### 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 WCC. Students who started before fall semester 2014 may continue to follow the MACRAO Agreement until the end of summer semester 2019. [WCC courses approved for the MTA](#).

1. **A course in English Composition**
   - ENG 111 Composition I .............................................4
   - WRTG 121 Comp II (pre-req for SET 350W) (3)+1 ..........4

2. **A Second course in English Composition or Communication**
   - COM 101 Fundamentals of Speaking .............................3
   - CTAC 124 University Elective .................................3

3. **A course in Mathematics**
   - MTH 191 Calculus I ....................................................5
   - MATH 120 Calculus I (4)+1 .......................................5
   - * MTH 192 Calculus II ..............................................4
   - MATH 121 Calculus II ..............................................4
   - * MTH 293 Calculus III (Math Restricted Elective) ........4
   - MATH 223 Multivariable Calculus ..............................4
   - * MTH 295 Differential Equations (Math Restricted Elective) 4
   - MATH 325 Differential Equations (3)+1 ......................4
   - * PHY 222 Analytical Physics II .................................5
   - PHY 224 Electricity and Light ....................................5
   - * CEM 111 General Chemistry I .................................4
   - CHEM 121 and 122 General Chemistry I ......................4
   - * PHY 211 Analytical Physics I ....................................5
   - PHY 223 Mechanics and Sound ..................................5

4. **Two courses in Natural Sciences from different disciplines (one lab required)**
   - * CEM 111 General Chemistry I .................................4
   - CHEM 121 and 122 General Chemistry I ......................4
   - * MTH 191 Calculus I ....................................................5
   - MATH 120 Calculus I (4)+1 .......................................5

5. **Two courses in Humanities and Fine Arts from different disciplines**
   - Choose from the approved MTA list ..........................6
   - University Electives .............................................6
   - * ENG 111 Composition I .............................................4
   - WRTG 121 Comp II (pre-req for SET 350W) (3)+1 ..........4
   - * CPS 161 An Introduction to Programming with Java .........4
   - MATH 120 Calculus I (4)+1 .......................................5
   - * CPS 171 The Art and Science of Digital Storytelling .......4
   - MATH 120 Calculus I (4)+1 .......................................5
   - * CPS 261 Adv Java Concepts (Computer Engr only) .........0-4
   - MATH 223 Multivariable Calculus ..............................4
   - * CPS 261 Adv Java Concepts (Computer Engr only) .........0-4
   - MATH 223 Multivariable Calculus ..............................4
   - * MTH 197 Linear Algebra ..........................................4
   - MATH 120 Calculus I (4)+1 .......................................5
   - * MTH 197 Linear Algebra ..........................................4
   - MATH 120 Calculus I (4)+1 .......................................5
   - * MTH 197 Linear Algebra ..........................................4
   - MATH 120 Calculus I (4)+1 .......................................5

6. **Two courses in Social Sciences from different disciplines**
   - Choose from the approved MTA list ..........................6
   - University Electives .............................................6
   - * CPS 161 An Introduction to Programming with Java .........4
   - MATH 120 Calculus I (4)+1 .......................................5
   - * CPS 171 The Art and Science of Digital Storytelling .......4
   - MATH 120 Calculus I (4)+1 .......................................5
   - * CPS 261 Adv Java Concepts (Computer Engr only) .........0-4
   - MATH 223 Multivariable Calculus ..............................4
   - * CPS 261 Adv Java Concepts (Computer Engr only) .........0-4
   - MATH 223 Multivariable Calculus ..............................4
   - * MTH 197 Linear Algebra ..........................................4
   - MATH 120 Calculus I (4)+1 .......................................5
   - * MTH 197 Linear Algebra ..........................................4
   - MATH 120 Calculus I (4)+1 .......................................5

If needed, complete an additional course in 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: Communication
  - COM 225
- Natural Science
  - ENV 101, 105
- Humanities
  - ART 143, 150
- Social Science
  - ANT 201, ECO 280, GEO 101, HST 109, 123, 150, 210, 230, 235, 240, 270, PLS 211, PSY 107, 251, 270; SOC 205, 206, 216.

**WCC Pre-Engineering Program Requirements (28 credits)**

Choose one from: CPS 141 or 171 ....................................4
*MTH 192 Calculus II ....................................................4
*MTH 293 Calculus III (Math Restricted Elective) ................4
*MTH 295 Differential Equations (Math Restricted Elective) 4
*PHY 222 Analytical Physics II .....................................5
CEM 122 General Chemistry II ........................................4
ENG 226 Composition II ...............................................3

**EMU Requirements and Electives that may be taken at WCC or EMU (13-16 credits)**

* CPS 161 An Introduction to Programming with Java ..........4
1 CPS 261 Adv Java Concepts (Computer Engr only) ............0-4
* MTH 197 Linear Algebra ............................................4
Open Electives or Math/Science pre-requisites ..................1-8

**Credits at WCC:** ..................................................74-77
**Credits that transfer to EMU:** .................................74-77

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*Required for EMU’s Electrical and Computer Engineering program. If not transferred, must be completed at EMU.

