

ARTICULATION AGREEMENT RENEWAL BETWEEN
Henry Ford College
AAS in Pre-Engineering: Electrical/Computer or
AS in Pre-Engineering: General
and
Eastern Michigan University
BS in Electrical and Computer Engineering

Article I
Agreement on Principle

Eastern Michigan University (EMU) and Henry Ford College (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, EMU and HFC agree to enter into this Articulation Agreement to facilitate the completion of the AAS in Pre-Engineering: Electrical/Computer or AS in Pre-Engineering: General at HFC and the BS in Electrical and Computer Engineering at EMU. Both parties enter into this Agreement as cooperating, equal partners who shall maintain the integrity of their separate programs.

Article II
Agreement on Program Specifics

EMU and HFC agree that interested students may transfer the course credits indicated on the attached articulation guide toward a BS in Electrical and Computer Engineering at EMU. Under this Agreement, EMU will waive the 60-hour rule and require that a minimum of 30 credit hours must be completed in courses offered by EMU, of which 15 hours must be in major/program requirements at the 300-level or above. A minimum of 120 total credits is required to graduate.

To use this Agreement students must apply and be admitted to EMU. HFC students will receive equal consideration with other students seeking admission and financial aid.

The Michigan Transfer Agreement (MTA) requirements may be completed at the most appropriate time for the student whether before or after admission to EMU. If already on the transcript, the MACRAO designation will be accepted at EMU after summer semester 2019. Students who have not satisfied the MTA or MACRAO agreement must complete EMU's General Education Requirements as applied to transfer students. All other EMU graduation and program requirements must be satisfied whether by transferred courses, EMU courses, or approved substitutions or waivers.

For the purpose of this Agreement, both HFC and EMU agree to accept transferable courses from each other and from other regionally accredited institutions. Articulation guides will be provided to assist students in completing the articulated program of study. Each institution will determine the satisfaction of their individual program and degree requirements. HFC courses indicated with an * on the articulation guide are required for EMU's program. Any substitutions for these courses must be approved by the EMU program coordinator if not already stated in the Agreement. In the case of a student who has accumulated credits before declaring this program, every effort will be made to maximize the use of credits already completed. All students using this Agreement will be encouraged to complete an associate degree, although it is not required. Students will be informed of reverse transfer opportunities. Disputes regarding the transfer of courses may be appealed to the EMU Provost by contacting the Office of Transfer Partnerships at 734.487.6577.

Article III

Agreement on Communication

EMU and HFC agree to cooperate in communicating with each other and with their common and respective publics concerning the established relationship between the two institutions. Communication may include the development of various kinds of publications to inform those who might benefit personally or professionally from the opportunities provided by this Agreement. Faculty and staff at both institutions will share the information in this Agreement with interested and qualified students and both institutions will provide counseling and advising to students and prospective students. EMU will provide transfer student performance data to HFC officials annually through the Community College Transfer Student Report. 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 EMU may share data on student achievement to assess program effectiveness.

Article IV

Maintenance and Review Procedures

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 Vice President of Academic Affairs at HFC and the School Director of Engineering at EMU. Both parties agree to communicate annually any changes in their respective programs that may affect this articulation agreement.

Effective Date: September 1, 2023 until August 31, 2026.

This is a renewal of an agreement made in September 2019. This Agreement is consistent with the 2023-2024 catalog. Students have until summer 2031 to graduate from Eastern Michigan University following this agreement. In the event that a student does not complete the program within seven years, they may be required to have their credits reevaluated using the requirements of the current articulation guide.

Termination: Either Party may terminate this Agreement without cause with 30 days written notice to the other, with the stipulation that students involved in programming at HFC or EMU pursuant to this Agreement at the time of termination shall be allowed to complete their training under the terms of the Agreement.

Article V

Miscellaneous Provisions

Discrimination: The Parties agree orientation that they will not discriminate against any student or participant because of race, color, age, sex/gender, sexual, gender identity, gender expression, religion, national origin, height, weight, marital status, disability, perceived disability, political affiliation, familial status, veteran status, genetic or other characteristic protected by law in the performance of programs and services under this Agreement, consistent with federal and state laws and with the non-

discrimination policies of each Party. Neither party will discriminate against any employee or applicant for employment (with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment) because of race, color, age, sex/gender, sexual orientation, gender identity, gender expression, religion, national origin, height, weight, marital status, disability, perceived disability, political affiliation, familial status, veteran status, genetic or other characteristic protected by law.

