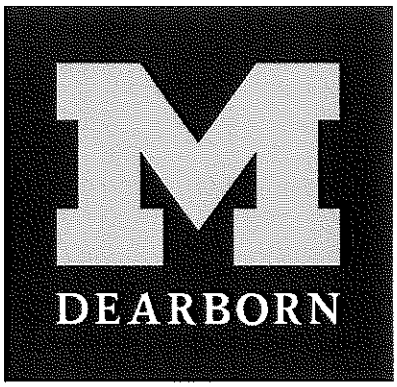
TRANSFER AGREEMENT

between

The University of Michigan-Dearborn



and

Pre-Engineering Program

May 5, 2016

INTRODUCTION

Henry Ford College (HFC) and the University of Michigan-Dearborn (UM-Dearborn) Engineering Transfer Program is a jointly developed program operated by both institutions. The program enables students to begin their education at Henry Ford College, Dearborn, Michigan and complete their studies for a designated Bachelor of Science in Engineering degree (including Bioengineering, Computer Engineering, Electrical Engineering, Robotics Engineering, Industrial & Systems Engineering, Manufacturing Engineering, and Mechanical Engineering) at the University of Michigan-Dearborn. It is designed for the transfer of the HFC component to UM-Dearborn. Students entering the program with a strong high school and/or experiential background may begin the program by attending Henry Ford College for two years of full-time study then transfer to UM-Dearborn for the final two years. Part-time students are also welcome to participate in this program; however, the time spent at each institution may be greater than two years. While the program is designed for a total of four years of full-time study, it may vary depending on the pace of courses chosen by the student, the program selected, and the need for any prerequisite courses.

ADMISSION REQUIREMENTS TO HENRY FORD COLLEGE

Henry Ford College is an open admissions institution that assesses students wishing to enter this program and places them into courses on the basis of their academic background and/or demonstrated experience in specific subject areas. Applicants will be required to participate in the HFC assessment program. Further information will be provided at the time of application.

Those considering an engineering program are advised to pursue a rigorous college preparatory curriculum with emphasis on science, mathematics, and English in their high school.

ADMISSION REQUIREMENTS TO UNIVERSITY OF MICHIGAN-DEARBORN

Admission to a UM-Dearborn undergraduate engineering program is guaranteed to students who earn the Associate in Science in Pre-Engineering at Henry Ford College with at least a 2.75 overall GPA and at least a 2.75 in all math, science, and engineering classes. Students with criteria less than this will be evaluated on a case-by-case basis. Courses with less than a 2.0 grade will not transfer for credit or placement. HFC students will be given equal consideration with UM-Dearborn students in applying for acceptance into the engineering programs and for financial aid.

Furthermore, credit awarded based on AP or IB courses should meet the score required at UM-Dearborn. Credit charts can be found at: https://umdearborn.edu/advancedplacement/. Applicants whose native language is not English must demonstrate English proficiency, as described at: https://umdearborn.edu/684363/. Also, upon admission to the University of Michigan-Dearborn,

all students are required to take the Composition Placement Exam within the first semester of enrollment at UM-Dearborn.

The Agreement encourages HFC students to consider taking a limited number of sophomore-level engineering classes (not available at HFC) at UM-Dearborn while completing the Associate's degree at HFC.

SEQUENCE OF CLASSES

HFC students are strongly encouraged to contact the HFC engineering advisor and UM-Dearborn engineering advisor as early as possible to put together a customized program plan for courses at both HFC and UM-Dearborn.

The Henry Ford College and University of Michigan-Dearborn program is designed so that HFC students who successfully complete transferable courses for their major on the attached Equivalency Guide (Appendix A) can complete the degree requirements in two to three years at UMD (if attending full-time; longer if part-time).

WORK EXPERIENCE COMPONENT

Engineering students at University of Michigan-Dearborn are eligible to participate in Cooperative Education Program. Transferred students from HFC will be indiscriminately considered for this opportunity.

The UM-Dearborn Co-Op office will provide necessary information to transfer students after they have been admitted to the University of Michigan-Dearborn. In addition, students are advised to contact the UM-Dearborn Co-Op office during the beginning of the first term of their second year at HFC, or earlier.

