan Transfer Agreement (MTA), students must have an official community college transcript, with the "MTA Satisfied" endorsement sent to EMU's Admissions Office. Students without the "MTA Satisfied" endorsement will be required to satisfy EMU's general education requirements as listed in the Undergraduate Catalog. The MTA may be completed after admission to EMU, however, students should inform advisors or they may be advised to complete additional courses for the general education program. Students who enrolled at the community college prior to September 2014 will have until the end of August 2019 to complete the MACRAO agreement.

3. Only courses with a grade of "C" or better (2.0 on a 4.0 scale) will be accepted for transfer to EMU.
4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 30 hours must be completed at EMU. Of the last 30 hours completed before graduating, at least 10 hours must be in courses offered by EMU. A minimum of 124 credit hours, completed in-residence or accepted in transfer, is required for graduation. Courses listed in this guide may be completed at the most appropriate time for students, whether before or after admission to EMU, as long as appropriate pre-requisites are satisfied.
5. Students must meet all admission requirements at the time of application for admission to EMU, including submitting transcripts from all previously attended colleges. MCCC students will receive equal consideration with other students for course registration and financial aid.
6. Students are encouraged to contact the Product Design and Development Program Coordinator before applying to EMU. To facilitate advising and the evaluation of transcripts, sign up for this articulation agreement using this link: www.emich.edu/ccr/trackingsystem/Enter.php and bring a copy of this guide to all advising sessions. Copies of the articulation guide are available on EMU's webpage at www.emich.edu/ccr/artguide.php.

Effective Dates: September 1, 2014 until August 31, 2017.

This is a renewal of an agreement made in September 2011. If the agreement is not renewed at the end of the effective period, students will have an additional three years to be admitted to EMU under the terms of the agreement. In the event a student does not complete degree requirements within seven years of the date of starting this program, the student may be required to have his/her credits re-evaluated in keeping with a more recent version of this agreement.

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