

## WASHTENAW COMMUNITY COLLEGE

### College of Engineering and Computer Science

### Bachelor of Science in Engineering

#### Transferring to the University of Michigan-Dearborn is easier than you think!

Utilize this transfer guide for a smooth transition into the College of Engineering and Computer Science (CECS).

#### MICHIGAN DIFFERENCE

At the University of Michigan-Dearborn, we emphasize hands-on learning, small class sizes, engaged faculty and a commitment to impact southeast Michigan. Students are developed to become Difference Makers in the workplace and in the community long before graduation.

We are addressing challenges to the region head-on through pioneering research, strategic partnerships and civic engagement. We are creative thinkers, innovators and leaders, and we're proud to call Dearborn home. Our beautiful campus, once the grounds of the Henry Ford Estate, continues to foster his bold spirit of entrepreneurship and collaboration.

After graduation from UM-Dearborn, you will become a member of the University of Michigan Alumni Association – one of the largest living alumni networks in the world.

#### FACULTY & THE CLASSROOM

All of our bachelor's, master's, doctoral and professional degree programs are designed and led by highly qualified and engaged faculty, not teaching assistants.

Classes are small—undergraduate lectures average 24 students and the student/faculty ratio is 15:1. Whatever your course of study, you'll get plenty of personal attention and support.

#### BACHELOR OF SCIENCE IN ENGINEERING MAJORS

- Bioengineering (BENG)
- Computer Engineering (COEN)
- Electrical Engineering (EE)
- Industrial and Systems Engineering (IMSE)
- Manufacturing Engineering (MFGE)
- Mechanical Engineering (ME)
- Robotics Engineering (RE)

For other College of Engineering and Computer Science majors, please see the Bachelor of Science Transfer Guide.

#### RESOURCES

For more transfer information, visit your hub: [umdearborn.edu/wcc](http://umdearborn.edu/wcc)

To determine credit evaluation for courses not listed, view the Course Transfer System at [umdearborn.edu/cts](http://umdearborn.edu/cts)

#### ADMISSION GUIDELINES

- Students must have a minimum of 24 transferable credit hours with a transferable grade point average (GPA) of at least 2.75 to be admitted into these programs. A GPA of a 2.75 is also required in Math, Science and Engineering Courses respectively.
- A maximum of 62 credit hours transfer into UM-Dearborn from community colleges.
- Courses with a grade of C- or below do not transfer for credit; however will be used in the admission GPA recalculation.
- It is the responsibility of the student to stay abreast of any changes related to their transfer. For specific questions about program requirements, call the CECS Office of Advising and Academic Success at (313) 593-5510 or visit [umdearborn.edu/cecs](http://umdearborn.edu/cecs).
- **\*EFFECTIVE Fall 2019:** Students will be admitted directly into a CECS major or into a new **Pre-Engineering program**. This program is designed to support students in building a stronger math and science foundation to be successful in the rigorous CECS curriculum. For updated admission criteria and complete details, visit: [www.umich.edu/preengineering](http://www.umich.edu/preengineering)

#### MICHIGAN TRANSFER AGREEMENT (MTA)

UM-Dearborn signed the MTA to participate as a receiving institution. Students should check with their community college to determine which courses can be used to fulfill MTA categories and learn the details for obtaining an MTA endorsement on their transcript. By utilizing the suggested courses, students can reduce the total number of courses they need to fulfill all transferable requirements.

## Michigan Transfer Agreement (MTA) UM-Dearborn Discovery Core (DDC)

WCC students who complete the MTA transfer a core block of lower-level community college credits to satisfy a portion of UM-Dearborn's Discovery Core (general education). This document outlines what courses students complete as part of the MTA and how they apply to the DDC.

<b>Subject</b>	<b>MTA*</b> 30 credits must be earned from the disciplines below.	<b>DDC Requirements**</b>	<b>Remaining DDC Requirements (after MTA)</b>
<b>English Composition</b>	One course in English Composition And Second course in English Composition Or One Course in Communications (ENG 111 and ENG 107 required)	6 credits of Written and Oral Communication	Satisfied
<b>Social Science</b>	Two courses in Social Science from two disciplines	9 credits Social and Behavioral Analysis (ECO 211 or ECO 222 is required for B.S. degrees and counts as 3 of the 9 required credits)	3 credits of Social and Behavioral Analysis
<b>Humanities/ Fine Arts</b>	Two courses in humanities/fine arts from two disciplines	6 credits Humanities and the Arts	Satisfied
<b>Mathematics</b>	One course in Mathematics (MATH 191 or above required)	3 credits in Quantitative Thinking and Problem Solving	Satisfied
<b>Natural Science &amp; Laboratory Experience</b>	Two courses in Natural Science from two disciplines with at least one laboratory experience (PHY 211 and CEM 111 required)	7-8 credits in Natural Sciences	Satisfied
<b>Upper-Level Writing</b>	N/A	3 credits of Upper-Level Writing Intensive Course	3 credits of Upper-Level Writing Intensive Course***
<b>Critical and Creative Thinking</b>	N/A	3 credits of Critical and Creative Thinking	3 credits of Critical and Creative Thinking***
<b>Intersections</b>	N/A	6 Upper-Level Credits	6 Upper-Level Credits***
<b>Capstone Experience</b>	N/A	3 credits of Capstone	3 credits of capstone***
<b>Total Credits</b>	<b>30</b> If total credit hour is less than 30, additional coursework from the above concentrations must be completed to satisfy the MTA.	<b>45-46</b>	<b>15</b>

Please note, additional math and sciences courses are required for a degree earned from the College of Engineering and Computer Science.

