

ARTICULATION AGREEMENT

between

Washtenaw Community College

**AAS in Computer Systems Security or
AAS in Data Recovery and Analysis**

and

Eastern Michigan University

College of Technology
School of Technology Studies

BS in Information Assurance

September 2009

ARTICULATION AGREEMENT BETWEEN
Washtenaw Community College
Associate in Applied Science Computer Systems Security or Data Recovery and Analysis
and
Eastern Michigan University
Bachelor of Science in Information Assurance

Article I
Agreement on Principle

Eastern Michigan University (EMU) and Washtenaw Community College (WCC) agree that students, who choose to transfer from a community college to a senior college or university to earn a bachelor's degree, should be provided with a smooth curriculum transition that minimizes loss of credit and duplication of coursework. Therefore, Eastern Michigan University and Washtenaw Community College agree to enter into this program articulation agreement for the Computer Systems Security program at WCC and the Bachelor of Science in Information Assurance at EMU. Both parties enter into this agreement as cooperating, equal partners who shall maintain the integrity of their separate programs.

Article II
Agreement on Program Specifics

Eastern Michigan University and Washtenaw Community College agree that any student who has successfully completed the minimum requirements outlined on the attached articulation guide may transfer the course credits indicated toward a Bachelor of Science in Information Assurance at Eastern Michigan University. 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. MACRAO provisos may be completed at the most appropriate time for the student whether before or after admission to EMU.

Students who follow this articulated program agreement must apply and be admitted to Eastern Michigan University. WCC students will receive equal consideration with other students seeking admission and financial aid. The bachelor's degree graduation requirements for students who follow this articulated program agreement are listed on the attached articulation guide.

Article III
Agreement on Communication

Eastern Michigan University and Washtenaw Community College agree to cooperate in communicating with each other and with their common and respective publics concerning the established relationship between the two institutions. Communication may include the development of various kinds of publications to inform those who might benefit personally or professionally from the opportunities provided by this agreement. Faculty and staff at both institutions will share the information in this agreement with interested and qualified students and both institutions will provide counseling and advising to students and prospective students.

Article IV

Maintenance and Review Procedures

At least one administrative or faculty member from each institution will be appointed to act as agents for the implementation of this agreement, to speak for the institutions and to communicate changes to respective faculty members, advisors, counselors, and others to whom the information is pertinent. Responsibility for oversight of this agreement rests with Assistant to the President for College and University Relations at Washtenaw Community College and the Director of the School of Technology Studies at Eastern Michigan University. Both parties agree to communicate annually any changes in their respective programs that may affect this agreement.

This agreement is effective as of **September 1, 2009 until 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 period may use this agreement.

**ARTICULATION AGREEMENT BETWEEN
 Washtenaw Community College
 Associate in Applied Science in Computer Systems Security or
 Data Recovery and Analysis
 and
 Eastern Michigan University
 Bachelor of Science in Information Assurance**

The representatives of Washtenaw Community College and Eastern Michigan University agree to the terms of this agreement, which will be for an initial period of three (3) years.

Signatures

Washtenaw Community College

Eastern Michigan University

Larry Whitworth, President	Date	Donald M. Loppnow Provost and Executive Vice President	Date
Roger Palay Vice President of Instruction	Date	Bette Warren, Associate Vice President Academic Programs (I)	Date
Rosemary Wilson, Dean Business and Computer Technology	Date	Morell Boone, Dean College of Technology	Date
Clarence Hasselbach, Department Chair Computer Information Systems	Date	John Boyless, Director School of Technology Studies	Date
	Date	Gerald Lawver, Coordinator Information Assurance Program	Date

cc: Joy Garrett, Director of Curriculum & Assessment

cc: Christina Shell, Registrar
 Sarah Kersuey-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, Livonia Center

Washtenaw Community College – AAS in Computer Systems Security
Eastern Michigan University – Bachelor of Science in Information Assurance