The Parties agree that they will provide appropriate accommodations and services for students with disabilities who are protected by the Americans with Disabilities Act and make sure that all of their programs are also accessible and comply with the Americans with Disabilities Act (ADA), Rehabilitation Act of 1974, World Wide Web Consortium's Accessibility Guidelines (W3CG) and any other applicable law or regulation.

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 below, or at such other address as may be specified by either Party. The Parties may otherwise communicate by email.

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

If to EMU: Director, Transfer Partnerships
Eastern Michigan University
200 McKenny Hall
Ypsilanti, MI 48197
ccr_office@emich.edu

Disputes. The Parties agree to attempt best efforts to resolve disputes on an informal basis through meetings and discussions. Disputes that are not resolved at the informal level will be submitted to facilitation. If facilitation is unsuccessful, the Parties shall submit their dispute to binding arbitration in lieu of litigation and waive the right to file suit against the other. The arbitration shall be conducted in Dearborn, Michigan by a mutually acceptable arbitrator who shall determine which Party(ies) shall be responsible for paying the arbitrator's fee.

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.

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

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.

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.

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.

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

**RENEWAL OF
ARTICULATION AGREEMENT BETWEEN
Henry Ford College – AAS in Pre-Engineering: Electrical/Computer or AS in Pre-
Engineering: General
Eastern Michigan University- BS in Electrical and Computer Engineering**

Henry Ford College and Eastern Michigan University agree to the terms of this Agreement, which will be in effect from September 1, 2023 until August 31, 2026. The signatories below warrant they are authorized to enter into this Agreement on behalf of their respective Parties.

Signatures

Henry Ford College

Eastern Michigan University

Russell A. Kavalhuna
Russell Kavalhuna, JD
President

3/30/2023
Date

James M. Smith
James M. Smith, PhD
President

3/21/23
Date

Michael A. Nealon
Michael Nealon, PhD
Vice President of Academic Affairs

3/26/23
Date

Rhonda Longworth
Rhonda Longworth, PhD
Provost & Executive Vice President
Academic and Student Affairs

3/13/23
Date

Janice Gilliland
Janice Gilliland, EdS
Dean, School of STEM

3/24/2023
Date

M. S. Qatu
Mohamad Qatu, PhD
Dean, GameAbove College of Engineering and
Technology

13 Feb 2023
Date

Vijay Mannari
Vijay Mannari, PhD
Interim School Director, School of
Engineering

03/10/2023
Date

ELECTRICAL & COMPUTER ENGINEERING ARTICULATION GUIDE

Henry Ford College – AAS in Pre-Engineering: Electrical/Computer

Eastern Michigan University – BS in Electrical and Computer Engineering

Henry Ford College Courses:**Eastern Michigan University Courses:****Michigan Transfer Agreement (MTA) Requirements (33 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 General Education Application Requirements of one Perspectives on a Diverse World course, one Learning Beyond the Classroom experience, and a Writing Intensive course in the major. Courses listed below for the MTA also satisfy program requirements at EMU and/or HFC. For HFC approved MTA courses go to [HFC's website](#). Students without an MTA or MACRAO endorsement must complete EMU's general education program.

1. A course in English Composition

ENG 131 Introduction to College Writing..... 3 WRTG 120 General Transfer Credit 3

2. A Second course in English Composition or Communication

ENG 135 Business and Technical Writing and Research 3 WRTG 121 Composition II (GEEC)..... 3

3. A course in Mathematics

1* MATH 180 Calculus I..... 5 MATH 120 Calculus I (4)+1 (GEQR)..... 5

4. Two courses in Natural Sciences from different disciplines (one lab required)

1* PHYS 231 Engineering Physics I 5 PHY 223 Mechanics and Sound (GEKN) 5

*CHEM 141 Principles of General and Inorganic Chemistry .5 CHEM 121/122 General Chemistry I (4)+1 (GEKN)..... 5

5. Two courses in Humanities and Fine Arts from different disciplines

Choose from the approved MTA list 6 General Transfer Credit 6

6. Two courses in Social Sciences from different disciplines

Choose one from: BEC 151 or 152..... 3 ECON 201 or 202 General Transfer Credit..... 3

