

# **ARTICULATION AGREEMENT**

between

**Oakland Community College**

**AAS in Computer Information Systems  
Information Technologies for Homeland Security Option**

and

**Eastern Michigan University**  
College of Technology  
School of Technology Studies

**BS in Information Assurance**

September 2009


**ARTICULATION AGREEMENT BETWEEN**  
**Oakland Community College**  
**AAS in Computer Information Systems –**  
**Information Technologies for Homeland Security Option**  
**and**  
**Eastern Michigan University**  
**Bachelor of Science in Information Assurance**

Oakland Community College and Eastern Michigan University agree to the terms of this agreement, which will be in effect from September 1, 2009 until August 31, 2012.

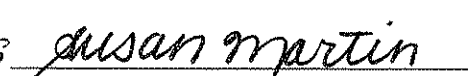
**Signatures**

**Oakland Community College**


**Eastern Michigan University**

  
 Patricia A. Dolly, President  
 Auburn Hills Campus

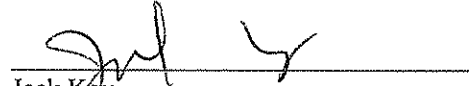
8/12/09  
 Date

  
 Susan W. Martin  
 President

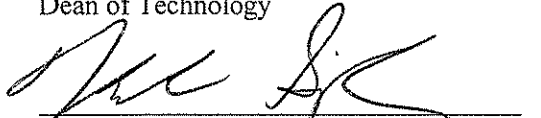
11/11/09  
 Date

  
 Philip R. Hale  
 Dean of Technology


3/10/09  
 Date

  
 Jack Kay  
 Provost and Executive Vice President

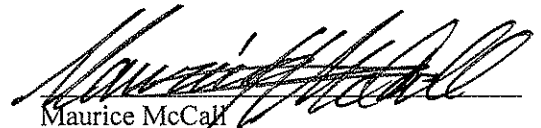
11-7-09  
 Date

  
 Ken Sigler, CIS Discipline Chair


8/6/09  
 Date

  
 Morell Boone  
 Dean of the College of Technology

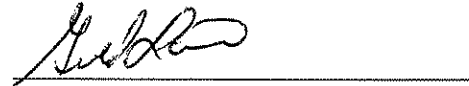
10/29/09  
 Date

  
 Maurice McCall  
 Registrar

10/17/09  
 Date

  
 John Boyless, Director  
 School of Technology Studies

10/29/09  
 Date

  
 Gerald Lawver, Coordinator  
 Information Assurance Program

10-27-09  
 Date

cc: Marikay Clancy, Manager, Academic Services  
 Charles Kurzer, Chair, Auburn Hills Counseling Dept.

cc: Christina Shell, Registrar  
 Sarah Kersey-Otto, Director, Academic Advising Center (I)  
 Douglas Potter, Associate Director of Transfer Admissions  
 Charlotte Stigler, Admissions Office  
 Byron Bond, Dean of Continuing Education  
 Cheryl Aubuchon, Director, EMU Livonia Center

**EASTERN MICHIGAN UNIVERSITY  
ARTICULATION GUIDE**

September 2009

**Oakland Community College – AAS in Computer Information Systems - IT for Homeland Security Option  
Eastern Michigan University – Bachelor of Science in Information Assurance**

