

ARTICULATION AGREEMENT
Between
HENRY FORD COLLEGE
Associate of Science in Pre-Engineering
and
MICHIGAN TECHNOLOGICAL UNIVERSITY
Bachelor of Science in Civil Engineering, Environmental Engineering,
or Geospatial Engineering

This Articulation Agreement (“Agreement”) is between Henry Ford College {hereafter referred to as "HFC"} and Michigan Technological University Civil and Environmental Engineering (hereafter referred to as "Michigan Tech" or “MTU”).

Michigan Tech and HFC agree that students who choose to begin their studies at a community college and transfer to a university to earn a bachelor’s degree should be provided with a smooth curriculum transition that minimizes loss of credit and duplication of coursework. Therefore, Michigan Tech and HFC agree to enter into this Articulation Agreement to facilitate the completion of an Associate of Science in Pre-Engineering at HFC and a Bachelor of Science in Civil Engineering, Environmental Engineering, or Geospatial Engineering degree from Michigan Tech. Both parties enter into this Agreement as cooperating, equal partners who shall maintain the integrity of their separate programs.

This Agreement applies only to HFC students seeking to enter Michigan Tech for the Bachelor of Science in Civil Engineering, Environmental Engineering, or Geospatial Engineering degree. Students are required to meet all prerequisites for Michigan Tech courses required in the Michigan Tech curriculum.

Therefore, it is agreed that:

1. Michigan Tech shall continue full responsibility for planning and executing the educational program, including programming, administration, curriculum design and content, faculty administration, and criteria for student achievement for the qualifying programs leading to the Bachelor of Science in Civil Engineering, Environmental Engineering, or Geospatial Engineering degree. Michigan Tech shall have full accountability and responsibility to maintain the quality and appropriateness of the baccalaureate program of studies offered. HFC shall continue full responsibility for planning and executing of the courses as indicated in the Transfer and Planning Guides (Appendices A, B and C) of this Agreement. including programming, administration, curriculum design and content, faculty administration, and criteria for student achievement.

Either Michigan Tech or HFC may change any aspect of their respective curriculum but no change will be made which will prevent any student at either institution who has taken courses in reliance on the published curriculum from enrolling at Michigan Tech due to the change in

curriculum.

All students admitted to and enrolled at HFC pursuant to the curriculum proposed by this Agreement shall be solely HFC students, shall not be considered Michigan Tech students for any purpose and shall be entitled to all, and only those benefits and privileges granted by HFC to its students similarly enrolled, except in exclusive and mutually agreeable cases in which HFC and Michigan Tech collaborate to offer a supplementary course from MTU during the students' enrollment at HFC. All students admitted to and enrolled at Michigan Tech pursuant to the curriculum proposed by this Agreement shall no longer be considered HFC students for any purpose and shall be entitled to all, and only those benefits and privileges granted by CEE to its students similarly enrolled.

Federal regulations generally require that students receive financial aid from only a single institution from which courses are taken during a given quarter or semester. Accordingly, advisors should recommend that financial aid recipients take all their courses in a given quarter or semester at either HFC or MTU. If a College student attends both HFC and MTU in a single semester, financial aid may be granted from only one institution unless the parties enter into a separate written consortium agreement to allocate and distribute financial aid between HFC and MTU.

2. HFC shall allow potential Michigan Tech students to enroll, subject to standard admission procedures and criteria, for the first two years of courses required to fulfill the Bachelor of Science in Civil Engineering, Environmental Engineering, or Geospatial Engineering degree requirements at Michigan Tech with full privileges of a HFC student while at HFC.
3. Students from HFC will be guaranteed admission to Michigan Tech, subject to meeting a minimum cumulative grade point average of 2.75 and all other standard admission criteria. They must also file an application with the Michigan Technological University Admissions Office and contact their MTU academic advisor to develop a completion plan.
4. HFC will collect and retain all tuition, fees and other applicable HFC charges from students during their enrollment at HFC in accord with standard HFC procedures. Michigan Tech will collect and retain all tuition, fees and other applicable Michigan Tech charges from students enrolled at Michigan Tech. HFC shall administer the financial aid program for the students enrolled pursuant to this Agreement for their years of the program with full privileges of HFC students. Michigan Tech shall administer the program for their students enrolled pursuant to this Agreement with full privileges of Michigan Tech students.