Washtenaw Community College

Eastern Michigan University

MACRAO Requirements (32-33 credits)		(32-33 credits)	
1. English Writing Requirement (7 credits)			(7 credits)
ENG 111 Composition I	4	ENG 121 English Composition (3)+1	4
ENG 226 Composition II	3	ENGL 326 Research Writing.....	3
2. Math/Science Requirement (8 credits)			(8 credits)
*1 MATH 160 Basic Statistics	4	MATH 170 Elem Statistics or (3)+1	4
Complete one lab science course:	4	One course:.....	4
Choose from courses approved by WCC to satisfy the MACRAO lab science requirement.		Courses may transfer as equivalent courses, General Education credit, or general transfer credit	
3. Humanities Requirement <i>See note below</i> (8-9 credits)			(8-9 credits)
* COM 102 Interpersonal Communication.....	3	CTAC 227 Interpersonal Communication.....	3
(satisfies WCC's speech requirement)			
Complete two courses (one must be other than speech) :	5-6	Two courses:	5-6
Choose from courses approved by WCC to satisfy General		Courses may transfer as equivalent courses, Education transfer credit, or general transfer	
The MACRAO humanities requirement. credit.			
4. Social Science Requirement <i>See note below</i> (9 credits)			(9 credits)
Complete three courses from at least two disciplines: .	9	Three courses:.....	9
Choose from courses approved by WCC to satisfy General		Courses may transfer as equivalent courses, Education transfer credit, or general transfer	
The MACRAO humanities requirement. credit.			
¹ NOTE: In completing the Humanities or Social Science Requirement, choose one course from the following to satisfy EMU's Perspectives on a Diverse World requirement: ART 143, 150; DAN 180; ENG 181, 213, 214, 224, 242; ANT 201; ECO 280; GEO 101; HST 123, 150, 230, 235, 240; PLS 211, SOC 205			
WCC Major/Area Requirements		(45 credits)	
* CIS 121 Linux/UNIX I: Fundamentals.....	3	NITA 212 Open Source Platform / Network Admin	3
* CNT 206 Internetworking I - Fundamentals	4	NITA 210 Concepts of Network & Business Tech (3)+14	
* CNT 211 Admin & Managing Microsoft Win Server (4) and			
*[CIS 206 (4) OR CNT 251 (4)]	8	NITA 344 Admin of Computer Systems (3)+5	8
CNT 216 Internetworking II - Routers.....	4	NITA 000 General Transfer Credit.....	4
CSS 180 Computer Security I.....	4	NITA 000 General Transfer Credit.....	4
* CSS 200 Computer Security II.....	4	IA 103 Information Assurance Overview(3)+1	4
CSS 205 Computer Security III.....	4	NITA 000 General Transfer Credit.....	4
CSS 210 Computer Security IV	4	NITA 000 General Transfer Credit.....	4
CSS 212 Computer Security V	4	NITA 000 General Transfer Credit.....	4
* CSS 220 Computer Security VI	4	IA 202 Risk and Vulnerability (3)+1.....	4
* CSS 272 Computer Security VIII	2	IA 325 Cyber Crime Investigation	3
EMU Requirements (may be taken at WCC or EMU)		(14 credits)	
* BMG 207 Business Communication	3	MGMT 202 Business Communication.....	3
* CIS 100 Introduction to Computers.....	3	COSC 101 Com Sci Conc & App (sub for COSC 105)	3
* CPS 161 Intro to Programming with Java	4	COSC 111 Intro to Programming (3)+1.....	4
* CPS 261 Programming Data Structures in Java	4	COSC 211 Programming Data Structures (3)+1.....	4

Credits at WCC:..... 91-92	Credits that transfer to EMU..... 91-92
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**Required for EMU's Information Assurance program.*

[†]MATH 160 should be completed at WCC 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.

Note: Courses that transfer as general transfer credit or university electives are not required for EMU's program, and may be substituted.

Washtenaw Community College – AAS in Computer Systems Security
Eastern Michigan University – Bachelor of Science in Information Assurance

Completion of the Information Assurance Program at EMU

Major Requirements (33-36 credits)

Foundation Course: (3 credits)
STS 300W Research & Writing: Tech Perspective..... 3

Concentration Requirements: (30-33 credits)

Complete one of the concentrations below:

Applied Information Assurance: (30 credits)
 COSC 374 Applied Cryptography..... 3
 IA 327 Computer Forensics I..... 3
 IA 329 Policy Development in Info Security..... 3
 IA 415 Intro to Research in Information Assurance 3
¹IA 416L Applied Research Project 3
 IS 413 Information Tech Infrastructure & Security..... 3
 LEGL 413 The Law and the Internet..... 3
 NITA 412 Linux Security Admin..... 3
 NITA 422 End-user Systems: Planning & Design..... 3
 Complete one course: 3
 BMMT 496 Records Admin Using Databases (3)
 IS 380 Introduction to Databases (3)

OR

Information Assurance Management: (33 credits)
 IA 329 Policy Development in Info Sec..... 3
 IS 350 Enterprise Resource Planning..... 3
 IS 413 Information Tech Infrastructure & Security..... 3
 IS 425 Project Management..... 3
 LEGL 413 Cyber Space Law..... 3
 MGMT 386 Organizational Behavior and Theory..... 3
 MGMT 403 Managerial Communication: Theory & Appl.. 3
 MGMT 480 Management Responsibility and Ethics..... 3
 NITA 422 End User Systems: Planning and Design 3
¹Internship in MGMT, IS, CS, or STS..... 6

¹Satisfies EMU's Learning beyond the Classroom requirement .