Students who do not complete the entire MTA, or complete courses in addition to the MTA, will receive a course by course evaluation that makes clear how many credits transfer and which DDC requirements still remain. To figure out which WCC courses fulfill DDC requirements, students should consult the DDC approved course list ([umdearborn.edu/dearborn\\_discovery\\_core](http://umdearborn.edu/dearborn_discovery_core)) and use the Course Transfer System ([umdearborn.edu/cts](http://umdearborn.edu/cts)) to identify the WCC equivalencies.

\*For information on WCC MTA: [wccnet.edu/services/transferresources/mta/](http://wccnet.edu/services/transferresources/mta/)

\*\*For information on the DDC: [umdearborn.edu/Dearborn\\_discovery\\_core](http://umdearborn.edu/Dearborn_discovery_core)

\*\*\*These courses typically are completed through major degree requirements and may overlap with one another

## Recommended Courses to follow the Dearborn Discovery Core (DDC)

Utilize the following guide to determine what WCC courses are defined as equivalencies at UM-Dearborn. This guide is not a complete listing of all courses required to obtain a degree.

<b>Humanities &amp; the Arts (6 credits)</b>	
WCC	UM-Dearborn
HUM 101	ARTH 101
HUM 102	ARTH 102
ART 130	ARTH Lower Distribution
HUM 145	HUM 201
ENG 240	LIBR 465
ENG 270	COMP 223
MUS 180	MHIS 100
MUS 185	MHIS Lower Distribution
PHL 101	PHIL 100
PHL 200, 240, 244, 245	PHIL Lower Distribution
PHL 205	PHIL 240
HUM 120	JASS 240

<b>Social &amp; Behavioral Analysis (9 credits)</b>	
WCC	UM-Dearborn
ANT 202, 205	ANTH Lower Distribution
ANT 201	ANTH 202
ECO 211 or ECO 222 (required)	ECON 201 or 202 (required)*
CJT 100	CRJ 200
HST 101	HIST 101
HST 123	HIST 103
HST 201	HIST 111
HST 202	HIST 112
HST 121, 150, 200, 210, 215, 216, 220, 230, 240, 251, 260, 270	HIST Lower Distribution
PLS 112	POL 101
PLS 211	POL 201
PLS 150, 220, 250, 260, 290	POL Lower Distribution
PSY 100	PSYC 101
PSY 107, 150, 206, 210, 257, 260, 270, 273	PSYC Lower Distribution
SOC 100	SOC 200
SOC 207	SOC 201
SOC 201, 203, 205, 216, 230, 250	SOC Lower Distribution

\*ECO 211 or 222 is required for B.S.E. degrees and counts as 3 of the 9 required credits.

<b>Written &amp; Oral Communication (6 credits)</b>	
WCC	UM-Dearborn
ENG 111	COMP 105
ENG 107 (or ENG 226)	COMP 270 (106)

All UM-Dearborn students, both freshmen and transfers, are required to take the English Composition placement test. Students who have taken ENG 111 and 107 (or 226), but place below Comp 105 will need to take Comp 227 at UM-Dearborn.

## REQUIRED COURSES FOR DEGREE

<b>Mathematics*</b>	
WCC	UM-Dearborn (18 credits)
MTH 191	MATH 115
MTH 192	MATH 116
MTH 293	MATH 215
MTH 295	MATH 216
MTH 197	MATH 227

\*Meets DDC Quantitative Thinking and Problem Solving requirement.

<b>Chemistry*</b>	
WCC	UM-Dearborn (8 credits)
CEM 111	CHEM 134
CEM 122**	CHEM 136

\*Meets DDC Natural Sciences requirement

\*\*Not for EE, COEN, or RE

<b>Physics*</b>	
WCC	UM-Dearborn (8 credits)
PHY 211	PHYS 150
PHY 222	PHYS 151

\*Meets DDC Natural Sciences requirement

## COURSES BY MAJOR

<b>Choose carefully from the courses below; they only count for the specified major.</b>	
WCC	UM-Dearborn
<b>BENG only</b>	
BIO 162 (or 215)	BIOL 140
CEM 211	CHEM 225
CEM 222	CHEM 226
CEM 211+222*	CHEM 225+226+227
<b>ISE only</b>	
ACC 111	ACC 298
ACC 122	ACC 299