Articulation Agreement

Resource & Transfer Guide for
Henry Ford College

Associate of Applied Science in Computer Information Systems – Cybersecurity or
Associate of Applied Science in Computer Information Systems – Network Administration

with

Eastern Michigan University

Bachelor of Science in Information Assurance and Cyber Defense

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HFC Programs **School of Business, Entrepreneurship and Professional Development**	https://catalog.hfcc.edu/programs/computer-information-systems-cybersecurity-aas https://catalog.hfcc.edu/programs/computer-information-systems-network-administration-aas
HFC Resources For Assistance with HFC Program information, contact:	**Marrci Conner, Cyber Security Program Director** Email: mrconner2@hfcc.edu **Brent Fulton, Computer Network Administration** Email: brent@hfcc.edu

Eastern Michigan Resources Sign up with EMU for this articulation agreement: https://www.emich.edu/ccr/articulation-agreements/signup.php	**Technology Management Program Coordinator** Email: cot_tm@emich.edu **College of Engineering and Technology Student Services** Phone: 734.487.8659 Email: cot_advising@emich.edu

The Articulation Agreement Transfer Guides are on the following

pages Effective Dates: September 1, 2020 to August 31, 2023

INFORMATION ASSURANCE AND CYBER DEFENSE
ARTICULATION AGREEMENT GUIDE

Henry Ford College – **AAS in Computer Information Systems - Cybersecurity**
Eastern Michigan University – **BS in Information Assurance and Cyber Defense**

Henry Ford College Courses:	**Eastern Michigan University Courses:**

Michigan Transfer Agreement (MTA) Requirements (30 credits)

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. <u>Courses listed below for the MTA also satisfy program requirements at EMU and/or HFC.</u> For HFC approved MTA courses go to <u>HFC's website</u>. Students without an MTA or MACRAO endorsement must complete EMU's general education program.

1. A course in English Composition
ENG 131 Introduction to College Writing ....3 WRTG 120 General Transfer Credit 3
2. A second course in English Composition or Communication
ENG 132 College Writing and Research............................3 WRTG 121 Composition II 3
3. A course in Mathematics
 * MATH 141 Introduction to Statistics ....4 STAT 170 Elementary Statistics (3)+1...............................4
4. Two courses in Natural Sciences from different disciplines (one lab required)
Choose from the approved MTA list....................................7-8 General Transfer Credit.......................................7-8
5. Two courses in Humanities from different disciplines
Choose from the approved MTA list..................................6 General Transfer Credit...6
6. Two courses in Social Sciences from different disciplines
CRJ 131 Intro to Law Enfmt & Crim Justice ....3 CRM 300 General Transfer Credit 3
Choose one from the approved MTA list................................3 General Transfer Credit..3

If needed, complete additional credits in any of the above categories to meet the 30 credit minimum for the MTA.

EMU's Perspectives on a Diverse World requirement: <u>Complete one course</u> from the following list:
These courses also satisfy an MTA area: <u>Natural Science</u>: BIO 138 (non-lab); <u>Humanities</u>: ART 224, 225, 226, 227; ENG 243, 248 <u>Social Science</u>:
 ANTH 131, 151, 152, 154; EDU 296; GEOG 132; HIST 113, 243, 252, 261; POLS 152; PSY 296; SOC 152, 251.
 This course applies, but does <u>not</u> satisfy the MTA: BBA 250; LGL 248; PHIL 201; PLGL 248; WR 233, 236, 241

HFC CIS Cybersecurity Program Requirements (50-51 credits)

