

**EASTERN MICHIGAN UNIVERSITY  
ARTICULATION GUIDE**

September 2006

**Washtenaw Community College– AAS in Computer Programming  
Eastern Michigan University – BBA in Computer Information Systems**

**Purpose:** Bring a copy of this articulation agreement to all advising sessions.

This articulation agreement was developed to provide a smooth curriculum transition for students who want to complete the Computer Programming curriculum at WCC and transfer to EMU to earn a Bachelor of Business Administration in Computer Information Systems. The agreement is designed to minimize loss of credits and duplication of coursework in transferring.

**Requirements:**

1. Complete the coordinated program of study for the Computer Programming curriculum at Washtenaw Community College and the BBA in Computer Information Systems at EMU as indicated in this articulation guide. Any course substitutions should be made with the guidance of an advisor or counselor to assure that all requirements are met.
2. Students whose transcripts are endorsed as “MACRAO Satisfied” by the community college will only be required to meet EMU’s additional four general education requirements, indicated on the attached articulation guide with a “1”, and listed below:
  - a) a course in advanced writing, speech, or a foreign language [BMG 207 at WCC] or [MGMT 202 at EMU]
  - b) a course in mathematical reasoning [MTH 181 or 197 at WCC] or [MATH 118 or 122 at EMU]
  - c) a cross-cultural course [ART 143, ART 150, ENG 181, or ENG 214 at WCC] or [an approved cross-cultural course at EMU]
  - d) a course in computer literacy [CIS 110 at WCC] or [IS 215 at EMU]

*To use the MACRAO (Michigan Association of Collegiate Registrars and Admissions Officers) Agreement, students should request a MACRAO evaluation of their transcript in the WCC Student Records Office. Students who do not satisfy MACRAO will have to complete all of EMU’s general education requirements.*

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 MACRAO agreement.
4. Under this agreement, EMU will waive the 60-hour rule and require only that a minimum of 41 credit hours must be completed at the four-year college level, 30 hours of which must be at EMU with 15 hours in program/major requirements at the 300-level or above. Of the final thirty hours completed before graduating, at least 10 credit 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 who have a cumulative GPA of 3.0 or higher at WCC will be given priority admission to the COB. Students must have completed at least 56 credits and met course pre-requisites. Students with less than a 3.0 GPA, may apply and be conditionally admitted to the COB during the first semester at EMU and will be regularly admitted after successful completion of all admission requirements, including 12 credits at EMU with a minimum GPA of 2.5.
6. Students should meet with the EMU Bachelor of Business Administration advisor early, before completing an admission application to EMU. A copy of this guide should be included in the application to EMU and brought to all advising sessions. Copies are available at [www.emich.edu/ccr/artguide.htm](http://www.emich.edu/ccr/artguide.htm).

**Effective Dates: September 1, 2006 until September 1, 2009.** In the fall semester of 2007 this agreement will be updated to be consistent with the new general education requirements that go into effect at EMU. WCC students, who began this articulated program prior to fall 2007, may continue to follow the requirements in place at the time they started. Students who begin at WCC during or after the fall semester of 2007 will have to satisfy the new General Education or MACRAO plus four requirements. If this agreement is not renewed at the end of the effective period, students who already began the program at WCC will have an additional three years to be admitted to EMU under the terms of the agreement. Students who began the program at WCC prior to the effective date may use this agreement.