**Oakland Community College**

**Eastern Michigan University**

<b>MACRAO Requirements (32 credits)</b>	<b>(32 credits)</b>
<b>1. English Writing Requirement (6 credits)</b>	<b>(6 credits)</b>
ENG 1510 Composition I..... 3	ENGL 120 Composition I (University Elective)..... 3
ENG 1520 Composition II..... 3	ENGL 121 Composition II: Researching Pub Exp..... 3
<b>2. Math/Science Requirement (8 credits)</b>	<b>(8 credits)</b>
*1 MAT 1580 Statistics (complete at OCC)..... 4	MATH 170 Elem Statistics (3)+1..... 4
Complete a lab science course:..... 4	One course: ..... 4
BIO 1500, 1511, 1530, 1540, 1550; CHE 1000, 1320, 1510, 1520; GSC 1530, 1580, 1620; PHY 1610, 1620, 2400, 2500; PSC 1560	Courses may transfer as equivalent courses, General education credit, or general transfer credit
<b>3. Social Science Requirement (9 credits)</b>	<b>(9 credits)</b>
Complete three courses: <b>See note below</b> ..... 9	Three courses: ..... 9
Choose from at least two subject areas on the OCC General Education Social Science Distribution list. POL 1510 is required for an associate degree.	Courses will transfer as equivalent courses, General Education credit or general transfer credit.
<b>4. Humanities Requirement (9 credits)</b>	<b>(9 credits)</b>
Complete three courses: <b>See note below</b> ..... 9	Three courses: ..... 9
Choose from at least two subject areas on the OCC General Education Fine Arts/Humanities Distribution list.	Courses will transfer as equivalent courses, General Education credit or general transfer credit.
<b>NOTE: In completing the Humanities or Social Science Requirement, choose at least one course from below to satisfy EMU's Global Awareness/US Diversity requirement: ANT 1540, 2510; ART 1700; ENG 1610, 2530, 2540; GEO 1520; HIS 1520, 1550, 2610, 2620; HUM 1710; MUS 1585, 1600; POL 2610; SOC 2530 or 2560</b>	
<b>OCC CIS - Homeland Security Option (57 credits)</b>	<b>(57 credits)</b>
* CIS 1050 Personal Computer Productivity Tools (MSOff)..... 4	COSC 000 (subs for COSC105)..... 4
CIS 1100 Fundamentals of Information Systems..... 4	IS 215 End User Computing (Univ Elective)(3)+1..... 4
<sup>2</sup> CIS 1200 Introduction to Database Systems..... 4	BMMT 000 (subs for IS 380) (AIA Conc)..... 4
* CIS 1300 Networking Concepts..... 4	NITA 210 Concepts of Network & Business Tech(3)+1..... 4
CIS 1400 Introduction to Web Systems..... 4	IS 247 Software Design/Prog (University Elective)..... 4
* CIS 1500 Introduction to Software Engineering (Java)..... 4	COSC 111 Introduction to Programming (3)+1..... 4
ACC 1500 Accounting for the Small Business Owner..... 3	ACC 000 General Transfer Credit..... 3
BUS 1100 Introduction to Business..... 4	BEDU 100 Introduction to Business (Univ Elective) (3)+1 ... 4
* SPE 1290 Interpersonal Communication..... 3	CTAC 227 Interpersonal Communication..... 3
<b>Information Technologies Homeland Security Option</b>	
<sup>2,3</sup> CIS 2111 Systems Analysis and Design (UML) ..... 4	NITA 422 End User Systems: Planning & Des (AIM, AIA) .. 4
CIS 2232 Fundamentals of System Support..... 4	IS 000 General Transfer Credit..... 4
* CIS 2838 System Security..... 4	IA 202 Risk and Vulnerability Analysis..... 4
* CIS 2839 Internet Security..... 4	IA 103 Information Assurance Overview..... 4
<sup>4</sup> CIS 2353 Data Structures (Option Elective)..... 4	COSC 211 Programming Data Structures (3)+!..... 4
<sup>4</sup> CIS 2434 Intro to Linux/UNIX Admin (Option Elective) ..... 3	NITA 212 Open Source Platform / Network Admin..... 3
<b>EMU Requirements (May be taken at OCC or EMU)</b>	<b>(4-8 credits)</b>
Before completing courses below, choose a concentration for the EMU Information Assurance Program on page 2.	
* BCOM 2050 Business Communications..... 4	MGMT 202 Business Communication (all concentrations).... 4
<sup>5</sup> MAT 1730 Calculus I ..... 0-4	MATH 120 Calculus I (for AIE option only) ..... 0-4
Open Elective ..... 0-1	University Elective (for AIM option only) ..... 0-1
<b>Credits at OCC: ..... 93-97</b>	<b>Credits that transfer to EMU ..... 93-97</b>

\* Required for EMU's Information Assurance program (all concentrations).

<sup>1</sup> MAT 1580 should be completed at OCC to satisfy EMU's quantitative reasoning requirement. If completed at EMU, MATH 110 will also be required, unless waived by ACT/SAT or math placement score.

<sup>2</sup> Required for the EMU Applied Information Assurance (AIA) Concentration at EMU.

<sup>3</sup> Required for the EMU Information Assurance Management (IAM) Concentration.

<sup>4</sup> Students using this articulation agreement may substitute CIS 2353 and CIS 2434 for OCC's Homeland Security Option electives.

<sup>5</sup> Required for the EMU Information Assurance Encryption (IAE) Concentration only.

