

**Henry Ford Community College– Associate in Science or Associate in General Studies**  
**Eastern Michigan University – Bachelor of Science in Computer Science Applied Major**

<b>Henry Ford Community College Courses:</b>	<b>Transfer to Eastern Michigan University:</b>
<b>Michigan Transfer Agreement (MTA) Requirements (30-32 credits)</b>	
Students with an 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. <u>Courses listed below for the MTA will also satisfy degree or program requirements at HFC or EMU.</u> Students who started before fall 2014 may continue to follow the MACRAO Agreement until the end of August 2019. For courses approved to satisfy the MTA go to <a href="https://www.hfcc.edu/registration-and-records/mta/hfc-agreement">https://www.hfcc.edu/registration-and-records/mta/hfc-agreement</a> .	
1. <b>A course in English Composition</b>	
ENG 131 Intro to College Writing.....3	University elective ..... 3
2. <b>A second course in English Composition or Communication</b>	
Choose from the approved MTA list .....3	University elective ..... 3
3. <b>A course in Mathematics</b>	
<sup>1</sup> MATH 115 College Algebra.....4	University elective ..... 4
4. <b>Two courses in Natural Sciences from different disciplines (one lab required)</b>	
Choose from the approved MTA list ..... 8-10	University electives ..... 8-10
5. <b>Two courses in Humanities from different disciplines</b>	
Choose from the approved MTA list .....6	University electives ..... 6
6. <b>Two courses in Social Sciences from different disciplines</b>	
Choose from the approved MTA list .....6	University electives ..... 6
<b>If needed, complete additional courses in any of the above categories to satisfy the 30 credit minimum for the MTA.</b>	
<i>EMU's Perspectives on a Diverse World requirement: Complete <u>one</u> course from the following list:</i> <i>Courses on this list will satisfy an MTA area above: <b>Natural Science:</b> BIO 138; <b>Humanities:</b> ART 224, 225, 226, 227; ENG 243, 248; WR 233, 236; <b>Social Science:</b> ANTH 131, 151, 152, 154; GEOG 132; HIST 113, 243, 252, 261; POLS 152; SOC 152, or 251; WR 233, 236;</i>	
<b>HFCC Requirements</b>	<b>(29-31 credits)</b>
CIS 170 "C" Programming (prerequisite for CIS 171)..... 3	COSC 000 University Elective ..... 3
* CIS 171 Java Programming ..... 3	COSC 111 Introduction to Programming ..... 3
* CIS 271 Advanced Java ..... 4	COSC 211 Programming Data Structures (3)+1..... 4
* Complete one course: .....3-4	COSC 231 Internet Based Computing (3) ..... 3-4
CIS 122 Web Internet Tech (3) or	
CIS 126 XHTML/CSS Web Programming (4)	
<sup>3</sup> MATH 175 Precalculus (prerequisite for MATH 180)..... 5	MATH 112 Topics in Precalculus (4)+1 ..... 5
* MATH 180 Calculus I (prerequisite for CIS 170)..... 5	MATH 120 Calculus I (4) +1 ..... 5
* MATH 275 Discrete Mathematics ..... 4	MATH 205 Mathematical Structures ..... 4
Satisfy the Wellness Group Requirement.....2-3	University Elective ..... 2-3
Choose from: COUN 114, HPE 140, 142, 153, 260; HPEA 117, 217, 126, or 155	
<b>EMU Requirements that May be Taken at HFCC or EMU</b>	
<b>(10-26 credits)</b>	
Open Electives ..... 10-15	University Electives ..... 10-15
EMU Minor requirements ..... 0-11	EMU minor courses ..... 0-11
A minor of at least 20 credit hours is required for EMU's Applied Computer Science program. Students should choose a minor at EMU and determine how many, if any, of the courses are transferrable before completing any additional courses at HFCC. Minor requirements are listed in the EMU <a href="#">Undergraduate Catalog</a> . Look up <a href="#">Course equivalencies</a> on-line.	
<b>Maximum Credits at HFCC:.....71-85</b>	<b>Maximum Credits that transfer to EMU. 71-85</b>

\* Required for EMU's Comprehensive Computer Science Curriculum

<sup>1</sup> Prerequisite for MATH 175 and MATH 180. If students initially place into Precalculus or Calculus I, College Algebra is not required.