5. For National Student Loan Clearinghouse, Veterans Administration, Athletic Eligibility, and enrollment verification purposes, HFC will have processing responsibility during a student's first two years in the Program.
6. An official transfer evaluation of credits taken prior to enrolling at Michigan Tech will be completed by the Michigan Tech Transfer Services Office upon acceptance to Michigan Tech. Courses completed with a grade of "C" (2.0) or better at HFC will be eligible for credit transfer. Course grades for credits transferred are not factored into the grade point average for credits completed at MTU.
7. Michigan Tech and HFC will work cooperatively to maintain the Transfer Guides/Operational Plans (Appendices A, B and C) to facilitate and implement the terms for the program included in the Agreement. The Operational Plans include degree mapping and credit requirements for fulfillment of the Bachelor of Science degree. HFC and Michigan Tech agree to review the Transfer Guides/Operational Plans annually and notify each other in writing of any proposed changes and of any adopted changes promptly.
8. In collaboration with this Agreement, credits taken at Michigan Tech will transfer to HFC, in accordance with their relative coursework, to "satisfy any qualifying degree or certificate requirements offered by HFC.
9. By signing this Agreement, HFC and Michigan Tech agree to enter into a relationship of continuous collaboration. Additional qualifying programs proposed for adoption in Attachment A may be included with an addendum to Attachment A with the written acceptance of both institutions and accompanied by its respective Operational Plan in Appendices A, B and C.
10. At least one administrative or faculty member from each institution will be appointed to act as agents for the implementation of this Agreement, to speak for the institutions and to communicate changes to respective faculty members, advisors, counselors, and others to whom the information is pertinent. Responsibility for oversight of this agreement rests with the Director of Academic Services at HFC and the Professor and Chair of the Civil and Environmental Engineering Department at Michigan Tech. Both parties agree to communicate annually any changes in their respective programs that may affect this Articulation Agreement.

To the extent permitted by applicable law, including the Family Educational Rights and Privacy Act ("FERPA"), 20 U.S.C. § 1232g, and its implementing regulations, 34 C.F.R. § 99.1 et seq., HFC and Michigan Tech will share data on student achievement to assess program effectiveness.

Liaisons:

**MICHIGAN TECHNOLOGICAL
UNIVERSITY**

Audra Morse
Professor and Chair
Civil and Environmental Engineering
Department
1400 Townsend Dr.
Houghton, MI 49931
Ph: 906-487-3240
Email: anmorse@mtu.edu

HENRY FORD COLLEGE

Academic Services (L314)
Henry Ford College
5101 Evergreen Rd.
Dearborn, MI 48128
academicservices@hfcc.edu

11. **Notices:** Notices required under this Agreement shall be in writing and shall be sent registered mail or certified mail, return receipt requested. Such notices shall be addressed to the Parties at the addresses set forth above under Liaisons, or at such other address as may be specified by either Party. The Parties may otherwise communicate by email. If either institution is closed due to health or safety reasons, notices may be communicated initially by email with additional notice by certified mail.

12. **Force Majeure.** Neither Party will be liable for any failure or delay in performing an obligation under this Agreement that is due to any of the following causes, to the extent beyond its reasonable control: acts of God, accident, riots, war, terrorist act, epidemic, pandemic, quarantine, civil commotion, breakdown of communication facilities, breakdown of web host, breakdown of internet service provider, natural catastrophes, governmental acts or omissions, changes in laws or regulations, national strikes, fire, explosion, generalized lack of availability of raw materials or energy.

For the avoidance of doubt, Force Majeure shall not include (a) financial distress nor the inability of either party to make a profit or avoid a financial loss, (b) changes in market prices or conditions, or (c) a party's financial inability to perform its obligations hereunder.

13. **Invalid Parts.** If any provision of this Agreement is declared by any court of competent jurisdiction to be invalid for any reason, such invalidity shall not affect the remaining provisions. On the contrary, such remaining provisions shall be fully severable, and this Agreement shall be construed and enforced as if such invalid provisions never had been inserted in this Agreement.

14. **Modifications.** This Agreement may only be modified by written instrument signed by both Parties hereto.