Choose a from the approved MTA list 3 General Transfer Credit 3

If needed, complete additional credits in any of the above categories to meet the 30 credit minimum for the MTA.**EMU's Perspectives on a Diverse World requirement: Complete one course from the following list:**

These courses also satisfy an MTA area: **Natural Science:** BIO 138 (non-lab); **Humanities:** ART 224, 225, 226, 227; ENG 243, 248; PHIL 201; WR 233, 236, 241; **Social Science:** ANTH 131, 151, 152, 154; EDU 296; GEOG 132; HIST 113, 261; POLS 152; SOC 152, 251. **This course applies, but does not satisfy the MTA:** ART 229, BBA 250; LGL 248; PLGL 248

HFC Pre-Engineering: Electrical/Computer Program Requirements (31 credits)

ENGR 125 Introduction to Computation for Engineering... 3 CEET 151 Intro Computing in Engineering Tech..... 3

* ENGR 130 Introduction to Engineering..... 3 ME 100 General Transfer Credit sub for EECE 100 ... 3

1*ENGR 240 Circuits 5 EECE 212 Engineering Circuit Analysis (3)+2 5

1*MATH 183 Calculus II..... 5 MATH 121 Calculus II (4)+1 5

* MATH 280 Calculus III..... 5 MATH 223 Multivariable Calculus (4)+1 5

* MATH 288 Differential Equations 5 MATH 325 Differential Equations (3)+2..... 5

* PHYS 232 Engineering Physics II..... 5 PHYS 224 Electricity and Light 5

EMU Requirements and Electives that may be taken at HFC or EMU (14 credits)* CIS 170 C Programming 3 COSC 000 General Transfer Credit sub for COSC 111 3* ENGR 205 Digital Systems..... 4 EECE 000 General Trans Credit sub for EECE 251 (3)+1 . 4* MATH 275 Discrete Mathematics 4 MATH 205 General Trans Credit sub for EECE 262 (3)+1 . 4

* MATH 283 Linear Algebra 3 MATH 122 Elementary Linear Algebra..... 3

Credits at HFC: 78 Credits that apply to EMU's program 78

* Required for the Electrical and Computer Engineering program at EMU. Must be taken at EMU if not completed prior to transferring.

¹ Admission requirement for the Electrical and Computer Engineering program at EMU. See page 3 of guide for all admission requirements.

ELECTRICAL & COMPUTER ENGINEERING ARTICULATION GUIDE

Henry Ford College – AAS in Pre-Engineering: Electrical/Computer

Eastern Michigan University – BS in Electrical and Computer Engineering

**Completion of the BS in Electrical and
Computer Engineering at EMU****Major Requirements (45 credits)****Electrical and Computer Engineering Requirements
(32 credits)**

EECE 213	Engineering Circuit Analysis II	3
EECE 341	Engineering Electronics I	3
EECE 351	Microcontrollers	3
EECE 369	Intro to Engineering Analysis Methods	3
EECE 371	Signals and Systems	3
EECE 380	Electric Circuit and Design Lab.....	3
EECE 400	EECE Professional Practice	2
EECE 421	Control Systems Engineering	3
EECE 430	Power Electronics	3
EECE 480	Senior Capstone	3
EECE 481W	Senior Capstone II.....	3

Restricted Electives (6 credits) Choose 2 below:

EECE 342	Engineering Electronics II	3
EECE 352	Digital Systems Designs with HDL.....	3
EECE 365	Engineering Electromagnetics	3
EECE 372	Communication Systems	3
EECE 411	Machine Learning	3
EECE 431	Digital Control Systems	3
EECE 435	Internet of Things.....	3
EECE 441	Introduction to Digital Signal Processing	3
EECE 452	Adv Digital System Design with FPGA	3

LBC Requirement

Students must complete one Learning Beyond the Classroom course or noncredit experience offered by EMU. Consult your advisor for options.

Technical Electives (7 credits)

Students must complete a minimum of 45 credits at EMU under this agreement. See faculty advisor for recommended courses if additional courses are needed at EMU to meet the minimum of 45 credits.