**NOTE:** To satisfy the Associate in Science degree requirements, at least 24 hours of math and science coursework must be completed.

**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 EMU's**

**Computer Science**

**Required Math Courses (3 credits)**

MATH 360 Statistical Methods.....3

**Required Computer Science Courses (15 credits)**

COSC 221 Computer Organization I.....3

COSC 311 Algorithms and Data Structures.....3

COSC 314 Computational Discrete Structures.....3

COSC 341 Programming Languages .....3

COSC 481W Software Engineering and Senior Project.....3

**Restricted Elective Courses (12 credits)**

Four courses from the following: ..... 12

- COSC 315 Symbolic computing (3)
- COSC 321 Computer Organization II (3)
- COSC 374 Applied Cryptography (3)
- COSC 405 Switching Theory (3)
- COSC 421 Systems Programming (3)
- COSC 422 Intro to Microprocessors (3)
- COSC 423 Computer Operating Systems (3)
- COSC 436 Web Programming (3)
- COSC 439 Computing Network Principles (3)
- COSC 444 Foundations of Automata and Languages (3)
- COSC 445 Compiler Construction (3)
- COSC 456 Computer Graphics (3)
- COSC 457 Computer Game Programming (3)
- COSC 461 Heuristic Programming (3)
- COSC 471 Database Principles (3)

**Minor Requirements..... (9-20 hours)**

Students must complete a minor of at least 20 hours. Some of those hours may be completed at HFCC if equivalent courses are identified. At least 6 hours toward the minor must be completed in EMU courses at the 300 level or above. Consult an advisor from the minor department to determine requirements.

**Additional Requirement (0-3 credits)**

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

**Minimum Credits at EMU:..... 39-53**

**Minimum Credits to Graduate:..... 124-126**

Suggested Sequence for completing this program:

**Fall Semester (12 credits)**

COSC 221 Computer Organization I.....3

MATH 360 Statistical Methods.....3

Restricted Elective.....3

Minor Requirement.....3

**Winter Semester (12-15 credits)**

COSC 311 Algorithms and Data Structures.....3

COSC 314 Computational Discrete Structures .....3

Restricted Elective.....3

Minor Requirement..... 3-6

**Fall Semester (12-15 credits)**

COSC 341 Programming Languages.....3

COSC 481W Software Engineering and Senior Project .....3

Restricted Elective.....3

Minor Requirements..... 3-6

**Winter Semester (3-11 credits)**

Restricted Elective.....3

Minor Requirements..... 0-5

LBC Requirement..... 0-3

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**Additional information:**

1. In completing the coordinated program of study for this articulation agreement, course substitutions may be made with the guidance of the advisors (indicated below) at both institutions to assure that all requirements are satisfied. Courses indicated with an \* are required for EMU's Program.
2. Students whose transcripts have the "MTA Satisfied" endorsement will only be required to complete one "Perspectives on a Diverse World" course, one "Learning Beyond the Classroom" (LBC) 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 listed in the Undergraduate Catalog. The MTA may be completed after admission to EMU, however, students should inform their advisor in order to receive appropriate advising.*

3. Only courses with a grade of "C" or better (2.0 on a 4.0 scale) will be accepted for transfer to EMU.
4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 46 credit hours must be completed at the four-year college level, of which 30 hours must be in courses offered by EMU, with 15 hours in program requirements, at the 300-level or above. Of the last 30 hours completed before graduating, at least 10 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. A minimum cumulative GPA of 2.0 is required for admission to EMU. Students must meet all admission requirements at the time of application for admission to EMU, including submitting transcripts from all previously attended colleges. HFCC students will receive equal consideration with other students for course registration and financial aid.
6. Students are encouraged to contact the Computer Science Program Coordinator early, before applying to EMU. To facilitate the evaluation of transcripts, students should indicate they are using this articulation agreement when applying to EMU and bring a copy of this guide to all advising sessions.

**Effective Dates: September 1, 2012 through August 31, 2015**

If this agreement is not renewed at the end of the effective period, students who already started this program will be given three additional years to be admitted to EMU under the terms of this agreement. Students who started the program prior to the effective date may use this agreement.

**Contacts:**

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