

COMPUTER SCIENCE COMPREHENSIVE ARTICULATION AGREEMENT GUIDE

Washtenaw Community College – AS in Computer Science, Programming in Java
 Eastern Michigan University – BS in Computer Science Comprehensive Curriculum

| Washtenaw Community College Courses: | Transfer to Eastern Michigan University: |
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| Michigan Transfer Agreement (MTA) Requirements (31-33 credits) | |
| Students with an 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 will also satisfy major requirements at WCC or EMU.</u> Students who started before fall 2014 may continue to follow the MACRAO Agreement until the end of August 2019. MACRAO versions of articulation guides are posted online at www.emich.edu/ccr/artguide.php . For courses approved to satisfy the MTA go to http://www.wccnet.edu/services/transferresources/mta/ . | |
| 1. A Course in English Composition | |
| ENG 111 Composition I4 | University elective 4 |
| 2. A Course in English Composition or Communication | |
| ENG 226 Composition II3 | University elective 3 |
| 3. A Course in Mathematics | |
| ¹ MTH 176 College Algebra4 | MATH 105 College Algebra (3)+1 4 |
| 4. Two courses in Natural Sciences from different disciplines (one lab required) | |
| * Complete the first course in a science sequence:4-5 | First course of required science sequence:..... 4-5 |
| BIO 161(4), CHM 111 (4), GLG 114 (4) or PHY 211(5) | BIO 120/121 (5), CHEM 121/122 (4), ESSC 110 (4), or PHY 223 (5) |
| * Complete a course from a different science discipline.....4-5 | Required science course from a different discipline..... 4-5 |
| Course must be intended for majors in the discipline | BIO 120/121, CHEM 121/122, ESSC 110, or PHY 223 |
| BIO 161, CEM 111, GLG 114, PHY 211 | |
| 5. Two courses in Humanities from different disciplines | |
| ² COM 225 Intercultural Communication3 | Perspectives on a Diverse World Requirement..... 3 |
| Choose from the approved MTA list3 | University elective 3 |
| 6. Two courses in Social Sciences from different disciplines | |
| Choose from the approved MTA list6 | University electives..... 6 |
| 7. If needed, complete additional course credits from the above categories to meet the 30 credit minimum for the MTA. | |
| WCC Program Requirements (26-28 credits) | |
| Major/Area Requirements: (20 credits) | (20 credits) |
| * CPS 161 An Introduction to Programming with Java4 | COSC 111/112 Introduction to Programming..... 4 |
| * CPS 261 Advanced Java Concepts4 | COSC 211/212 Programming Data Structures 4 |
| CPS 276 Web Programming using Apache, MySQL, or PHP4 | University Elective 4 |
| CPS 278 Java Server Programming4 | University elective 4 |
| CPS 251 Android Programming using Java4 | University elective 4 |
| Graduation Requirements: (6-8 credits) | (6-8 credits) |
| Computer Literacy Requirement3 | University Elective 3 |
| * Complete an additional science course from a discipline below3-5 | Additional required science course 3-5 |
| Choose from Biology, Chemistry, Physics or Psychology. | Biology, Chemistry, Physics or Psychology |
| EMU Requirements that May be Taken at WCC or EMU (18-21 credits) | |
| * MTH 191 Calculus I5 | MATH 120 Calculus I (4)+1 5 |
| * MTH 197 Linear Algebra.....4 | MATH 122 Elementary Linear Algebra (3) +1..... 4 |
| * MTH 192 Calculus II (or other 200 level non-teaching MTH course) ...5 | MATH 121 Calculus II (4) or other 200 non-teaching math course. 5 |
| * Complete the second course of the science sequence above...4-5 | Second course of required science sequence 4-5 |
| BIO 162 (4), CHM 112 (4), GLG 125 (4), PHY 222 (5) | BIO 110/111 (5), CHEM 123/124, (4) ESSC 111 (4), PHY 224 (5) |
| Open elective if needed, not to exceed 78 credits at WCC0-3 | University Elective if needed 0-3 |
| Credits at WCC:75-78 | Credits that transfer to EMU..... 75-78 |

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

¹ Prerequisite for MATH 191. If students initially place into Calculus I, College Algebra is not required.

² Satisfies EMU's Perspectives on a Diverse World requirement and WCC's general education speech requirement.