Credits at EMU: 45**Transfer Credits: 78****Total Credits: 123**

ELECTRICAL & COMPUTER ENGINEERING ARTICULATION GUIDEHenry Ford College – **AS in Pre-Engineering: General**Eastern Michigan University – **BS in Electrical and Computer Engineering****Henry Ford College Courses:****Eastern Michigan University Courses:****Michigan Transfer Agreement (MTA) Requirements (33 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 General Education Application Requirements of one Perspectives on a Diverse World course, one Learning Beyond the Classroom experience, and a Writing Intensive course in the major. Courses listed below for the MTA also satisfy program requirements at EMU and/or HFC. For HFC approved MTA courses go to [HFC's website](#). Students without an MTA or MACRAO endorsement must complete EMU's general education program.

1. A course in English Composition

ENG 131 Introduction to College Writing..... 3 WRTG 120 General Transfer Credit 3

2. A Second course in English Composition or Communication

ENG 135 Business and Technical Writing and Research 3 WRTG 121 Composition II (GEEC)..... 3

3. A course in Mathematics

1* MATH 180 Calculus I..... 5 MATH 120 Calculus I (4)+1 (GEQR)..... 5

4. Two courses in Natural Sciences from different disciplines (one lab required)

1* PHYS 231 Engineering Physics I 5 PHY 223 Mechanics and Sound (GEKN) 5

*CHEM 141 Principles of General and Inorganic Chemistry .5 CHEM 121/122 General Chemistry I (4)+1 (GEKN)..... 5

5. Two courses in Humanities and Fine Arts from different disciplines

Choose from the approved MTA list 6 General Transfer Credit 6

6. Two courses in Social Sciences from different disciplines

Choose one from: BEC 151 or 152..... 3 ECON 201 or 202 General Transfer Credit..... 3

Choose a from the approved MTA list 3 General Transfer Credit 3

If needed, complete additional credits in any of the above categories to meet the 30 credit minimum for the MTA.**EMU's Perspectives on a Diverse World requirement: Complete one course from the following list:**

These courses also satisfy an MTA area: **Natural Science:** BIO 138 (non-lab); **Humanities:** ART 224, 225, 226, 227; ENG 243, 248; PHIL 201; WR 233, 236, 241; **Social Science:** ANTH 131, 151, 152, 154; EDU 296; GEOG 132; HIST 113, 261; POLS 152; SOC 152, 251. **This course applies, but does not satisfy the MTA:** ART 229, BBA 250; LGL 248; PLGL 248

HFC Pre-Engineering: Electrical/Computer Program Requirements (30 credits)

1*MATH 183 Calculus II..... 5 MATH 121 Calculus II (4)+1 5

* MATH 280 Calculus III..... 5 MATH 223 Multivariable Calculus (4)+1 5

* MATH 288 Differential Equations 5 MATH 325 Differential Equations (3)+2..... 5

* ENGR 130 Introduction to Engineering..... 3 ME 100 General Transfer Credit sub for EECE 100..... 3

* PHYS 232 Engineering Physics II..... 5 PHYS 224 Electricity and Light 5

ENGR 125 Introduction to Computation for Engineering ...3 CEET 151 Intro Computing in Engineering Tech..... 3

* ENGR 205 Digital Systems..... 4 EECE 000 General Trans Credit sub for EECE 251 (3)+1 .4**EMU Requirements and Electives that may be taken at HFC or EMU (11 credits)*** CIS 170 C Programming 3 COSC 000 General Transfer Credit sub for COSC 111 3* MATH 275 Discrete Mathematics 4 MATH 205 General Trans Credit sub for EECE 262 (3)+1 .4

* MATH 283 Linear Algebra 3 MATH 122 Elementary Linear Algebra 3

1*ENGR 240 Circuits 5 EECE 212 Engineering Circuit Analysis (3)+2 5

Credits at HFC: 78 Credits that apply to EMU's program 78

* Required for the Electrical and Computer Engineering program at EMU. Must be taken at EMU if not completed prior to transferring.

¹ Admission requirement for the Electrical and Computer Engineering program at EMU. See page 3 of guide for all admission requirements.