Community College Relations

Copies of this guide are available on-line at: [http://www.emich.edu/ccr/artguide\\_mew.htm](http://www.emich.edu/ccr/artguide_mew.htm)

August 6, 2009

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**EASTERN MICHIGAN UNIVERSITY  
ARTICULATION GUIDE**

September 2009

Oakland Community College – AAS in Computer Information Systems - IT for Homeland Security Option  
Eastern Michigan University – Bachelor of Science in Information Assurance

**Completion of the Information Assurance Program at EMU**

**Remaining Major Requirements (30-33 credits)**

**Concentration Requirements: ( 30-35 credits)**

*Complete one of the concentrations below.*

**<sup>1</sup>Information Assurance Management (IAM) (30 credits)**

ENGL 324 Principles of Technical Communication .....	3
IA 329 Policy Development in Info Security .....	3
IS 350 Enterprise Resource Planning .....	3
IS 413 Evaluation and Application Computer Hdw .....	3
IS 425 Information Systems Project Management .....	3
LEGL 413 Cyber Space Law .....	3
MGMT 386 Organizational Behavior and Theory .....	3
MGMT 403 Managerial Communication .....	3
MGMT 480 Management Responsibility and Ethics .....	3
STS 300W Research & Writing: Tech Perspective .....	3

**Credits at EMU:..... 30**

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

**Applied Information Assurance (AIA) (33 credits)**

COSC 374 Applied Cryptography .....	3
IA 325 Cyber Crime Investigation I .....	3
IA 327 Computer Forensics I .....	3
IA 329 Policy Development in Info Security .....	3
IA 415 Intro to Research in Information Assurance .....	3
<sup>1</sup> IA 416 Applied Research Projects .....	3
IS 413 Information Tech Infrastructure & Security .....	3
LEGL 413 The Law and the Internet .....	3
NITA 344 Administration of Computer Systems .....	3
NITA 412 Linux Security Administration .....	3
STS 300W Research & Writing: Tech Perspective .....	3

**Credits at EMU:..... 33**

**Credits to Graduate:..... 126**

<sup>1</sup> One LBC course or noncredit experience must be completed. An internship in MGMT, IS, NITA, or STS is recommended.

**Information Assurance Encryption (IAE) (31 credits)**

COSC 314 Computational Discrete Structures .....	3
IA 415 Intro to Research in Information Assurance .....	3
<sup>1</sup> IA 416 Applied Research Projects .....	3
IS 413 Information Tech Infrastructure & Security .....	3
LEGL 413 Cyber Space Law .....	3
* MATH 121 Calculus II (or MAT 1740 at OCC) .....	4
MATH 205 Math Structures of Computer Science .....	3
MATH 319 Mathematical Modeling .....	3
MATH 409 Cryptography .....	3
STS 300W Research & Writing: Tech Perspective .....	3

\*If Calculus II is completed at OCC, then at least 3 credits from the list of "EMU Requirements that may be taken at OCC or EMU" must be completed at EMU to bring the minimum at EMU to 30 credit hours.

**Credits at EMU: ..... 31**

**Credits to Graduate: ..... 128**

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**Oakland Community College – AAS in CIS- Information Technologies for Homeland Security Option  
Eastern Michigan University – Bachelor of Science in Information Assurance**

**Additional Information:**

1. In completing the coordinated program of study on the preceding guides, substitutions should be made with the guidance of the EMU and OCC Program Advisors to assure that program and graduation requirements will be satisfied at each institution. Each institution will be responsible for determining the completion of its own requirements.
2. Students whose transcripts are endorsed as “MACRAO Satisfied” by the community college will be required to meet EMU’s three general education requirements, indicated on this 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: [MAT 1580 or 1730 at OCC]
  - c) a course in Perspectives on a Diverse World: [ANT 1540, 2510; ART 1700; ENG 1610, 2530, 2540; GEO 1520; HIS 1520, 1550, 2610, 2620; HUM 1710; MUS 1585, 1600; POL 2610; SOC 2530 or 2560]
  - d) an approved Learning Beyond the Classroom (LBC) course or experience offered by EMU: [IA 416 or other approved course or experience at EMU]

*To use MACRAO, students should request a MACRAO evaluation of their transcript in the OCC Registrar’s Office. Students who do not satisfy MACRAO will have to complete EMU’s general education requirements as listed in the EMU undergraduate catalog.*

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 EMU courses, 15 hours of which must be in major/program requirements at the 300-level or above. Of the last 30 hours completed before graduation, a minimum of 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. Students must meet all admission requirements at the time of admission to EMU, including submitting transcripts from all previously attended colleges.
6. Students are encouraged to meet with the EMU Information Assurance Advisor early, before completing an admission application to EMU. A copy of the articulation guide should be brought to all advising sessions. Copies of this agreement are available at [www.emich.edu/ccr/artguide.htm](http://www.emich.edu/ccr/artguide.htm).

**Effective Dates: September 1, 2009 through August 31, 2012.**

If this agreement is not renewed at the end of the effective period, students will have an additional three years to be admitted to EMU under the terms of the agreement. Students who began the program prior to the effective date may use this agreement.

**Contacts:**

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