

**EXHIBIT B**  
**ELECTRONIC ENGINEERING TECHNOLOGY**  
**ARTICULATION AGREEMENT GUIDE**

Henry Ford College – **AA in Pre-Engineering**

Eastern Michigan University – **BS in Electronic Engineering Technology**

**Henry Ford College Courses:**

**Transfer to Eastern Michigan University as:**

**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 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. Courses listed below for the MTA also satisfy program requirements at EMU and/or HFC. Students who started before fall semester 2014 may continue to follow the MACRAO Agreement until the end of summer semester 2019. Courses approved for the MTA can be found on [HFC's website](#).

<b>1. A course in English Composition</b>		
ENG 131 Introduction to College Writing ..... 3	WRTG 120 (University Elective)..... 3	
<b>2. A Second course in English Composition or Communication</b>		
* ENG 132 College Writing and Research..... 3	WRTG 121 Comp II (pre-req for SET 350W)..... 3	
<b>3. A course in Mathematics</b>		
* MATH 180 Calculus I..... 5	MATH 120 sub for MATH 140..... 5	
<b>4. Two courses in Natural Sciences from different disciplines (one lab required)</b>		
<sup>1</sup> * PHYS 231 Engineering Physics I ..... 5	PHY 223 sub for PHY 221 ..... 5	
*CHEM 141 Principles of General & Inorganic Chemistry I ..... 5	CHEM 121/122 General Chemistry I (4)+1..... 5	
<b>5. Two courses in Humanities and Fine Arts from different disciplines</b>		
Choose from the approved MTA list..... 6	University Elective ..... 6	
<b>6. Two courses in Social Sciences from different disciplines</b>		
Complete one: BEC 151 or 152..... 3	ECON 201 or 202 Macro or Microeconomics (Univ Elective)... 3	
Choose a second course from the approved MTA list..... 3	University Elective ..... 3	

**If needed, complete an additional course in the above categories to meet the 30 credit minimum for the MTA.**

\*EMU "Perspectives on a Diverse World" Requirement: These courses may be used to satisfy an MTA category above. *These courses also satisfy an MTA area:* **Humanities:** ART 224, 225, 226, 227; ENG 243, 248; PHIL 201; WR 233, 236; **Social Science:** ANTH 131, 151, 152, 154; GEOG 132; HIST 113, 243, 261; PHIL 201; POLS 152; PSY 296; SOC 152, 251.

**HFC Pre-Engineering Program Requirements (26 credits)**

* MATH 183 Calculus II ..... 5	MATH 121 Calculus II (4)+1..... 5
MATH 280 Calculus III ..... 5	MATH 223 University Elective (4)+1 ..... 5
MATH 288 Differential Equations ..... 5	MATH 325 University Elective..... 5
* ENGR 130 Introduction to Engineering ..... 3	ET 100 Introduction to Engineering Technology ..... 3
<sup>1</sup> *PHYS 232 Engineering Physics II..... 5	PHYS 224 sub for PHY 222..... 5
Computer Technology Requirement ..... 3	University Elective ..... 3

**EMU Requirements and Electives that may be taken at HFC or EMU (19 credits)**

* MATH 283 Linear Algebra ..... 3	MATH 122 Elementary Linear Algebra ..... 3
ELEC 103 Basic Electricity (Pre-req for ELEC 195, 200).... 4	ELEC 000 University Elective..... 4
* ELEC 115 Digital Circuits I..... 3	ELEC 214 Digital Circuit Analysis I ..... 3
* ELEC 195 AC/DC Circuit Analysis ..... 3	ELEC 200 Circuit Analysis I ..... 3
* ELEC 200 Ladder Diagrams & Motor Controls..... 3	ELEC 218 Motors and Controls..... 3
* ELEC 295 Microprocessor Systems..... 3	CET 220 Computer-Aided Electronics ..... 3

**Credits at HFC: .....78      Credits that apply to EMU's program..... 76**

\* Required for the Electronic Engineering Technology program at EMU. If not transferred from HFC, these courses must be completed at EMU.

<sup>1</sup> EMU will also accept HFC PHYS 131 and 132 for the Electronic Engineering Technology 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.

