

COMPUTER SCIENCE, APPLIED ARTICULATION AGREEMENT GUIDE

Washtenaw Community College – AS in Computer Science: Programming in Java
 Eastern Michigan University – BS in Computer Science, Applied

Washtenaw Community College Courses:	Transfer to Eastern Michigan University:
Michigan Transfer Agreement (MTA) Requirements (30-31 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	University elective 4
4. Two courses in Natural Sciences from different disciplines (one lab required)	
Choose from the approved MTA list7-8	University electives 7-8
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 courses in any of the above categories to satisfy the 30 credit minimum for the MTA.	
WCC Program Requirements (30 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: (10 credits)	(10 credits)
Computer Literacy Requirement3	University Elective 3
Electives to satisfy the minimum of 60 credits for a degree.....7	University Elective 7
EMU Requirements that May be Taken at WCC or EMU (5-18 credits)	
* MTH 191 Calculus I5	MATH 120 Calculus I (4) +1 5
³ Open Electives.....0-13	University Electives or minor requirements 0-13
100-level or above transferable courses may be applied as university electives.	
Minors may be found online at http://catalog.emich.edu/ Click on major/minors. Look for equivalent courses that apply to your chosen minor at http://it.emich.edu/service/online/tranequiv/	
Credits at WCC:.....65-78	Credits that transfer to EMU.....65-78

* This course is required for EMU's Applied Computer Science Major.
¹ Prerequisite for the Math courses required in the Computer Science program, starting with Calculus I. If students initially place into Calculus I, College Algebra does not need to be taken.
² Satisfies EMU's Perspectives on a Diverse World requirement and WCC's general education speech requirement.
³ Choose a minor at EMU and see an EMU advisor to determine how many courses are needed and their transferability, before completing electives at WCC. A minor of at least 20 credit hours is required for EMU's degree.
 NOTE: A university elective is any college level course.

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: <http://www.emich.edu/ccr/articulation-agreements/signup.php>

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Completion of EMU's

Computer Science Applied Program

Required Math Courses (7 credits)

- MATH 205 Mathematical Structures for Computer Science.....4
- MATH 360 Statistical Methods.....3

Required Computer Science Courses (18 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 341 Programming Languages.....3
- COSC 481W Software Engineering and Senior Project.....3

Restricted Elective Courses (12 credits)

- Four courses from the following: 12
- COSC 315 Symbolic computing (3)
 - COSC 321 Computer Organization II (3)
 - COSC 374 Applied Cryptography (3)
 - COSC 405 Switching Theory (3)
 - COSC 421 Systems Programming (3)
 - COSC 422 Intro to Microprocessors (3)
 - COSC 423 Computer Operating Systems (3)
 - COSC 436 Web Programming (3)
 - COSC 439 Computing Network Principles (3)
 - COSC 444 Foundations of Automata and Languages (3)
 - COSC 445 Compiler Construction (3)
 - COSC 456 Microcomputer Graphics (3)
 - COSC 457 Computer Game Programming (3)
 - COSC 461 Heuristic Programming (3)
 - COSC 471 Database Principles (3)

Minor Requirements (9-22 credits)

Students must complete a minor of at least 20 credit hours. Some of those hours may be completed at WCC. At least 6 hours toward the minor must be completed in EMU courses at the 300 level or above.

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.

Credits at EMU:..... 46-59

Transfer Credits: 65-78

***Minimum Credits to Graduate:..... 124**

Suggested Sequence for completing this program:

Fall Semester (16 credits)

- COSC 221 Computer Organization I.....3
- COSC 231 Internet Based Computing.....3
- MATH 205 Mathematical Structures.....4
- COSC or Minor Electives.....6

Winter Semester (15 credits)

- COSC 311 Algorithms and Data Structures.....3
- COSC 314 Computational Discrete Structures.....3
- COSC 341 Programming Languages.....3
- MATH 360 Statistical Methods.....3
- COSC or Minor Elective.....3

Spring/Summer Semester (3-6 credits)

- COSC or Minor Elective.....3
- LBC Requirement..... 0-3

Fall Semester (12 credits)

- COSC 481WI Software Engineering and Senior Project.....3
- COSC or Minor Electives.....9

* 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 degree program. EMU will accept substitutes for WCC courses on the guide that transfer as university electives or general transfer credit.
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 a "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
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 at least 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, 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 EMU's Computer Science Program Coordinator 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 of this articulation guide to all advising sessions.

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

This is an update to the January 2013 renewal of the September 2009 agreement. Students who began this program prior to the new effective date have the option of changing to this guide. If this agreement is not renewed at the end of the effective period, students who already began the program at Washtenaw Community College will have an additional three years to be admitted to EMU under the terms of the 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 a more recent version of this agreement.

Contacts:

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Community College Relations

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