**Contacts:**

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<b>MACRAO Requirements (33-34 credits)</b>	<b>(33-34 credits)</b>
<p><b>1. English Writing Requirement (7 credits)</b>            ENG 111 Composition I..... 4  <sup>1</sup>ENG 226 Composition II..... 3</p> <p><b>2. Math/Science Requirement (8-9 credits)</b>  <sup>1</sup>Choose one course from the following:..... 4                MTH 181 Mathematical Analysis I (4)                MTH 197 Linear Algebra (4)            Choose one course from the following:..... 4-5                BIO 101, 102; CEM 105, 111; GLG 100, 114;                PHY 105, 111 or other transferable course approved                for the MACRAO Math/Science requirement</p> <p><b>3. Social Science Requirement (9 credits)</b>            ECO 211 Principles of Economics I..... 3            PLS 112 Introduction to American Government..... 3            PSY 100 Introductory Psychology ..... 3</p> <p><b>4. Humanities Requirement (9 credits)</b>            COM 101 Fundamentals of Speaking ..... 3  <sup>1</sup>Complete one course: ..... 3                ART 143, ART 150; ENG 181; or ENG 214            Complete one course: ..... 3                PHL 205, 250, or other course approved for the                MACRAO Humanities requirement will be accepted</p>	<p style="text-align: right;"><b>(7 credits)</b></p> <p>ENGL 121 English Composition II..... 3            ENGL 326 Research Writing ..... 3</p> <p style="text-align: right;"><b>(8-9 credits)</b></p> <p>One course:..... 4                MATH 118 Mathematical Analysis I (4)                MATH 122 Elementary Linear Algebra (3) +1            One course:..... 4-5            Courses will transfer as equivalent courses, or            general education transfer courses (BAS), or            general transfer (000) or (AACR)</p> <p style="text-align: right;"><b>(9 credits)</b></p> <p>ECON 201 Principles of Macroeconomics..... 3            PLSC 112 American Government..... 3            PSY 101 General Psychology ..... 3</p> <p style="text-align: right;"><b>(9 credits)</b>  <b>(must be from at least two disciplines)</b></p> <p>CTAS 121 Fundamentals of Speech (2) +1 ..... 3            General Education Cross-cultural Requirement ..... 3            One course ..... 3</p>
<p><b>WCC Program Requirements (41 credits)</b></p> <p><b>Major/Area Requirements: (17 credits)</b>  <sup>1</sup>CIS 110 Intro to Computer Information Systems..... 3            CIS 117 Windows Operating System ..... 2            CIS 121 Linux/UNIX Fundamentals..... 3            CIS 221 UNIX Tools and Scripts ..... 3            CIS 282 Relational Database Concepts &amp; Appl ..... 3            CIS 288 Systems Analysis Design ..... 3</p> <p><b>Required Programming Option: (12 credits)</b>            Complete one course ..... 4                CPS 171 Intro to Programming with C++ (4)                CPS 185 Intro to Visual Basic.Net Programming(4)                CIS 175 Beginning Java Programming (4)            Complete one course ..... 4                CPS 271 Object Features of C++ (4)                CPS 285 Adv. Visual Basic.Net Programming (4)                CIS 269 Java Certification Preparation (4)            Complete one course ..... 4                CPS 272 Data Structures with C++ (4)                CPS 293 C#.NET (4)                CIS 278 Java Server Programming (4)</p> <p><b>Support Courses: (12 credits)</b>            ACC 111 Principles of Accounting I (elective)..... 3            BMG 106 Legal Basics in Business ..... 3            BMG 140 Introduction to Business (elective)..... 3            BMG 200 Human Relations in Business..... 3</p>	<p style="text-align: right;"><b>(41 credits)</b></p> <p style="text-align: right;"><b>(17 credits)</b></p> <p>IS 215 End-User Computing ..... 3            BEDU 000 University Elective ..... 2            BEDU 000 University Elective ..... 3            BEDU 000 University Elective ..... 3            IS 380 Introduction to Databases..... 3            IS 000 University Elective ..... 3</p> <p style="text-align: right;"><b>(12 credits)</b></p> <p>One course:..... 4                IS 000 University Elective                BEDU 000 University Elective                COSC 111 University Elective            One course:..... 4                IS 247 Intro to Web Application Dev (3) +1                IS 247 Intro to Web Application Dev (3) +1                IS 247 Intro to Web Application Dev (3) +1            One course:..... 4                IS 315 Object Oriented Application Dev (3)+1                IS 315 Object Oriented Application Dev (3)+1                IS 315 Object Oriented Application Dev (3)+1</p> <p style="text-align: right;"><b>(12 credits)</b></p> <p>ACC 240 Principles of Financial Accounting ..... 3            LAW 293 Legal Environment of Business..... 3            COB 200 Introduction to Business..... 3            MGMT 000 University Elective ..... 3</p>
<p><b>Credits at WCC:..... 74</b></p>	<p><b>Credits that transfer to EMU ..... 74</b></p>

<sup>1</sup> Meets one of EMU's four general education requirements in addition to MACRAO. See page 1, #2 for more information.

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<b>Courses that May be Taken at WCC or EMU</b>	
<b>A maximum of three courses from the list below may be completed at WCC</b>	<b>(8-9 credits)</b>
<b>A minimum of two courses from the list below must be completed at EMU</b>	<b>(5-6 credits)</b>
ACC 122 Principles of Accounting II ..... 3	ACC 241 Principles of Managerial Accounting .... 3
<sup>1</sup> BMG 207 Business Communication..... 3	MGMT 202 Business Communication ..... 3
BMG 265 Business Statistics ..... 3	DS 265 Business Statistics..... 3
ECO 222 Principles of Economics II ..... 3	ECON 202 Principles of Microeconomics ..... 3
PEA 102 Cardiovascular Training (1) and PEA/YOG activity course (1)..... 2	PEGN 210 Lifetime Wellness and Fitness.....2
<b>Maximum Credits at WCC: ..... 83</b>	<b>Maximum Credits that transfer to EMU..... 83</b>

<sup>1</sup> Meets one of EMU's four general education requirements in addition to MACRAO. See page 1, #2 for more information.

**Completion of the Bachelor of Business  
Administration Program at EMU**

**Required Credits at EMU (5-14 credits)**

A minimum of 5 additional credits  
must be completed at EMU ..... 5-14

**Business Administration Core (15 credits)**

FIN 350 Principles of Finance ..... 3  
 MKTG 360 Principles of Marketing ..... 3  
 MGMT 386 Organizational Behavior & Theory..... 3  
 POM 374 Intro to Production/Operations Mgmt..... 3  
 MGMT 490 Business Policy..... 3

**Discipline Requirements (21 credits)**

IS 320 Business Data Commun & Comp Networks..... 3  
 IS 413 Information Tech Infrastructure Security ..... 3  
 IS 417 Systems Analysis and Design ..... 3  
 IS 421 Enterprise Database Application ..... 3  
 IS 425 Information Systems Project Management..... 3  
 IS 449 Information Systems Integration..... 3  
 Choose one course: ..... 3  
     IS 350 Enterprise Resource Planning (3)  
     IS 410 Business Intelligence (3)  
     IS 416 System Software Administration (3)

**Minimum Credits at EMU: ..... 41-50**

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