* Required for EMU’s Electrical and Computer Engineering program Computer Engineering Concentration.

**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.
Completion of the Electrical and Computer Engineering Program at EMU

**Major Requirements (47-50 credits)**

**Foundational Courses (9 credits)**
- CET 151 Intro to Computing in Engineering Tech ........3
- ME 100 Intro to Engineering Design & Manufacturing ..3
- \(^1\) SET 350W Engineering Communication ..................3

**Electrical & Computer Engr Courses (29 credits)**
- EECE 212 or ELEC 212 Engineering Circuit Analysis ....3
- EECE 213 Engineering Circuit Analysis II ...................3
- EECE 251 Digital Logic Design ...............................3
- EECE 341 Engineering Electronics I ..........................3
- EECE 351 Microcontrollers ....................................3
- EECE 371 Signals and Systems ..................................3
- EECE 400 EECE Professional Practice .......................2
- EECE 421 Control Systems Engineering .....................3
- EECE 430 Power Electronics ....................................3
- EECE 480 Senior Capstone .....................................3

**Concentration: Computer or Electrical (9 - 12 credits)**
- COSC 221 Computer Organization I ..........................3
- EECE 352 Digital Systems Designs with HDL ................3
- EECE 452 Advanced Digital System Designs with FPGA ....3

**Electrical Engineering (12 credits)**
- ELEC 342 Engineering Electronics .............................3
- EECE 365 Engineering Electromagnetics .....................3
- EECE 372 Communication Systems ...........................3
- EECE 431 Digital Control Systems ............................3

**LBC Requirement (0-3 credits)**
Students must complete one Learning Beyond the Classroom course or noncredit experience offered by EMU. Consult your advisor for options. \(^2\) EECE 3857L4, \(^3\)386L4, or \(^3\)387L4 will apply toward this requirement.

Credits at EMU: ........................................... 47-50
Transfer Credits: .......................................... 74-77
Minimum Credits to Graduate: ...................... 124

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**Sample course sequence**

*This is a sample sequence only. Courses may not be offered every semester. Students will work with their advisor at EMU for a plan. ELEC 212 or EECE 212 must be taken in the winter before beginning the sequence of courses. Students may consider taking the course at EMU while finishing up the associate degree if they do not plan to transfer in the winter term.*

**Winter Semester (12 credits)**
- CET 151 F,W ..................................................3
- EECE or ELEC 212 W, pre-req PHY 224 ......................3
- ME 100 W, pre-req MATH 120 .................................3
- SET 350W pre-req WRTG 121 .................................3

**Fall Semester (9 credits)**
- EECE 213 F, pre-req MATH 325 ..............................3
- EECE 251 F, pre-req COSC 111 ...............................3
- EECE 341 F, pre-req PHY 223, MATH 120, 121, COSC 111, and EECE 212 or ELEC 212) .....................3

**Additional Semesters (26-29 credits)**
- Concentration Courses ......................................... 9-12
- EECE 351 pre-req: minimum grade of “C” in EECE 251 ..3
- EECE 371 pre-req: minimum grade of “C” in EECE 213 ..3
- EECE 400 pre-req EECE or ELEC 212, EECE 213, 251, 341, 351, 371, 421) .................................................2
- EECE 421 pre-req: minimum grade of “C” in EECE 371 ..3
- EECE 430 pre-req: minimum grade of “C” in EECE 341 ..3
- EECE 480 pre-req: EECE 212, 213, 251, 341, 351, 371, 400, 421, ..........................................................3

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\(^1\) Satisfies EMU’s Writing Intensive requirement.
\(^2\) Satisfies EMU’s Learning Beyond the Classroom requirement.
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. WCC courses indicated with an * are required for EMU’s BS in Electrical and Computer Engineering 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 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. Students who enrolled in college prior to fall semester 2014 will have until the end of summer semester 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. WCC students will receive equal consideration with other students for course registration and financial aid.

6. Students are encouraged to contact EMU’s Electrical and Computer Engineering program coordinator before applying to EMU. To facilitate advising and the evaluation of transcripts, sign up for this articulation agreement using this link, and bring a copy of this articulation guide to all advising sessions.

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

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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