

COMPUTER SCIENCE ARTICULATION AGREEMENT GUIDE

Schoolcraft College – **AAS in CIS: Programming**
 Eastern Michigan University – **BA in Computer Science**

Schoolcraft College Courses:**Transfer to Eastern Michigan University:****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 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. Specific courses listed below for the MTA will also satisfy program requirements at Schoolcraft and/or EMU. For courses approved by Schoolcraft to satisfy the MTA go to [Schoolcraft's website](#). Students who do not have a MACRAO or MTA endorsement must complete EMU's general education program.

1. A Course in English Composition		
ENG 101 English Composition 1	3	University Elective
2. A Second Course in English Composition or Communication		
ENG 102 English Composition 2	3	University Elective
3. A Course in Mathematics		
*MATH 126 College Algebra (in place of MATH 102, 113).....	4	MATH 105 College Algebra.....
4. Two Natural Science courses from different disciplines (one lab required)		
Choose from the approved MTA list	7-8	University Elective
5. Two Humanities courses from different disciplines		
COMA 103 Fundamentals of Speech	3	CTAC 124 Foundations of Speech Communication
Choose from the approved MTA list	6	University Electives
6. Two Social Science courses from different disciplines		
Choose one of the following: POLS 105; PSYCH 153 or 201 .3-4		University Electives
Choose from the approved MTA list	3	University Electives

If needed, complete additional courses in any of the above categories to satisfy 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:** BIOL 104; GEOG 212; **Humanities:** ENG 170, 275; HIST 138; HUM 201, 202, 203, 204; **Social Sciences:** ANTH 112, 201, 214; GEOG 133; HIST 138; POLS 207, 209; SOC 210

These courses apply, but do not satisfy the MTA: BUS 240; CCD 217; EDUC 200; SPE 100

Schoolcraft CIS: Programming Requirements (43-44 credits)

CIS 115 Introduction to Computer Based Systems.....	3	IS 215 Information Systems for Business	3
*CIS 129 Introduction to Programming Logic (3) and 0			
*CIS 290 Object-Oriented Programming w/Java (3).....	6	COSC 111/112 Intro to Computer Programming (4)+2.....	6
CIS 176 Visual Basic.NET	3	BMMT 000 University Elective	3
*CIS 211 Introduction to C++ (2) and			
*CIS 221 Advanced C++ (2)	4	COSC 211/212 Programming Data Structures	4
CIS 225 Database Management Systems	3	IS 000 University Elective	3
*CIS 238 JavaScript (Program Elective).....	3	COSC 231 Internet Based Computing	3
CIS 250 Systems Development and Design	4	IS 000 University Elective	4
CIS 255 Introduction to Linux.....	3	IA 212 University Elective	3
CNT 115 Cybersecurity Fundamentals	3	ISAC 000 University Elective	3
Choose one of the following: CIS 170 or 178	3	BMMT 000 University Elective	3
Choose 8-9 credits from the following:	8-9	University Electives	8-9
CIS 120, 122, 171, 185, 223, 238, 251			

EMU Requirements that May be Taken at Schoolcraft or EMU (5-6 credits)

Open Elective (not to exceed 79 credits at SC).....	5-6	University Elective	5-6
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Credits at Schoolcraft: 79 Credits that transfer to EMU..... 79

*This course is required for EMU's Computer Science Major-Applied.

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 BA in Computer Science**Major Requirements (34 credits)****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 341	Programming Languages	4
COSC 381	Software Engineering Solutions	4
COSC 481W	Software Engineering and Senior Project.....	3

Restricted Electives (12 credits)

COSC 374	Applied Cryptography
COSC 421	Systems Programming
COSC 423	Computer Operating Systems
COSC 426	Software Dvlpmnt for Mobile Devices
COSC 436	Web Programming
COSC 439	Computing Network Principles
COSC 445	Compiler Construction
COSC 456	Computer Graphics
COSC 457	Computer Game Programming
COSC 461	Heuristic Programming
COSC 471	Database Principles
<i>Choose two courses from below or above, not already taken</i>	
COSC 315	Symbolic Computing
COSC 321	Computer Organization II
COSC 405	Switching Theory
COSC 411	Algorithm Design & Analysis
COSC 422	Intro to Microprocessors
COSC 444	Found of Automata & Languages
COSC 462	Introduction to Information Retrieval
COSC 472	Big Data I
COSC 473	Big Data II
COSC 480	Special Topics

LBC Requirement

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

Minor Requirement (15-20 credits)

Students must complete a minor of at least 20 hours. Some of those hours may be completed at SC. At least 6 credits must be completed at EMU at the 300 level or above. Some minors are more than 20 hours.

Minimum Credits at EMU:..... 49

Transfer Credits: 75

Minimum Credits to Graduate:..... 124

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Eastern Michigan University – **BS in Computer Science – Applied, BS in Computer Science – Curriculum, or a BA in Computer Science**

Additional information:

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both Schoolcraft and EMU agree to accept transferrable courses from each other and from other institutions. Schoolcraft courses indicated with an * are required for EMU's BS in Computer Science or the BA in Computer Science. 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 with at least 30 hours in EMU courses, 15 hours of which must be in program requirements 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. Schoolcraft students will receive equal consideration with other students for course registration and financial aid.
6. Students are encouraged to contact EMU's Bachelor of Science in Computer Science 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 Dates: September 1, 2019 until August 31, 2022

This agreement is consistent with the 2019-2020 catalog. Students have until summer 2027 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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