

**INFORMATION ASSURANCE & CYBER DEFENSE  
ARTICULATION AGREEMENT GUIDE**

Oakland Community College – **CIS – CISCO Internetworking Certificate of Achievement (CIS.CIN.CA)**  
Eastern Michigan University – **BS in Information Assurance and Cyber Defense**

**Michigan Transfer Agreement (MTA) Requirements (30 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. Courses listed below for the MTA also satisfy major requirements at OCC and/or EMU. Students who started college before fall 2014 may continue to follow the MACRAO Agreement until the end of summer 2019. A MACRAO version of this articulation guide is available at [http://www.emich.edu/ccr/artchartguide\\_macrao.php](http://www.emich.edu/ccr/artchartguide_macrao.php). For courses approved by OCC to satisfy the MTA go to: <http://catalog.oaklandcc.edu/graduation-requirements/michigan-transfer-agreement/>.

**Oakland Community College Courses:**

**Transfer to Eastern Michigan University as:**

<b>1. A Course in English Composition</b>		
ENG 1510 Composition I.....	3	University Elective..... 3
<b>2. A Course in English Composition or Communication</b>		
ENG 2200 Professional Communication.....	3	University Elective..... 3
<b>3. A Course in Mathematics</b>		
*MAT 1580 Statistics.....	4	STAT 170 Elem Statistics (3)+1 ..... 4
<b>4. Two Natural Science courses from different disciplines</b>		
Choose from the approved MTA list .....	8	University Electives..... 8
<b>5. Two Humanities courses from different disciplines</b>		
Choose from the approved MTA list.....	6	University Elective..... 6
<b>6. Two Social Science courses from different disciplines</b>		
Choose from the approved MTA list.....	6	University Electives..... 6
<b>7. If needed, complete additional courses from the above categories to meet the 30 credit minimum for the MTA.</b>		

**EMU's Perspectives on a Diverse World requirement: Complete one course from the following list:**

**These courses also satisfy an MTA area: Communication: COM 2290; Natural Science: BIO 1500; Humanities: ENG 1610, 2530, 2540, 2570; HIS 1520; MUS 1585; Social Sciences: ANT 1540; GEO 1520; HIS 1520, 1550, 2620; POL 2530, 2610; SOC 2620**

**These courses apply, but do not satisfy the MTA: BUS 2150; PSY 2730; SOC 2530; BIO 1512; SOC 2560**

**OCC CIS – CISCO Internetworking Certificate (16 credits)**

CIS 1305 CCNA Studies I: Introduction to Networks .....	4	University Elective (may transfer as IA 000 or IA 110).....	4
*CIS 1310 CCNA Studies II: Routing & Switching Essen....	4	IA 150 Networking I .....	4
CIS 1320 CCNA Studies III: Scaling Networks.....	4	University Elective.....	4
CIS 1330 CCNA Studies IV: Connecting Networks .....	4	University Elective.....	4

**EMU Requirements that May be taken at OCC or EMU (33 credits)**

*1CIS 1300 Networking Concepts.....	4	IA 110 Concepts of Network & Business Tech.....	4
*CIS 1550 Introduction to Secure Programming .....	3	COSC 146 Applied Programming & Scripting.....	3
*1CIS 1600 Fundamentals of Cybersecurity.....	4	IA 103 Information Assurance Overview.....	4
*CIS 1620 Intro to Cryptography.....	4	COSC 274 Intro to Applied Cryptography (3)+1 .....	4
*CIS 2434 Intro to Linux and Unix Admin.....	3	IA 212 Open Systems Platform & Network Admin.....	3
*CIS 2535 Microsoft Windows Server Administration.....	3	IA 244 Administration of Computer Systems.....	3
*CIS 2838 System Security.....	4	IA 202 Risk and Vulnerability Analysis .....	4
<sup>2</sup> Open Electives (not to exceed 79 credits at OCC) .....	8	University Electives.....	8

**Credits at OCC: .....79 Credits that apply to EMU Program..... 79**

\*Required for EMU's Information Assurance and Cyber Defense program. If not transferred, must be completed at EMU.

<sup>1</sup>A grade of "B-" or higher in CIS 1300 and CIS 1600 (IA 103 and IA 110 at EMU) is required for admission to the IA program at EMU.

<sup>2</sup>Completing CIS 1610, CIS 1630, and CIS 2845 will result in an additional Certificate in CIS – Cybersecurity.

**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](http://www.emich.edu/ccr/trackingsystem/Enter.php)

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**Completion of the Bachelor of Science in  
Information Assurance & Cyber Defense**

IA 103 and IA 110 (CIS 1600 and CIS 1300 at OCC) must be completed with a grade of "B-" or higher for admission to the IA major and to enroll in IA 300-level courses

**Major Requirements (45 credits)**

**Information Assurance Required Courses (39 credits)**

LEGL 320	Cyber Law and Compliance.....	3
IA 322	Managing Security Projects.....	3
IA 329W	Policy Development in Info Assurance (GEWI).....	3
IA 354	Networking II.....	3
IA 385	Database Management & Security.....	3
<sup>1</sup> IA 387L4	Co-operative Education (GELB).....	3
IA 400	Malware Analysis & Reverse Engineering.....	3
IA 427	Digital Forensics I.....	3
IA 445	Ethical Hacking and Offensive Security.....	3
IA 455	Incident Response.....	3
IA 462	Adv. Operating Systems Security & Admin.....	3
IA 473	Network Forensics & Analytics.....	3
IA 495	Capstone.....	3