OR

Information Assurance Encryption (33 credits)
 COSC 314 Computational Discrete Structures 3
 IA 415 Intro to Research in Information Assurance..... 3
¹ IA 416L Applied Research Project3
 IS 413 Information Tech Infrastructure & Security 3
 LEGL 413 Cyber Space Law..... 3
 MATH 120 Calculus I..... 4
 MATH 121 Calculus II..... 4
 MATH 205 Math Structures for Computer Science..... 4
 MATH 319 Mathematical Modeling..... 3
 MATH 409 Cryptography..... 3

Credits at EMU: 33-36

Credits to Graduate: 124 -128

A minimum of 124 credits is required to graduate

Washtenaw Community College – AAS in Data Recovery and Analysis
Eastern Michigan University – Bachelor of Science in Information Assurance

Washtenaw Community College

Eastern Michigan University

MACRAO Requirements (32-33 credits)	(32-33 credits)
1. English Writing Requirement (7 credits)	(7 credits)
ENG 111 Composition I..... 4	ENG 121 English Composition (3)+1..... 4
ENG 226 Composition II..... 3	ENGL 326 Research Writing 3
2. Math/Science Requirement (8 credits)	(8 credits)
¹ MATH 160 Basic Statistics 4	MATH 170 Elem Statistics or (3)+1 4
Complete one lab science course: 4	One course:..... 4
Choose from courses approved by WCC to satisfy the: MACRAO lab science requirement.	Courses may transfer as equivalent courses, General Education credit, or general transfer credit
3. Humanities Requirement See note below (8-9 credits)	(8-9 credits)
*COM 102 Interpersonal Communication 3	CTAC 227 Interpersonal Communication 3
Complete two courses (one must be other than speech) :5-6	Two courses: 5-6
Choose from courses approved by WCC to satisfy The MACRAO humanities requirement.	Courses may transfer as equivalent courses, General Education transfer credit, or general transfer credit.
4. Social Science Requirement See note below (9 credits)	(9 credits)
Complete three courses from at least two disciplines: 9	Three courses:..... 9
Choose from courses approved by WCC to satisfy General The MACRAO humanities requirement.	Courses may transfer as equivalent courses, Education transfer credit, or general transfer credit.
<p><i>NOTE: In completing the Humanities or Social Science Requirement, choose one course from the following to satisfy EMU's Global Awareness/US Diversity requirement: ART 143, 150; DAN 180; ENG 181, 213, 214, 224, 242; ANT 201; ECO 280; GEO 101; HST 123, 150, 230, 235, 240; PLS 211, SOC 205</i></p>	
WCC Major/Area Requirements	(49 credits)
* CIS 121 Linux/UNIX I: Fundamentals..... 3	NITA 212 Open Source Platform / Network Admin..... 3
CJT 208 Criminal Evidence and Procedure 3	CRM 460 Criminal Law II (University Elective) 3
CNT 201 Admin MS Windows XP Professional..... 3	NITA 000 General Transfer Credit..... 3
CSS 180 Computer Security I 4	NITA 000 General Transfer Credit..... 3
* CSS 200 Computer Security II 4	IA 103 Information Assurance Overview (3)+1 4
² CSS 272 Computer Security VIII 2	IA 325 Cyber Crime Investigation (AIA Concentration) . 3
² CSS 270 Computer Security VII 4	IA 327 Computer Forensics I1 (3)+1 (AIA Concentration)4
CSS 275 Computer Security IX..... 4	IA 328 Computer Forensics II (3)+1 (Univ Elec)..... 4
CST 150 Computer Systems Technology 1..... 5	NITA 000 General Transfer Credit..... 5
CST155 Computer Systems Technology 2..... 5	NITA 000 General Transfer Credit..... 5
Complete one Option below: 12	Three courses 12
[CIS 221 (4) AND CSS 205 (4) AND * CSS 210 Computer Security IV (4)] OR [CSS 205 Computer Security III (4) AND ² CNT 211 (4) AND (CIS 206 OR CNT 251)(4)]	NITA 000 General Transfer Credit (8) NITA 210 Concepts of Network & Business Tech (4) NITA 000 General Transfer Credit (4) NITA 344 Admin of Computer System (3)+5 (AIA Conc)
EMU Requirements (may be taken at WCC or EMU)	(14 credits)
*BMG 207 Business Communication 3	MGMT 202 Business Communication3
* CIS 100 Introduction to Computers 3	COSC 101 Com Sci Conc & App (sub for COSC 105)3
*CPS 161 Intro to Programming with Java 4	COSC 111 Intro to Programming (3)+14
*CPS 261 Programming Data Structures in Java 4	COSC 211 Programming Data Structures (3)+14
Credits at WCC:..... 95-96	Credits that transfer to EMU 95-96

* Required for EMU's Information Assurance program, all concentrations.

