

ALERT!

Students who begin college in September 2014 must follow the Michigan Transfer Agreement (MTA) requirements rather than the MACRAO requirements listed here. New MTA articulation guides will be posted to the EMU Community College Relations website soon. In the meantime, please see a community college counselor for more information about the MTA or look for more information at <http://www.macrao.org/mcm.asp?floor=4>.

January 2013

**Macomb Community College – AAS in Information Technology—Programming for Electronic Games
Eastern Michigan University – Bachelor of Science in Simulation, Animation, and Gaming**

Macomb Community College Courses: Transfer to Eastern Michigan University as:

MACRAO Requirements	(30 credits)	(30 credits)
1. English Writing Requirement	(6-8 credits)	(6-8 credits)
Complete a two-course sequence:.....	6-8	Two courses:6-8
ENGL-1180 & 1190 Communication I & II (8)		ENGL 120 & 121 Composition I & II (6) +2
ENGL-1210 & 1220 Composition I & II (6)		ENGL 120 & 121 Composition I & II (6)
2. Math/Science Requirement	(8 credits)	(8 credits)
¹ MATH 1410 College Algebra (Complete at Macomb CC)	4	MATH 105 College Algebra.....4
² PHYS 1180 Introduction to Physics	4	PHY 221 Mechanics, Sound, and Heat.....4
3. Humanities Requirement (see note below)	(8 credits)	(8 credits)
*ARTT 1060 Basic Drawing 1.....	3	ARTS 123 Foundations Drawing I.....3
*ARTT 1360 Color & Design 1	3	ARTS 121 Two-Dimensional Design.....3
Complete a minimum of 2 credits from a discipline below	2-3	A minimum of 2 credits.....2-3
Creative Writing, Foreign Language, Humanities, Literature, Music, or Philosophy		Courses may transfer as equivalent courses, General Education credit, or general transfer credit.
4. Social Science Requirement (see note below)	(8 credits)	(8 credits)
Complete at least 8 credit hours from different disciplines:	8	Two or more courses.....8
Anthropology, Economics, Geography, History, Political Science, Psychology, Sociology, or Social Science		Courses will transfer as equivalent courses or General Education transfer credit or general transfer credit
NOTE: In completing <u>one</u> MACRAO area above, choose a course from the following to satisfy EMU's Perspectives on a Diverse World requirement: Humanities: ENGL 2800, 2810; HUMN 1700, 1270, 2000; INTL 2000, 2300; Social Sciences: ANTH 1000; GEOG 2000; HIST 1260, 1270, 1700, 2420, 2520, 2650; INTL 2000, 2010, 2500, 2700; POLS 1600; SOSC 2010.		

Macomb CC Program Requirements	(47 credits)	(47 credits)
Complete one course: ITCS 1010 or ITCS 2335.....	4	University Elective (IS 215).....4
* ITCS 1950 Intro to Game Development	4	SAG 105 Intro to Simulation, Animation, & Gaming (3)+1.....4
ITCS 2000 Game Programming in Direct X with C++	4	University Elective
ITCS 2050 Adv Game Development	4	University Elective
ITCS 2530 C++ Programming 1	4	COSC 246 Programming in C++ (sub for COSC 211)
ITWP 1000 Introduction to Web Programming.....	3	University Elective
MACA 1055 Digital Layout : Adobe	4	Sub for CMT 131 Intro to Computer Graphic Systems
* MACA 1160 Previsualization	4	SAG 245 Story Development (3)+1.....4
* MACA 1320 Introduction to Photoshop.....	4	CMT 205 Digital Photography (3)+1
* MACA 2510 Introduction to 3D	4	SAG 285 Studio I – Simulation (3)+1.....4
* MACA 2720 Flash Multimedia I	4	SAG 235 Flash I (3)+1.....4
BCOM 2050 Business Communications	4	University Elective (MGMT 202).....4

EMU Requirements that May be Taken at Macomb or EMU	(15-19 credits)
*ARTT 1370 Color and Design 2.....	3
*ITCS-1140 Intro to Program Design & Development.....	4
*MACA-1400 Introduction to Digital Video.....	4
*PRDE 1000 Fundamentals of Design.....	4
³ MATH 1760 Anal Geom & Calculus (for Cognate B only).....	0-4
Note: See your EMU program advisor to receive credit for substitutions.	

Credits at MCC: 92-96 Credits that transfer to EMU 92-96

* Required for EMU's Simulation, Animation, and Gaming program.
¹ MATH 1410 must be completed at Macomb to satisfy EMU's Quantitative Reasoning Requirement. If completed at EMU, MATH 110 is required; or if intermediate algebra has been completed with a "C" or better other QR choice courses may be chosen. See pg. 3.
² PHYS 1180 (PHY 221 at EMU) is a pre-requisite for COSC 215 and (SAG 470 in Cognate A).
³ MATH 120 is a pre-requisite for MATH 205 in Cognate B.
Note: EMU will accept substitutions for courses that transfer as university electives or general transfer credit.