ASSOCIATE DEGREE COMPLETION

Henry Ford College students are strongly encouraged to complete their Associate degree requirements in order to receive the HFC Associate in Science in Pre-Engineering or Associate in Applied Science in Pre-Engineering degree as well as the designated bachelor of engineering degree from the University of Michigan-Dearborn.

EFFECTIVE DATES: The term of this agreement is five years beginning on the date it is signed. During the fifth year, the agreement will be reviewed for possible revisions and renewal. If not renewed, HFC students who designated this program agreement before its termination will have three additional years to be admitted to the University of Michigan-Dearborn under the terms of the agreement. Standard Admissions policies may apply here Note: the Equivalency Guide (Appendix A) will be updated annually to reflect new and discontinued classes and programs. This could affect the number of transfer credits accepted.

University of Michigan-Dearborn Transfer Agreement with Henry Ford College Associate in Science Degree in Pre-Engineering

TRANSFER AGREEMENT

Henry Ford College and University of Michigan-Dearborn enter into this agreement to form a partnership consistent with the goals of both institutions to ensure that students are able to complete their education in a timely manner. The purpose of this agreement is to establish a "seamless" transition between institutions.

To this end the two institutions have agreed to the following:

1. Transfer credit for a course is determined by the articulation agreement in effect when the course is taken. Information on effective dates will be posted on the UM-Dearborn's website.
2. Representatives of the two institutions will meet annually to update the Equivalency Guide based on course changes and other conditions that may affect the nature of this agreement. Students should always refer to the most recent Equivalency Guide, which can be found on UM-Dearborn's website.
3. The engineering advisors at the University of Michigan-Dearborn and the engineering coordinator at Henry Ford College will establish lines of communication to ensure that students planning to transfer to the University of Michigan-Dearborn receive accurate and timely academic advice.
4. To obtain acceptance into the College of Engineering and Computer Science at the University of Michigan-Dearborn, a student must meet the conditions and considerations specified in this document.
5. This entire document will be reviewed every five years from the day it is signed, and every 5 years thereafter.

For the Regents of
The University of Michigan

Daniel Little, Ph.D.
Chancellor
The University of Michigan-Dearborn

Dated: 6/15/16

For the Board of Trustees of
Henry Ford College

Stanley Jensen, Ph.D.
President
Henry Ford College

Dated: 5-5-2016

DEARBORN
CECS

Henry Ford College Transfer Guide
College of Engineering and Computer Science
The University of Michigan-Dearborn

The following courses will transfer into the University of Michigan-Dearborn **Bachelor of Science in Engineering (B.S.E.)** programs:

Bioengineering **Computer Engineering** **Electrical Engineering**
Robotics Engineering **Mechanical Engineering** **Industrial & Systems Engineering**
Manufacturing Engineering

A GPA of 2.75 (overall recalculated GPA, separate mathematics GPA, separate science GPA, separate ENGR/CIS GPA) are required for admission. A **maximum of 72 credits** transfer into UM-Dearborn from HFC. Courses with C- or below do not transfer. Since requirements may change, it is the student's responsibility to check with the UM-Dearborn Office of Admissions & Orientation, http://www.umdearborn.edu/admissions/, for the latest information.

HENRY FORD COLLEGE COURSES	UM-DEARBORN EQUIVALENCIES
Written and Oral Communication: **2 courses (6 credits)** ENG 131 Introduction to College Writing ENG 132 College Writing and Research **or** ENG 135 Business and Tech Writing	**Written and Oral Communication:** **2 courses (6 credits)** COMP 105 Writing and Rhetoric I COMP 270 Technical Writing for Engineers
Economics: **1 course (3 credits)** BEC 151 Prin. Of Macroeconomics **or** BEC 152 Prin. Of Microeconomics	**Economics:** **1 course (3 credits)** ECON 201 Macroeconomics or ECON 202 Microeconomics
Humanities and the Arts: **2 courses (6 credits)** ART 121, 122, 123, 221, 225, 226, 227 ENG 231; HON 251 MUS 130, 132, 133, 232, 233 PHIL 133, 135, 137, 138, 139 TCM 132 WR 130, 131, 232, 233, 236, 240	**Humanities and the Arts:** **2 courses (6 credits)** Can select courses from approved list
Social and Behavioral Analysis: **3 courses (9 credits)** ANTH 131, 151, 152, 153 BEC 151, 152 HIST 111, 113, 151, 152, 222, 226, 239, 243, 250, 252, 254, 256, 258, 261, 268, 270, 273, 281, 283, 285, 286 POLS 101, 131, 152, 155, 200, 201, 202 PSY 131, 161, 253, 251, 254, 257, 260 SOC 131, 132, 151, 152, 253, 254	**Social and Behavioral Analysis:** **3 courses (9 credits)** Can select courses from approved list