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. Sign up at: www.emich.edu/ccr/trackingsystem/Enter.php

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| <p>Completion of EMU's Computer Science Program</p> <p>Mathematics Requirements (7 credits) MATH 205 Mathematical Structures..... 4 MATH 360 Statistical Methods 3</p> <p>Required Computer Science Courses (39 credits) COSC 221 Computer Organization I 3 COSC 231 Internet Based Computing..... 3 COSC 311 Algorithms and Data Structures..... 3 COSC 314 Computational Discrete Structures..... 3 COSC 321 Computer Organization II 3 COSC 341 Programming Languages 3 COSC 423 Computer Operating Systems 3 COSC 439 Computing Network Principles 3 COSC 444 Foundations of Automata and Languages..... 3 COSC 471 Database Principles..... 3 COSC 481W Software Engineering and Senior Project..... 3 Complete Two Courses:..... 6 Any 400-level computer science courses not already taken or select two from the list of courses below: COSC 315 Symbolic computing (3) COSC 405 Switching Theory (3) COSC 421 Systems Programming (3) COSC 422 Intro to Microprocessors (3) COSC 436 Web Programming (3) COSC 445 Compiler Construction (3) COSC 456 Microcomputer Graphics (3) COSC 461 Heuristic Programming (3)</p> <p>Additional Requirement (0-3 credits) Students must complete one Learning Beyond the Classroom experience or course offered by EMU. Consult computer science advisor for options.</p> <p>Credits at EMU:..... 46-49 Transfer Credits: 75-78 * Minimum Credits to Graduate: 124</p> | <p>Suggested Sequence for completing this program:</p> <p>Fall Semester (13 credits) COSC 221 Computer Organization I 3 COSC 231 Internet Based Computing..... 3 MATH 205 Mathematical Structures..... 4 COSC Elective..... 3</p> <p>Winter Semester (12 credits) COSC 311 Algorithms and Data Structures..... 3 COSC 314 Computational Discrete Structures..... 3 COSC 321 Computer Organization II 3 COSC 341 Programming Languages 3</p> <p>Fall Semester (12 credits) COSC 439 Computing Network Principles 3 COSC 444 Foundations of Automata and Languages..... 3 COSC 481WI Software Engineering and Senior Project 3 MATH 360 Statistical Methods 3</p> <p>Winter Semester (9-12 credits) COSC 423 Computer Operating Systems 3 COSC 471 Database Principles..... 3 COSC Elective..... 3 LBC Requirement 0-3</p> |
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* If too few credits are transferred, complete enough elective hours at EMU to bring the total hours for the program to 124 hours.

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Additional information:

1. In completing the coordinated program of study for this articulation agreement, course substitutions should be made with the guidance of the advisors at both institutions (indicated below) to assure that all requirements are satisfied. Each institution will determine the satisfaction of their individual program and degree requirements. WCC courses indicated with an * are required for EMU's Bachelor of Science in Computer Science Program.
2. Students whose transcripts have the "MTA Satisfied" endorsement will only be required to complete one "Perspectives on a Diverse World" course, one "Learning Beyond the Classroom" (LBC) experience, and a Writing Intensive course in the major. The Perspectives on a Diverse World requirement may be satisfied at the community college as part of the MTA requirements.

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 listed in the Undergraduate Catalog. The MTA may be completed after admission to EMU, however, students should inform advisors or they may be advised to complete additional courses for the general education program.

3. Only courses with a grade of "C" or better (2.0 on a 4.0 scale) will be accepted for transfer to EMU. A course completed with a grade of less than 2.0, will not transfer to EMU even though it may be used to satisfy the MTA.
4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 46 credit hours must be completed at the four-year college level, of which 30 hours must be in courses offered by EMU, with 15 hours in program requirements, at the 300-level or above. Of the last 30 hours completed before graduating, at least 10 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. A minimum cumulative GPA of 2.0 is required for admission to EMU. Students must meet 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 the Computer Science Program Coordinator early, before applying to EMU. To facilitate advising and the evaluation of transcripts, sign up for this articulation agreement using the link www.emich.edu/ccr/trackingsystem/Enter.php, and bring a copy to all advising sessions.

Effective Dates: January 1, 2013 until January 1, 2016.

This is a renewal of an agreement made in September 2009. Students who began this program prior to the new effective date may follow the guide they started under or may change to this guide. If this agreement is not renewed at the end of the effective period, students who already started the program will be given an additional three years to be admitted to EMU under the terms of this agreement. In the event a student does not complete degree requirements within seven years of the date of starting this program, the student may be required to have his/her credits re-evaluated in keeping with the requirements of a more recent version of the catalog.

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Eastern Michigan University

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