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

**EASTERN MICHIGAN UNIVERSITY
ARTICULATION GUIDE**

January 2013

**Macomb Community College – AAS in Information Technology—Programming for Electronic Games
Eastern Michigan University – Bachelor of Science in Simulation, Animation, and Gaming**

<p style="text-align: center;"><u>Completion of EMU's Simulation, Animation & Gaming Program</u></p> <p>Major Requirements (33-38 credits)</p> <p>Required Courses (15 credits)</p> <p>COSC 215 Scientific Simulation 3 MGMT 386 Organization behavior & Theory 3 MGMT 486 Organizational Change & Team Building 3 ¹STS 300W Researching & Writing Techniques 3 SAG 225 Graphics for Simulation II 3</p> <p>Cognate options Choose a cognate option A or B below:</p> <p>Option A Graphics and Design (18-21 credits)</p> <p>SAG 275 Texturing & Mapping 3 SAG 305 Environmental Design 3 SAG 355 Lighting & Camera Techniques 3 SAG 375 Studio II 3 SAG 470 Simulation & Animation Dynamics 3 SAG/COSC 485 Senior Projects in SAG 3 ²LBC Requirement (See advisor for options) 0-3</p> <p>Option B Programming (23 credits)</p> <p>COSC 221 Computer Organization I 3 COSC 311 Algorithms and Data Structures 3 COSC 456 Computer Graphics 3 COSC 457 Computer Game Programming 3 COSC 461 Heuristic Programming 3 ¹COSC 481W Software Engineering and Senior Project... 3 ²COSC 486 Coop. Education in Computer Science 1 MATH 205 Mathematical Structures for Comp Sci 4</p> <p>Minimum Credits at EMU: 33-38</p> <p>Credits to Graduate: 124-135</p>	<p>Suggested sequence for completing the program:</p> <p><i>PHY 221 and COSC 111 are prerequisites for COSC 215. SAG 175 is prerequisite for SAG 225.</i></p> <p>All Students</p> <p>Semester 1 (15 credits)</p> <p>COSC 215 Scientific Simulation 3 MGMT 386 Organization behavior & Theory 3 STS 300W Researching & Writing Techniques 3 SAG 225 Graphics for Simulation II 3</p> <p>Cognate A Students Only</p> <p>Semester 2 (15 credits)</p> <p>MGMT 486 Organizational Change & Team Building 3 SAG 275 Texturing & Mapping 3 SAG 305 Environmental Design 3 SAG 470 Simulation & Animation Dynamics 3 SAG 375 Studio II 3</p> <p>Semester 3 (6-9 credits)</p> <p>SAG 355 Lighting & Camera Techniques 3 SAG/COSC 485 Senior Projects in SAG 3 LBC Requirement 0-3</p> <p>Cognate B Students Only</p> <p>Semester 2 (10credits)</p> <p>COSC 221 Computer Organization I 3 MATH 205 Mathematical Structures for Comp Science 4 MGMT 486 Organizational Change & Team Building 3</p> <p>Semester 3 (4 credits)</p> <p>COSC 311 Algorithms and Data Structures 3 ¹COSC 486 Coop. Education in Computer Science 1</p> <p>Semester 4 (9 credits)</p> <p>COSC 456 Computer Graphics 3 COSC 457 Computer Game Programming 3 COSC 461 Heuristic Programming 3</p>
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¹ Satisfies EMU's Writing Intensive in the major requirement.
² Satisfies EMU's Learning beyond the Classroom (LBC) requirement.

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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 (indicated below) at both institutions to assure that all requirements are satisfied. Each institution will determine the satisfaction of their individual program and degree requirements. MCC courses with an * are required for EMU's Simulation, Animation, and Gaming Program.
2. Students whose transcripts are endorsed as "MACRAO Satisfied" will only be required to meet three of EMU's general education requirements, noted on the articulation guide and listed below. These requirements may be completed at the most appropriate time for the student whether before or after admission to EMU:
 - a) an approved course in Quantitative Reasoning: [MATH 1410 at MCC]
 - b) an approved course in Perspectives on a Diverse World: [at MCC: [ENGL 2800, 2810; HUMN 1270; ANTH 1000; GEOG 2000; HIST 1260, 1270, 1700, 2420, 2520 INTL 2000, 2010, 2300, 2500, 2700; POLS 1600; SOSC 2010] or [at EMU: refer to the catalog website: <http://www.emich.edu/gened/students/approved.php>]
 - c) an approved Learning Beyond the Classroom course or experience offered by EMU: [see EMU Program Coordinator for options.]

To use MACRAO, students must request that an official community college transcript, with the "MACRAO Satisfied" stamp, be sent to EMU's Admissions Office. Students, who do not have "MACRAO Satisfied" on their community college transcript, will be required to satisfy EMU's general education requirements as listed in the Undergraduate Catalog. The MACRAO stamp may be completed after admission to EMU, however, students should inform advisors at EMU that they intend to complete MACRAO, 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 30 credit hours must be completed 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. Courses listed in this guide may be completed at the most opportune time for students, whether before or after admission to EMU, as long as appropriate pre-requisites are satisfied.
5. Students must meet all admission requirements at the time of application for admission to EMU, including submitting transcripts from all previously attended colleges. MCC students will receive equal consideration with other students for course registration and financial aid.
6. Students are encouraged to contact the Simulation, Animation, and Gaming Program Coordinator early, before applying to EMU. To facilitate the evaluation of transcripts, students should indicate they are using this articulation agreement when applying to EMU and bring a copy of this guide to all advising sessions. Copies of the articulation guide are available on EMU's webpage at www.emich.edu/ccr/artguide.php

Effective Dates: January 1, 2013 until January1, 2016.

This is a renewal of an agreement made in February 2010. 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 started the program at Macomb Community College will have an additional three years to be admitted to EMU under the terms of this agreement.

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