15. **Enforcement and Governing Law.** All matters relating to the validity, interpretation, performance or enforcement of this Agreement, and any claims arising from or related to this Agreement, will be governed by and construed in accordance with the laws of the United States of America, State of Michigan, without regard to the principle of conflict of laws. This Agreement is between the HFC and Michigan Tech, is enforceable only by HFC and Michigan Tech, and is not intended to create nor shall it create any rights in or be enforceable by any third party, including any student of either institution.

16. **Indemnification.** Statutory and common law theories and principles of indemnification, contribution, and equitable restitution shall govern and apply to claims, actions, causes of action, costs, expenses and losses (including attorneys' fees) resulting from or caused by the actions or omissions of the parties or their employees pursuant to this Agreement.

17. **Entire Agreement.** This Agreement embodies the entire agreement of the Parties and supersedes all other verbal and/or written agreements, warranties, representations, or understandings entered into by the Parties and may only be modified by a written amendment executed by authorized signatories of both Parties.

18. **Counterparts.** This Agreement may be executed in counterparts which, when combined, shall constitute the entire agreement.

19. **Termination.** This Agreement may be terminated by either HFC or Michigan Tech upon written notice to the other but in the event of any termination both institutions will permit those students who have pursued a course of study in reliance on the program provided by this Agreement to complete that course of study.

20. Henry Ford College and Michigan Tech agree to the terms of this Agreement, which will be in effect from July 1, 2021 until June 30, 2024. The signatories below warrant they are authorized to enter into this Agreement on behalf of their respective Parties.

**MICHIGAN TECHNOLOGICAL
UNIVERSITY**



Richard J. Koubek
President
3/11/2021

Date

(Optional Name)
(Title)

Date


(Optional Name)
(Title)

Date

(Optional Name)
(Title)

Date

HENRY FORD COLLEGE



Russell Kavalhuna, J.D.
President
March 26, 2021

Date



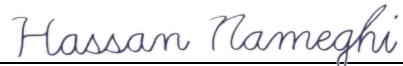
Michael Nealon, Ph.D.
VP Academic Affairs
March 26, 2021

Date



Janice Gilliland, Ed.S.
Dean, School of STEM
3/24/2021

Date



Hassan Nameghi, Ph.D.
Faculty Chair of Engineering
3/24/2021

Date



Appendix A

TRANSFER GUIDE – HENRY FORD TO MTU

Associate in Science in Pre-Engineering – Henry Ford

BS Civil Engineering – Michigan Technological University

HENRY FORD	CREDITS	MTU COURSE	CREDITS	NOTES
CHEM 141	5	CH 1150/1151	3, 1	
PHYS 231	5	PH 2100/1100	3, 1	
PHYS 232	5	PH 2200/1200	3, 1	
MATH 180	5	MA 1161	5	
MATH 183	5	MA 2160	4	
MATH 280	5	MA 3160	4	
MATH 288	5	MA 3530	3	Will cover MA 3520
ENGR 130	3	ENG 1XXE		Will cover CEE 1000
ENGR 125	3	Not evaluated		
Additional courses can be completed at Henry Ford College				
ENGR 232	3	MEEM 2110	3	
ENGR 235	2	MEEM 2150	2	
ENGR 233	3	MEEM 2700	3	Engineering Science Elective
CIS 171	3	ENG 1101	3	
General Education (MTA)				
Students with the MTA endorsement on their community college transcript will have satisfied MTU's General Education Core Requirements and 6 credits of Humanities, Arts and Social Science (HASS). Students will need to take 6 credits of upper level (3000+) at Michigan Tech to complete the HASS requirement.				

Henry Ford Pre-Engineering Info

<https://catalog.hfcc.edu/programs/pre-engineering-general-associate-science-associate-science>



Planning Guide

MTU Civil Engineering (General Path)

