

COMPUTER SCIENCE CURRICULUM ARTICULATION AGREEMENT GUIDEHenry Ford College – **AS in Computer Science**Eastern Michigan University – **BS in Computer Science Curriculum****Henry Ford College Courses:****Eastern Michigan University Courses:****Michigan Transfer Agreement (MTA) Requirements (30 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

Choose one from ENG 131, 131A, 131H..... 3 General Transfer Credit..... 3

2. A course in English Composition or Communication

Choose one from ENG 132, 132H, 135..... 3 General Transfer Credit..... 3

3. A course in Mathematics

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

4. Two courses in Natural Sciences from different disciplines (one lab required)* Choose one course for the first of the science sequence..... 4-5 First science course in sequence 4-5
BIO 152, CHEM 141, PHYS 231 BIO 110/111, CHEM 121/122, ESSC 110, PHY 223

Complete a course in a different science discipline..... 3-4 General Transfer Credit..... 3-4

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

Choose two from the approved MTA list 6 General Transfer Credit..... 6

6. Two courses in Social Sciences from different disciplines

Choose two from the approved MTA list 6 General Transfer Credit..... 6

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, 243, 252, 261; POLS 152;
PSY 296; SOC 152, 251. **This course applies, but does not satisfy the MTA:** BBA 250; LGL 248; PLGL 248

HFC AS in Computer Science Program Requirements (41 credits)

CIS 100 Introduction to Information Technology..... 3 IS 215 General Transfer Credit..... 3

CIS 111 SQL for Database Development..... 3 IS 000 General Transfer Credit..... 3

* CIS 122 Web Internet Technologies..... 3 COSC 231 Internet Based Computing..... 3

CIS 125 Principles of Programming Logic 4 IT 145 General Transfer Credit..... 4

CIS 130 C# Programming..... 3 COSC 000 General Transfer Credit..... 3

* CIS 170 C Programming (3) and

* CIS 171 Java Programming (3) 6 COSC 111/112 Introduction to Programming (4)+2 6

CIS 230 C++ Programming..... 3 AACR GEN General Transfer Credit..... 3

* CIS 271 Advanced Java 4 COSC 211/212 Programming Data Structures..... 4

CIS 294 Software Engineering..... 3 AACR GEN General Transfer Credit..... 3

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

MATH 275 Discrete Structures 4 MATH 205 General Transfer Credit..... 4

EMU Requirements and Electives that May be Taken at HFC or EMU (9-10 credits)* Complete a second course in the science sequence 4-5 Second science course in sequence 4-5
BIO 150, CHEM 142, PHYS 232 BIO 120/121, CHEM 123/124, ESSC 111, PHY 224

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

Credits at HFC:..... 80-81 Credits that transfer to EMU..... 73

*Required for EMU's BS in Computer Science Curriculum program. If not transferred, must be completed at EMU.

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.

COMPUTER SCIENCE CURRICULUM ARTICULATION AGREEMENT GUIDEHenry Ford College – **AS in Computer Science**Eastern Michigan University – **BS in Computer Science Curriculum****Completion of EMU's BS in Computer Science Curriculum****Major Requirements (51 credits)****Mathematics Requirements (3 credits)**

STAT 360 Statistical Methods.....3

Additional MATH/STAT course (6 credits)

Any MATH course 300 level or higher.....3

Any STAT course 300 level or higher3

Required Computer Science Courses (22 credits)

COSC 221 Computer Organization I.....3

COSC 311 Algorithms and Data Structures4

COSC 314 Computational Discrete Structures4

COSC 321 Computer Organization II.....4

COSC 341 Programming Languages.....4

COSC 381 Software Engineering Solutions.....4

¹COSC 481W Software Engineering and Senior Project.....3**Restricted Elective Courses (20 credits)**

Choose five courses from the following. At a minimum, two courses must be from List A. The remaining three courses may be selected from either list.

List A

COSC 423 Computer Operating Systems
 COSC 439 Computing Network Principles
 COSC 444 Found of Automata & Languages
 COSC 471 Database Principles

List B

COSC 374 Applied Cryptography
 COSC 411 Algorithm Design and Analysis
 COSC 421 Systems Programming
 COSC 422 Intro to Microprocessors
 COSC 426 Software Dvlpmnt for Mobile Devices
 COSC 436 Web Programming
 COSC 445 Compiler Construction
 COSC 456 Computer Graphics
 COSC 457 Computer Game Programming
 COSC 461 Heuristic Programming
 COSC 462 Introduction to Information Retrieval
 COSC 472 Big Data I
 COSC 473 Big Data II
 COSC 480 Special Topics (4)

LBC Requirement

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

Credits at EMU: 51**Transfer Credits 73****Minimum Credits to Graduate:..... 124***1 Satisfies EMU's Writing Intensive requirement.*

COMPUTER SCIENCE CURRICULUM ARTICULATION AGREEMENT GUIDEHenry Ford College – **AS in Computer Science**Eastern Michigan University – **BS in Computer Science Curriculum****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 Computer Science Applied or Curriculum. 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 30 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 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 EMU's BS in Computer Science Curriculum program coordinator 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 Date: September 1, 2020 until August 31, 2023.

This agreement is consistent with the 2020-2021 catalog. Students have until summer 2028 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.

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