**ARTICULATION AGREEMENT GUIDE**  
Washtenaw Community College – **AS in Computer Science: Programming in Java**  
Eastern Michigan University – **BA in Computer Science**  
---

### Washtenaw Community 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 WCC. For WCC 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**
   - **Washtenaw Community College**
     - ENG 111 Composition I .......................................................... 4
   - **Eastern Michigan University**
     - WRTG 121 Composition II (3)+1 .......................................... 4

2. **A Course in English Composition or Communication**
   - **Washtenaw Community College**
     - Choose from the approved MTA list........................................ 3
   - **Eastern Michigan University**
     - General Transfer Credit ........................................................ 3

3. **A Course in Mathematics**
   - **Washtenaw Community College**
     - * MTH 176 College Algebra ....................................................... 4
   - **Eastern Michigan University**
     - MATH 105 College Algebra (3)+1......................................... 4

4. **Two courses in Natural Sciences from different disciplines (one lab required)**
   - **Washtenaw Community College**
     - Choose from the approved MTA list .................................... 7-8
   - **Eastern Michigan University**
     - General Transfer Credit ...................................................... 7-8

5. **Two courses in Humanities from different disciplines**
   - **Washtenaw Community College**
     - Choose from the approved MTA list ....................................... 6
   - **Eastern Michigan University**
     - General Transfer Credit ......................................................... 6

6. **Two courses in Social Sciences from different disciplines**
   - **Washtenaw Community College**
     - Choose from the approved MTA list ....................................... 6
   - **Eastern Michigan University**
     - 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:

- **Communication:** COM 225
- **Natural Science:** ENV 101, 105
- **Humanities:** ART 143, 150
- **Social Science:** ANT 201; ECO 280; GEO 101; HST 108, 109, 123, 150, 230; PSY 251; SOC 205

These courses apply, but do not satisfy the MTA:

- ECD 240

---

### WCC AS in Computer Science: Programming in Java Requirements (30 credits)

<table>
<thead>
<tr>
<th>Washtenaw Course</th>
<th>Eastern Michigan Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 120 Linux/UNIX I: Fundamentals (prev. CIS 121)</td>
<td>IA 212 Open Systems Platform &amp; Network Admin.. 3</td>
</tr>
<tr>
<td>CIS 282 Database Principles and Application</td>
<td>IS 000 General Transfer Credit.. 3</td>
</tr>
<tr>
<td>* CPS 161 Introduction to Programming with Java</td>
<td>COSC 111/112 Introduction to Programming.. 4</td>
</tr>
<tr>
<td>* CPS 261 Advanced Java Concepts</td>
<td>COSC 211212 Programming Data Structures.. 4</td>
</tr>
<tr>
<td>* CPS 276 Web Programming Using Apache, MySQL, &amp; PHP</td>
<td>COSC 231 Internet-based Computing (3)+1.. 4</td>
</tr>
<tr>
<td>CPS 278 Java Server Programming</td>
<td>IS 000 General Transfer Credit (or COSC 111/112) 4</td>
</tr>
<tr>
<td>CPS 251 Android Programming Using Java</td>
<td>IS 000 General Transfer Credit.. 4</td>
</tr>
<tr>
<td>CPS 298 Professional Team Programming</td>
<td>AACR Gen Credit.. 4</td>
</tr>
</tbody>
</table>

### EMU Requirements and Electives that May be Taken at WCC or EMU (15 credits)

- Minor requirement courses/open electives 15
- Minor requirement courses/university electives 15

This program requires a minor. 100 level or higher transfer credit may be applied as university elective or as credit toward a minor at EMU. Minors available at EMU can be found in EMU’s catalog (catalog.emich.edu). Course equivalencies for WCC courses transferring to EMU can be found at EMU’s transfer equivalency page (app.emich.edu/transfereq)

---

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

*Required for EMU’s BA in Computer Science, BS in Computer Science Applied, or BS in Computer Science Curriculum program. If not transferred, must be completed at EMU.*
Completion of the BA in Computer Science at EMU

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 Elective Courses: 12 credits
Choose one course from the following:
- 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, Introduction to Artificial Intelligence (4)
- COSC 471, Database Principles (4)

Choose two courses from the list below or above, not already taken:
- 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, Introduction to Microprocessors (4)
- COSC 444, Foundations of Automata & Languages (4)
- COSC 462, Introduction to Information Retrieval (4)
- COSC 472, Big Data I (4)
- COSC 473, Big Data II (4)
- COSC 480, Special Topics (4)

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

Minor Requirements: (11 credits)
Students must complete a minor for this program with at least six credits at the 300/400 level at EMU. Some courses for the minor may be transferred to EMU. Students may have more than 11 credits to complete at EMU depending on the minor chosen.

Credits at EMU: .................................................. 45
Transfer Credits ................................................... 75
Minimum Credits to Graduate: .............................. 120

1 Fulfils EMU's Writing Intensive Requirement.
ARTICULATION AGREEMENT GUIDE
Washtenaw Community College – AS in Computer Science: Programming in Java
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. WCC courses indicated with an * are required for EMU’s BA in Computer Science, BS in Computer Science Applied, or BS in Computer Science 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 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. WCC students will receive equal consideration with other students for course registration and financial aid.

6. Students are encouraged to contact EMU’s Undergraduate Admissions Office before applying to EMU. To facilitate advising and the evaluation of transcripts, bring a copy of this articulation guide to all advising sessions.

Effective Date: September 1, 2023 until August 31, 2026.
This is a renewal of an agreement made in September 2009 (BA in Computer Science 2019) and renewed in January 2013, September 2017 and September 2020. This agreement is consistent with the 2023-2024 catalog. Students have until summer 2031 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:
Washtenaw Community College
Advising
734.677.5102
advising@wccnet.edu

Eastern Michigan University
EMU Undergraduate Admissions
Student Center, Ste. 220
734.487.6453
transfer_admissions@emich.edu
Schedule an appointment