Fall _____			Spring _____		
Course		Credits	Course		Credits
ENG1102	Modeling and Design	3	CEE1001	Sustainability & CE Practice	1
SU2000	Surveying	2	MA2320	Linear Algebra	2
CEE3332	Fundamentals of Construction	3	CEE3401	Transportation Eng.	3
CEE3710	Uncertainty Analysis	3	ENG3200	Thermo/Fluids	4
GE2000	Understanding the Earth	3	HASS 3000+	Social & Behavioral Studies	3
Co-cur		1	CEE3331	Professional Practice	2
Total Credits <u> 15 </u>			Total Credits <u> 15 </u>		
Fall _____			Spring _____		
Course		Credits	Course		Credits
CEE3101	CE Materials	3	CEE3810	Soil Mechanics	4
CEE3620	Water Resources Eng.	4	PROF. ELECT.	Professional Elective	3
CEE3202	Structural Analysis	3	CEE4223/4213	Steel or Concrete Design	4
EC3400	Economic Decision Analysis	3	CEE3503	Environmental Eng.	3
HASS 3000+	Any HASS list	3	Co-cur		1
Total Credits <u> 16 </u>			Total Credits <u> 15 </u>		
Fall _____			Spring _____		
Course		Credits			
CEE4905	Senior Design	3			
PROF. ELECT.	Professional Elective	3			
PROF. ELECT.	Professional Elective	3			
PROF. ELECT.	Professional Elective	3			
Co-cur		1			
Total Credits <u> 13 </u>					

Total Credits: 74



Appendix B

TRANSFER GUIDE – HENRY FORD TO MTU

Associate in Science in Pre-Engineering – Henry Ford

BS Environmental Engineering – Michigan Technological University

HENRY FORD	CREDITS	MTU COURSE	CREDITS	NOTES
CHEM 141	5	CH 1150/1151	3, 1	
PHYS 231	5	PH 2100/1100	3, 1	
PHYS 232	5	PH 2200/1200	3, 1	
MATH 180	5	MA 1161	5	
MATH 183	5	MA 2160	4	
MATH 280	5	MA 3160	4	
MATH 288	5	MA 3530	3	Will cover MA 3520
ENGR 130	3	ENG 1XXE	3	Will cover CEE 1501
ENGR 125	3	Not evaluated		
Additional courses can be completed at Henry Ford College				
ENGR 232	3	MEEM 2110	3	ENGR 232/235 will cover ENG2120
ENGR 235	2	MEEM 2150	2	
CIS 171	3	ENG 1101	3	
CHEM 142	5	CH 1160/61	4	
General Education (MTA)				
Students with the MTA endorsement on their community college transcript will have satisfied MTU's General Education Core Requirements and 6 credits of Humanities, Arts and Social Science (HASS). Students will need to take 6 credits of upper level (3000+) at Michigan Tech to complete the HASS requirement.				

Henry Ford Pre-Engineering Info

<https://catalog.hfcc.edu/programs/pre-engineering-general-associate-science-associate-science>



Planning Guide

MTU Environmental Engineering

Fall _____			Spring _____		
Course		Credits	Course		Credits
ENG 1102	Modeling and Design	3	CEE 3502	Env. Mon. & Measure. Analysis	3
MA 2320	Linear Algebra	2	ENG 3200	Thermo/Fluids	4
GE 2000	Understanding the Earth	3	CEE 4506	Sust. Princ. To Engrg Practice	3
CEE 3501	Env. Engrg Fundamentals	3	CEE 3331	Professional Practice	2
HASS	SOC/BEH SCI 3000+	3	HASS	Any HASS 3000+	3
Co-cur		1	Co-cur		1
Total Credits <u> 15 </u>			Total Credits <u> 16 </u>		
Fall _____			Spring _____		
Course		Credits	Course		Credits
BL 3080	Bio Concepts for Eng.	3	BL 3310	Microbiology	3
CEE 4501	Chem Process	4	CEE 4503	Water Treatment	3
CEE 3620	Water Resources Eng.	4	GE 3850	Geohydrology	3
CEE 4502	Wastewater Treat.	3	EC 3400	Econ. Decision Analysis	3
Prof. Elect.		3	CEE 4509	Env. Proc. & Simulation	2
Total Credits <u> 17 </u>			Total Credits <u> 14 </u>		
Fall _____			Spring _____		
Course		Credits			
CEE 3810/FW 3330	Soil Mechanics	4			
CEE 4505	Surface Water Quality	3			
CEE 4504	Air Quality	3			
CEE 4905	Senior Design	3			
Co-cur		1			
Total Credits <u> 14 </u>					