¹ MATH 160 should be completed at WCC to satisfy EMU's QR Requirement. If completed at EMU, MATH 110 will also be required unless waived by ACT/SAT or math placement score.

² Required for the EMU Applied Information Assurance Concentration.

Note: Courses that transfer as general transfer credit or university electives are not required for EMU's program and may be substituted.

Completion of the Information Assurance Program at EMU

Major Requirements (36-39 credits)

Foundation Courses: (6 credits)
 IA 202 Risk and Vulnerability 3
 STS 300W Research & Writing: Tech Perspective..... 3

Concentration Requirements: (30-33 credits)
 Complete one of the concentrations below:

Applied Information Assurance: (30 credits)

For this concentration, students should complete Windows/Unix Operating System Security Option at WCC or complete NITA 344 and NITA 412 at EMU.

NITA 210 Concepts of Network & Business Technology 3
 COSC 374 Applied Cryptography..... 3
 IA 329 Policy Development in Info Security..... 3
 IA 415 Intro to Research in Information Assurance 3
¹IA 416L Applied Research Projects 3
 IS 413 Information Tech Infrastructure & Security..... 3
 LEGL 413 The Law and the Internet..... 3
 NITA 412 Linux Security Admin..... 3
 NITA 422 End-user Systems: Planning & Design..... 3
 Complete one course: 3
 BMMT 496 Records Admin Using Databases (3)
 IS 380 Introduction to Databases (3)

OR
Information Assurance Management: (33 credits)

For this concentration, students should complete the Network Security Option at WCC or complete NITA 210 at EMU.

IA 329 Policy Development in Info Sec..... 3
 IS 350 Enterprise Resource Planning..... 3
 IS 413 Information Tech Infrastructure & Security..... 3
 IS 425 Project Management..... 3
 LEGL 413 Cyber Space Law..... 3
 MGMT 386 Organizational Behavior and Theory..... 3
 MGMT 403 Managerial Communication: Theory & Appl.. 3
 MGMT 480 Management Responsibility and Ethics..... 3
 NITA 422 End User Systems: Planning and Design 3
¹ Internship in MGMT, IS, CS, or STS..... 6

¹ Satisfies EMU's Learning beyond the Classroom requirement

OR
 Information Assurance Encryption: (33 credits)
 COSC 314 Computational Discrete Structures 3
 IA 415 Intro to Research in Information Assurance..... 3
¹ IA 416L Applied Research Projects 3
 IS 413 Information Tech Infrastructure & Security 3
 LEGL 413 Cyber Space Law..... 3
 MATH 120 Calculus I..... 4
 MATH 121 Calculus II..... 4
 MATH 205 Math Structures for Computer Science..... 4
 MATH 319 Mathematical Modeling..... 3
 MATH 409 Cryptography..... 3

Credits at EMU: 36-39

Credits to Graduate: 131-135

A minimum of 124 credits is required to graduate.

Washtenaw Community College – AAS in Computer Systems Security or Data Recovery & Analysis
Eastern Michigan University – Bachelor of Science in Information Assurance**Additional Information:**

1. In completing the coordinated program of study, as indicated on the preceding guides, substitutions should be made with the guidance of the EMU and WCC Program Advisors to assure that program and graduation requirements will be satisfied at each institution. Each institution will be responsible for determining if their requirements are satisfied.
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: [MTH 160 at WCC]
 - b) a course in Perspectives on a Diverse World: [ART 143, 150; DAN 180; ENG 181, 213, 214, 224, 242; ANT 201; ECO 280; GEO 101; HST 123, 150, 230, 235, 240; PLS 211, SOC 205 at WCC]
 - c) a Learning beyond the Classroom (LBC) course or experience offered by EMU: [an internship or IA 416L at EMU]

To use MACRAO, students should request a MACRAO evaluation of their transcript in the WCC Records 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 courses offered by EMU, 15 hours of which must be in 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 included with the application to EMU and brought to all advising sessions. Copies of this agreement are available at www.emich.edu/ccr/artguide.htm.

Effective Dates: September 1, 2009 until 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 period may use this agreement to the extent that courses completed are consistent with the agreement.

Contacts:**Washtenaw Community College**

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