ELECTRICAL & COMPUTER ENGINEERING ARTICULATION GUIDEHenry Ford College – **AS in Pre-Engineering: General**Eastern Michigan University – **BS in Electrical and Computer Engineering****Completion of the BS in Electrical and Computer Engineering at EMU**

Major Requirements	(45 credits)
Electrical and Computer Engineering Requirements (32 credits)	
EECE 213	Engineering Circuit Analysis II..... 3
EECE 341	Engineering Electronics I..... 3
EECE 351	Microcontrollers 3
EECE 369	Introduction to Engineering Analysis Methods..... 3
EECE 371	Signals and Systems 3
EECE 380	Electric Circuit and Design Lab 3
EECE 400	EECE Professional Practice 2
EECE 421	Control Systems Engineering 3
EECE 430	Power Electronics..... 3
EECE 480	Senior Capstone..... 3
EECE 481W	Senior Capstone II..... 3

Restricted Electives (6 credits) Choose 2 below:

EECE 342	Engineering Electronics II..... 3
EECE 352	Digital Systems Designs with HDL 3
EECE 365	Engineering Electromagnetics..... 3
EECE 372	Communication Systems..... 3
EECE 411	Machine Learning..... 3
EECE 431	Digital Control Systems 3
EECE 435	Internet of Things..... 3
EECE 441	Introduction to Digital Signal Processing 3
EECE 452	Advanced Digital System Design with FPGA 3

LBC Requirement

Students must complete one Learning Beyond the Classroom course or noncredit experience offered by EMU. Consult your advisor for options.

Technical Electives (7 credits)

Students must complete a minimum of 45 credits at EMU under this agreement. See faculty advisor for recommended courses if additional courses are needed at EMU to meet the minimum of 45 credits.

Credits at EMU:	45
Transfer Credits:	78
Total Credits:	123

ELECTRICAL & COMPUTER ENGINEERING ARTICULATION GUIDEHenry Ford College – **AS in Pre-Engineering: General**Eastern Michigan University – **BS in Electrical and Computer Engineering****Additional Information:**

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both institutions agree to accept transferrable courses from each other and from other regionally accredited institutions. HFC courses indicated with an * are required for EMU's BS in Electrical and Computer Engineering. Substitutions for these courses must be approved by the EMU program coordinator.
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 the major. The Perspectives on a Diverse World requirement may be transferred to EMU.

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 who do not have "MTA Satisfied" on their community college transcript, will be required to satisfy EMU's general education requirements as applied to transfer students. The MTA may be completed after admission to EMU, however, students should inform their advisors or they may be advised to complete additional courses for the general education program. If already on the transcript, the MACRAO designation will be accepted at EMU after August 2019.

3. Only courses with a grade of "C" or better (2.0 on a 4.0 scale) will be accepted for transfer to either institution.
4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 45 credit hours must be completed in EMU courses, with at least 15 hours in the program at the 300 level or above. Of the last 30 hours completed before graduating, a minimum of 10 credit hours must be in courses offered by EMU. A minimum of 120 credit hours, completed in residence or accepted in transfer, is required for graduation.
5. Students must satisfy all admission requirements at the time of application for admission to EMU, including submitting transcripts from all previously attended colleges. HFC students will receive equal consideration with other students for course registration and financial aid.

Admissions Requirements

- Minimum EMU cumulative GPA of 2.5 (or a combined GPA from all transfer institutions).
 - Completion of PHY 223 (PHYS 231), MATH 120 (MATH 180), MATH 121 (MATH 183), and EECE 212 (ENGR 240), with a grade of C or above. [See catalog for additional information.](#)
6. Students are encouraged to contact EMU's Undergraduate Admissions Office before applying to EMU. To facilitate advising and the evaluation of transcripts, bring a copy of this articulation guide to all advising sessions.

Effective Date: September 1, 2023 until August 31, 2026.

This is a renewal of an agreement made in September 2019. This agreement is consistent with the 2023-2024 catalog. Students have until summer 2031 to graduate from Eastern Michigan University following this agreement. In the event that a student does not complete the program within seven years, they may be required to have their credits reevaluated using the requirements of the current articulation guide.

Contacts:

Henry Ford College
Hassan Nameghi, PhD
Faculty Chair – Engineering
313.317.1746
hnameghi@hfcc.edu
HFC Advising
313.317.6845
advising@hfcc.edu

Eastern Michigan University
Undergraduate Admissions
Student Center, Suite 220
734.487.6453
transfer_admissions@emich.edu
[Schedule an appointment](#)