Total Credits: 76



Appendix C

TRANSFER GUIDE – HENRY FORD TO MTU

Associate in Science in Pre-Engineering – Henry Ford

BS Geospatial Engineering – Michigan Technological University

HENRY FORD	CREDITS	MTU COURSE	CREDITS	NOTES
CHEM 141	5	CH 1150/1151	3, 1	
PHYS 231	5	PH 2100/1100	3, 1	
PHYS 232	5	PH 2200/1200	3, 1	
MATH 180	5	MA 1161	5	
MATH 183	5	MA 2160	4	
MATH 280	5	MA 3160	4	
MATH 288	5	MA 3530	3	
ENGR 130	3	ENG 1XXE	3	Will cover SU1000
ENGR 125	3	Not evaluated		
Additional courses can be completed at Henry Ford College				
ENGR 232	3	MEEM 2110	3	ENGR 232/235 will cover ENG2120
ENGR 235	2	MEEM 2150	2	
CIS 171	3	ENG 1101	3	
General Education (MTA)				
Students with the MTA endorsement on their community college transcript will have satisfied MTU's General Education Core Requirements and 6 credits of Humanities, Arts and Social Science (HASS). Students will need to take 6 credits of upper level (3000+) at Michigan Tech to complete the HASS requirement.				

Henry Ford Pre-Engineering Info

<https://catalog.hfcc.edu/programs/pre-engineering-general-associate-science-associate-science>



Planning Guide

MTU Geospatial Engineering – Prof. Surveying Path

Fall _____			Spring _____		
Course		Credits	Course		Credits
ENG 1102	Modeling and Design	3	MA 3710	Statistics	3
MA 2320	Linear Algebra	2	CMG 3200	Site Planning & Development	4
GE 2000	Understanding the Earth	3	SU 2220	Route & Engrg Surveying	3
SU 2000	Surveying	2	BUS 2200	Business Law	3
SU 2050	Plane Surveying	4	HASS	Any HASS 3000+	3
Co-cur		1	Co-cur		1
Total Credits <u> 15 </u>			Total Credits <u> 17 </u>		
Fall _____			Spring _____		
Course		Credits	Course		Credits
SU 3600	Surveying Comp & Adj	4	Surveying Elect		3
SU 3110	Surveying Field Pract.	4	FW 3540	Intro to GIS for Natrl Res. Mgt	4
SU 3180	Boundary Surv. Princ.	4	SU 4060	Geodesy	3
HASS	SOC/BEH SCI 3000+	3	SU 4180	Land Subdivision Design	3
CEE 3331	Professional Practice	2	Eng Elective		3
Total Credits <u> 17 </u>			Total Credits <u> 16 </u>		
Fall _____			Spring _____		
Course		Credits			
SU 4300	Geospatial Monitoring	3			
SU 4140	Photogrammetry	3			
SU 4100	Geodetic Positioning	3			
HU 3120	Tech & Prof. Comm.	3			
CEE 4905	Senior Design	3			
Co-cur		1			
Total Credits <u> 16 </u>					

Total Credits: 81



Planning Guide

MTU Geospatial Engrg. – Geoinformatics Path

Fall _____			Spring _____		
Course		Credits	Course		Credits
ENG 1102	Modeling and Design	3	MA 3710	Statistics	3
MA 2320	Linear Algebra	2	CMG 3200	Site Planning & Development	4
GE 2000	Understanding the Earth	3	IGT Elective		3
SU 2000	Surveying	2	FW 3540	Intro to GIS for Natrl Res. Mgt	4
HASS	SOC/BEH SCI 3000+	3	HASS	Any HASS 3000+	3
Prog. Elect		3			
Total Credits <u> 16 </u>			Total Credits <u> 17 </u>		
Fall _____			Spring _____		
Course		Credits	Course		Credits
SU 4140	Photogrammetry	3	SU 4060	Geodesy	3
SU 3600	Surveying Comp & Adj	4	SU 4010	Geospatial Concepts	3
FW 4540	Remote Sensing	3	GIS Elective		3
SU 4142	3D Surveying & Mod.	3	SU 4012	Geospatial Data Mining	3
CEE 3331	Professional Practice	2	SU 4013	Hydrographic Mapping	3
Co-cur		1	Co-cur		1
Total Credits <u> 16 </u>			Total Credits <u> 16 </u>		
Fall _____			Spring _____		
Course		Credits			
SU 4300	Geospatial Monitoring	3			
SU 4100	Geodetic Positioning	3			
SU 4011	Cadastre & Land Info	3			
HU 3120	Tech & Prof. Comm.	3			
CEE 4905	Senior Design	3			
Co-cur		1			
Total Credits <u> 16 </u>					

Total Credits: 81