**IA Restricted Electives (6 hours)**

IA 425	Cyber Crime Investigation I (3)	
IA 428	Digital Forensics II (3)	
IA 440	Intelligence Analysis I(3)	
IA 471	Data Security and Privacy (3)	
IA 474	Applied Data Mining for IA (3)	
IA 475	Adv Topics in Information Security (3)	
IA 476	Enterprise Security Analytics (3)	
	Any IA, CIS, or COSC 300-level or higher (3)	
<b>Total Credits at EMU</b>		<b>45</b>
<b>Transfer Credits</b>		<b>79</b>
<b>Credits to Graduate</b>		<b>124</b>

*Courses may not be offered every semester. Meet with a program advisor to plan a program of study.*

**FALL START**

<b>Fall semester (9 credits)</b>		
LEGL 320	(may be taken in any semester).....	3
IA 322	F Prereq: IA 202.....	3
IA 329W	FW Prereq: IA 202.....	3
<b>Winter semester (12 credits)</b>		
IA 354	W Prereq: IA 150.....	3
IA 385	FW Prereq: IA 110.....	3
IA 400	FW Prereq: COSC 146.....	3
IA 427	FW Prereq: IA 110.....	3

<b>Fall semester (12 credits)</b>		
IA 445	FW Prereq: IA 212 & 244.....	3
IA 473	FW prereq: IA 427.....	3
IA 495	F Prereq: IA 329, 244 & 322.....	3
IA Restricted Elective	.....	3

<b>Winter semester (12 credits)</b>		
<sup>1</sup> IA 387L4	FW Prereq: IA 329 & 244.....	3
IA 455	FW Prereq: IA 473.....	3
IA 462	W Prereq: IA 212 & 244.....	3
IA Restricted Elective	.....	3

**WINTER START**

<b>Winter semester (9 credits)</b>		
LEGL 320	(may be taken in any semester).....	3
IA 329W	FW Prereq: IA 202.....	3
IA 354	W Prereq: IA 150.....	3

<b>Fall semester (12 credits)</b>		
IA 322	F Prereq: IA 202.....	3
IA 385	FW Prereq: IA 110.....	3
IA 400	FW Prereq: COSC 146.....	3
IA 427	FW Prereq: IA 110.....	3

<b>Winter semester (12 credits)</b>		
IA 445	FW Prereq: IA 212 & 244.....	3
IA 462	W Prereq: IA 212 & 244.....	3
IA 473	FW prereq: IA 427.....	3
IA Restricted Elective	.....	3

<b>Fall semester (12 credits)</b>		
IA 455	FW Prereq: IA 473.....	3
IA 495	F Prereq: IA 329, 244 & 322.....	3
<sup>1</sup> IA 387L4	FW Prereq: IA 329 & 244.....	3
IA Restricted Electives	.....	3

Sample Sequences for completing the program:

<sup>1</sup> Satisfies EMU's Learning Beyond the Classroom requirement

NOTE: A minimum of 124 credits is required to graduate. If insufficient credits are transferred, students must take additional credits at EMU to satisfy the 124 credit minimum.

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**Additional Information:**

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both OCC and EMU agree to accept transferable courses from each other and from other regionally accredited colleges. OCC courses indicated with an \* are required for EMU's Information Assurance & Cyber Defense major. Substitutions for these courses must be approved by the EMU program coordinator.
2. Students with the 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. The Perspectives on a Diverse World requirement may be transferred to EMU.  
*To use the Michigan Transfer Agreement (MTA), students must have an official community college transcript, with the "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 applied to transfer students. The MTA may be completed after admission to EMU, however, students should inform their advisors or they may be advised to complete additional courses for the general education program. Students who enrolled in college prior to September 2014 will have until the end of August 2019 to complete the MACRAO agreement. If already on the transcript, the MACRAO designation will be accepted at EMU after August 2019.*
3. A grade of "C" or better (2.0 on a 4.0 scale) is required for courses to transfer to either institution.
4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 45 credit hours must be completed at the four-year college level, with at least 30 credit hours at 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, in EMU courses or accepted in transfer, is required for graduation.
5. Students must satisfy all admission requirements at the time of admission to EMU
  - a. Completion of IA 103 and IA 110 (CIS 1600 and CIS 1300 at OCC) with a grade of "B-" or higher
  - b. Submit transcripts of all colleges attended to [cot-isac@atari.emich.edu](mailto:cot-isac@atari.emich.edu) by October 1, February 1, or July 1
  - c. Attend a mandatory meeting with an IA/CD faculty member or designated COT advisor. Student will be contacted to schedule an appointment after receipt of application. Students may enroll in two IA 300-level courses in the semester they apply to the program.
  - d. Students must maintain a minimum GPA of 2.5
6. Students are encouraged to meet with the EMU Information Assurance advisor before completing an admission application to EMU. To facilitate advising and the evaluation of transcripts, sign up for this articulation agreement using the link [www.emich.edu/ccr/trackingssystem/Enter.php](http://www.emich.edu/ccr/trackingssystem/Enter.php), and bring a copy of this guide to all advising sessions.

**Effective Dates: September 1, 2017 until August 31, 2020.**

This is a renewal of an agreement made in September 2009 and extended in September 2012. Students who began this program prior to the new effective date have the option of changing to this guide or may follow the guide they started under for up to seven years. If the agreement is not renewed at the end of the effective period, students who already began the program at OCC will have three additional years to be admitted to EMU under the terms of the agreement.

**Contacts:**

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