COMPUTER SCIENCE CURRICULUM ARTICULATION AGREEMENT GUIDE

Henry 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. <u>Courses listed below for the MTA also satisfy program requirements at EMU and/or HFC.</u> 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: <u>Complete one course</u> 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 <u>not</u> 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.................. 80-81**

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

<u>*Sign up with us:*</u> *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 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 higher 3

Required Computer Science Courses (22 credits)
COSC 221   Computer Organization I...............................3
COSC 311   Algorithms and Data Structures 4
COSC 314   Computational Discrete Structures 4
COSC 321   Computer Organization II............................4
COSC 341   Programming Languages.............................4
COSC 381   Software Engineering Solutions 4
[1]COSC 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 80-81
Minimum Credits to Graduate:.............................. 120

1 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. 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 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.

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.

Contacts:

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