HENRY FORD COLLEGE COURSES	UM-DEARBORN EQUIVALENCIES
Critical and Creative Thinking:	**Critical and Creative Thinking:**
1 course (3 credits)	**1 course (3 credits)**
CRJ 131	
PHIL 131	Can select course from approved list
TCM 131, 132	
Math, Science, Engineering Courses	**9 Courses (30 credits)**
All Engineering Disciplines:	
CHEM 141 Principles of Gen. Chemistry	CHEM 134/144 Chemistry I
MATH 180 Calculus I	MATH 115 Calculus I
MATH 183 Calculus II	MATH 116 Calculus II
MATH 280 Calculus III	MATH 205/215 Calculus III
MATH 283 Linear Algebra	MATH 227 Linear Algebra
MATH 289 Differential Equations	MATH 216 Differential Equations
PHYS 231 Engineering Physics I	PHYS 150 Physics I
PHYS 232 Engineering Physics II	PHYS 151 Physics II
ENGR 130 Intro to Engineering	ENGR 100 Intro to Engineering

Additional courses can be completed at Henry Ford College for each B.S.E. program at UM-Dearborn. Please see the following list of specific courses for each major.

Additional Courses for Bioengineering	
BIO 152 Cells and Molecular Biology	BIOL 140 Molecular and Cell Biology
CHEM 142 Chemistry II	CHEM 136 Chemistry II
CHEM 241 Organic Chemistry I	CHEM 225 Organic Chemistry I
CHEM 242 Organic Chemistry II	CHEM 226 Organic Chemistry II
CHEM 243 Organic Chemistry Lab I **and**	CHEM 227 Organic Chemistry Lab
CHEM 244 Organic Chemistry Lab II	
DRAF 120 Introduction to CAD **or**	ENGR 126 Engineering Graphics
DRAF 127 CATIA V5 Level III	
ENGR 201 Science of Materials	ENGR 250 Engineering Materials
Additional Courses for Computer Engineering	
MATH 275 Discrete Math	ECE 276 Discrete Math in COEN
CIS 170 & 230 Programming	ECE 270 Computer Methods
Additional Courses for Electrical Engineering	
CIS 170 & 230 Programming	ECE 270 Computer Methods
Additional Courses for Robotics Engineering	
CIS 170 & 230 Programming	ECE 270 Computer Methods

HENRY FORD COLLEGE COURSES	UM-DEARBORN EQUIVALENCIES
Additional Courses for Industrial & Systems Engineering	
DRAF 120 Introduction to CAD **or** DRAF 127 CATIA V5 Level III	ENGR 126 Engineering Graphics
CHEM 142 Chemistry II	CHEM 136 Chemistry II
BAC 131 Introduction to Financial Accounting	ACC 298 Financial Accounting
BAC 132 Introduction to Managerial Accounting	ACC 299 Managerial Accounting
ENGR 201 Science of Materials	ENGR 250 Engineering Materials
ENGR 232 Statics*	ME 260 Design Stress Analysis
**Must take one additional credit at UM-D to make up missing credit*	
Additional Courses for Manufacturing Engineering	
DRAF 120 Introduction to CAD **or** DRAF 127 CATIA V5 Level III	ENGR 126 Engineering Graphics
CHEM 142 Chemistry II	CHEM 136 Chemistry II
ENGR 201 Science of Materials	ENGR 250 Engineering Materials
ENGR 232 Statics*	ME 260 Design Stress Analysis
**Must take one additional credit at UM-D to make up missing credit*	
Additional Courses for Mechanical Engineering	
DRAF 120 Introduction to CAD **or** DRAF 127 CATIA V5 Level III	ENGR 126 Engineering Graphics
CHEM 142 Chemistry II	CHEM 136 Chemistry II
ENGR 201 Science of Materials	ENGR 250 Engineering Materials
ENGR 232* Statics	ME 260 Design Stress Analysis
ENGR 233* Dynamics	ME 345 Engineering Dynamics
**Must take one additional credit at UM-D to make up missing credit*	