

**BA IN COMPUTER SCIENCE ARTICULATION AGREEMENT GUIDE**

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

**Schoolcraft 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 SC. For SC approved MTA courses go to the community college’s website. Students without an MTA or MACRAO endorsement must complete EMU’s general education program.

**1. A course in English Composition**

ENG 101 English Composition 1 ...3      WRTG 120 Composition I..... 3

**2. A course in English Composition or Communication**

ENG 102 English Composition 2..... 3      WRTG 121 Composition II (GEEC) ..... 3

**3. A course in Mathematics**

\* MATH 126 College Algebra ..... 4      MATH 105 College Algebra (3)+1 ..... 4

**4. Two courses in Natural Sciences from different disciplines (one lab required)**

Choose two from the approved MTA list ..... 8      General Transfer Credit..... 8

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

COMA 103 Fundamentals of Speech..... 3      COMM 124 Found of Speech Communication (GEEC) ..... 3

Choose one from the approved MTA list..... 3      General Transfer Credit..... 3

**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:** BIOL 104; GEOG 212; **Humanities:** COMA 240; ENG 170; HIST 138; HUM 201, 202, 203, 204; **Social Sciences:** ANTH 112, 201, 214; GEOG 133; HIST 138; POLS 207, 209; SOC 210, 211

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

**SC Program Requirements (35 credits)**

CIS 115	Introduction to Computer Based Systems ..... 3	IS 215	Information Systems for Business ..... 3
*CIS 129	Introduction to Programming Logic (3) and		
*CIS 290	Object-Oriented Programming with Java (3) ..... 6	COSC 111/112	Intro to Programming/Online Lab (6)-2..... 4
CIS 178	Technical Microsoft Windows ..... 3	BMMT 000	General Transfer Credit..... 3
*CIS 211	Introduction to C++ (2) and		
*CIS 221	Advanced C++ (2)..... 4	COSC 211/212	Programming Data Structures..... 4
CIS 223	Introduction to C# ..... 3	COSC 000	General Transfer Credit..... 3
CIS 225	Database Management Systems..... 3	IS 000	General Transfer Credit..... 3
*CIS 238	JavaScript (Elective)..... 3	COSC 231	Internet Based Computing ..... 3
CIS 250	Systems Development and Design..... 4	IS 000	General Transfer Credit..... 4
CIS 255	Introduction to Linux ..... 3	IS 212	Open Source Platform & Network Admin..... 3
CNT 115	Cybersecurity Fundamentals..... 3	ISAC 000	General Transfer Credit..... 3

**EMU Requirements and Electives that may be Taken at SC or EMU (10 credits)**

\* Credit toward a minor at EMU ..... 10      General Transfer Credit or Minor Credit..... 10  
 A minor is required for this major. Please see the [EMU catalog](#) for program options and the [equivalency table](#) for courses that may apply. At least 6 credits at the upper level must be completed at EMU as part of the minor and all requirements must be met.

**Credits at SC: ..... 75      Credits that transfer to EMU ..... 75**

\*Required for EMU’s BA in Computer Science. 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.

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**Completion of the BA in Computer Science**

**Major Requirements (34 credits)**

**Required Computer Science Courses (22 credits)**

COSC 221	Computer Organization .....	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
<sup>1</sup> COSC 481W	Software Engineering and Senior Project.....	3

**Restricted Electives (12 credits)**

Choose three courses from the following. At a minimum, one course must be from List A. Students may select the remaining two courses from either list.

List A

COSC 374	Applied Cryptography .....	4
COSC 421	Systems Programming .....	4
COSC 423	Computer Operating Systems .....	4
COSC 426	Software Development for Mobile Devices.....	4
COSC 436	Web Programming.....	4
COSC 439	Computing Network Principles .....	4
COSC 445	Compiler Construction .....	4
COSC 456	Computer Graphics .....	4
COSC 457	Computer Game Programming .....	4
COSC 461	Intro to Artificial Intelligence.....	4
COSC 471	Database Principles.....	4

List B

COSC 315	Symbolic Computing.....	4
COSC 321	Computer Organization II .....	4
COSC 405	Switching Theory .....	4
COSC 411	Algorithm Design and Analysis.....	4
COSC 422	Intro to Microprocessors.....	4
COSC 444	Foundations of Automata and Languages.....	4
COSC 462	Intro to Information Retrieval .....	4
COSC 472	Big Data I.....	4
COSC 473	Big Data II.....	4
COSC 480	Special Topics .....	4

*<sup>1</sup> Satisfies EMU's Writing Intensive requirement.*

**LBC Requirement**

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

**Minor Requirement (11-20 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.

<b>Minimum Credits at EMU:</b> .....	<b>45</b>
<b>Transfer Credits:</b> .....	<b>75</b>
<b>Total Credits:</b> .....	<b>120</b>

**COMPUTER SCIENCE APPLIED ARTICULATION AGREEMENT GUIDE**

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

**Additional Information:**

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both institutions agree to accept transferable courses from each other and from other regionally accredited institutions. SC courses indicated with an \* are required for EMU's Computer Science (BA). 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 45 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 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. SC students will receive equal consideration with other students for course registration and financial aid.
6. Students are encouraged to contact EMU's Francine Parker Advising Center 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, 2022 until August 31, 2025.**

This is a renewal of an agreement made in September 2019. This agreement is consistent with the 2022-2023 catalog. Students have until summer 2030 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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