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**Completion of the Electronic Engineering Technology Program at EMU**

<b>Major Requirements</b>	<b>(48 credits)</b>
CET 151 Intro to Computing in Engineering Tech .....	3
CET 427 Programmable Logic Controller .....	3
ELEC 210 Circuit Analysis II .....	3
ELEC 300 Analog Circuit Analysis I .....	3
ELEC 310 Analog Circuit Analysis II .....	3
ELEC 314 Digital Circuit Analysis II .....	3
ELEC 320 Microcomputer Circuits .....	3
ELEC 326 Transform Circuit Analysis with Calculus .....	3
<sup>1</sup> ELEC 387L4 Co-op in Electronic Technology .....	3
ELEC 415 Communication Circuits .....	3
ELEC 420 Advanced Microprocessors .....	3
ELEC 426 Control Systems Engineering .....	3
ELEC 450 Senior Design Project .....	3
QUAL 320 Industrial Quality Control .....	3
SET 350W Engineering Communication .....	3
Choose one course from the following: .....	3
MET 211 Statics (3)	
MET 314 Applied Thermodynamics & Heat Transfer(3)	
<b>Minimum Credits at EMU: .....</b>	<b>48</b>
<b>Transfer Credits .....</b>	<b>76</b>
<b>Credits to Graduate: .....</b>	<b>124</b>

**Suggested Sequence for completing the program:**

*Courses may not be offered every semester. Consult with the program coordinator to develop a program of study.*

*MATH 120 (MATH 180 at HFC) is pre or co-requisite to ELEC 210.  
 MATH 121 (MATH 183 at HFC) is pre or co-requisite to ELEC 310*

**Fall Semester (12 credits)**

CET 151 F,W .....	3
ELEC 314 F, pre-req: ELEC 214 .....	3
ELEC 320 F, pre-reqs: ELEC 214 and CET 151 .....	3
Choose one course from the following: .....	3
MET 211 Statics (3)	
MET 314 Applied Thermodynamics & Heat Transfer(3)	

**Winter Semester (9 credits)**

ELEC 210 W, pre-req: ELEC 200 .....	3
ELEC 310 W, pre-req: ELEC 300 .....	3
ELEC 420 W, pre-req: ELEC 320 .....	3

**Fall Semester (12 credits)**

ELEC 300 F, pre-req: ELEC 210 .....	3
ELEC 326 F, pre-reqs: ELEC 210 and MATH 120 .....	3
ELEC 415 F, pre-req: ELEC 310 .....	3
QUAL 320 F, W .....	3

**Winter Semester (12 credits)**

<sup>1</sup> ELEC 387L4F,W .....	3
ELEC 426 W, pre-reqs: ELEC 326 and MATH 121 .....	3
ELEC 450 W, pre-reqs: ELEC 420 and 415 .....	3
SET 350W F, W, pre-req: WRTG 121 .....	3

<sup>1</sup> ELEC 387 may be waived if student has work experience in this field, however, one LBC experience or course must be completed to graduate. See program advisor for suggestions.

<sup>2</sup> Satisfies EMU's Writing Intensive Requirement.

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**Additional Information:**

1. Each institution will determine the satisfaction of their individual program and degree requirements. For the purpose of this articulation agreement, 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 Electronic Engineering Technology program. 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 satisfied at the community college as part of the MTA requirements.  
*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 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 in college prior to September 2014 have until the end of August 2019 to complete the MACRAO agreement. 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 30 credit hours must be completed in EMU courses, with at least 15 hours in the program or (9 hours in the major and 6 hours in the minor), 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 124 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.
6. Students are encouraged to contact the College of Technology Student Services before applying to EMU. To facilitate advising and the evaluation of transcripts, [sign up for this articulation agreement](#), and bring a copy of this articulation guide to all advising sessions.

**Effective Dates: September 1, 2018 until August 31, 2021.**

This is a renewal of an agreement made in April 2006 and renewed in September 2009, January 2014, and updated in September 2014. This agreement is consistent with the 2018-2019 catalog. Students have until summer 2026 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:**

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