CIS 100 Introduction to Information Technology...................3	IS 215 General Transfer Credit 3
CIS 111 SQL for Database Development 3	IS 000 General Transfer Credit 3
*CIS 124 Introduction to Windows Server Administration 3	IA 244 Systems Administration 3
*CIS 125 Principles of Programming Logic 4	IT 145 Task Automation for IT Admins (3)+1 4
*CIS 129 Introduction to UNIX with Shell Scripting 4	IA 212 Open Systems Platform & Network Admin (3)+1......4
CIS 158 A+ Operating Systems 4	IA 215 General Transfer Credit...4
¹*CIS 229 UNIX System Administration..................................4	IA 412 sub for Restricted Elective 4
*CIS 276 Digital Forensics..3	IA 000 sub for Restricted Elective 3
*CIS 280 Information Assurance and Security 4	IA 103 Information Security Overview (3)+1......................4
*CIS 296 Information Assurance Methodology.......................3	ISAC 000 sub for Restricted Elective 3
*CNT 110 CCNA: Networking I..4	IT 110 Concepts of Network and Business Technology 4
* CNT 120 CCNA: Networking II..4	IT 150 Networking I (3)+1...4
*CNT 260 Network Security..4	IA 202 Risk-Vulnerability Analysis (3)+1 4
Choose one from: AUTO 237 or ENGR 130........................2-3	ELEC 000 or ET/ME 100..2-3
³Choose one from (optional) CIS 190 or 290 1	AACR GEN General Transfer Credit 1

EMU Requirements and Electives that May be Taken at HFC or EMU (8 credits)

²CNT 210 CCNA: Networking III (4) and
²CNT 220 CCNA: Networking IV (4).......................................8 IT 254 sub for Restricted Elective (3 credits) (3)+5 8

Credits at HFC:..88-89	**Credits that transfer to EMU...................... 76**

* Required for EMU's BS in Information Assurance and Cyber Defense program. If not transferred, must be completed at EMU.
¹Credit applied toward the 124 credits required for graduation at EMU, but not toward the required 45 credits at the 300/400 level.
² Students may choose to complete an additional 3 credit Restricted Elective course at EMU on page 2 of this guide in place of CNT 210 and 220.
³Choose one from CIS 190, CIS 290 or a minimum of 1 credit of a 100 level or higher course if needed to meet 62 credits for degree completion.

*<u>**Sign up with us:**</u> **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.**

INFORMATION ASSURANCE AND CYBER DEFENSE
ARTICULATION AGREEMENT GUIDE

Henry Ford College – **AAS in Computer Information Systems - Cybersecurity**
Eastern Michigan University – **BS in Information Assurance and Cyber Defense**

<u>Completion of the BS in Information Assurance & Cyber Defense</u>

IA 103 and IT 110 (CIS 280 and CNT 110) must be completed with a grade of "B-" or higher for admission to the IACD major and to enroll in IA 300-level courses. **All students must take at least 45 credits at the 300 level or above in the IACD program.**

Major Requirements   (48 credits)

Information Assurance Required Courses (42 credits).
LEGL 320   Cyber Law and Compliance 3
IA 322   Managing Security Projects................................3
[1] IA 329W   Policy Development in Info Assurance (GEWI) ...3
IA 385   Database Management & Security......................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 (was IA 430).......3
IA 495   Capstone 3
ISAC 240 Intro to Cryptoanalysis & Generic Attacks...........3
ISAC 350 Network Security 3
ISAC 375 Software Assurance 3

IA Restricted Electives (6 hours)
A maximum of 9 hours can be taken with an IA prefix.
IA 240   Intelligence Analysis I (3)
[2] IA 387L4 Co-operative Education (GELB) (3)
IA 425   Cyber Crime Investigation I (3)
IA 428   Digital Forensics II (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)
ISAC 317 IoT and Embedded Systems Security (3)
ISAC 417 Modern Vehicle Technology & Cyber Security (3)
Any IA, CIS, or COSC 300-level or higher (3)

[1] *Satisfies EMU's Writing Intensive requirement.*
[2] *Satisfies Learning Beyond the Classroom requirement.*

LBC Requirement
Students must complete one Learning Beyond the Classroom course or noncredit experience offered by EMU. Consult your advisor for options.

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

Total Credits at EMU 48
Transfer Credits 76
Credits to Graduate.. 124

INFORMATION ASSURANCE AND CYBER DEFENSE
ARTICULATION AGREEMENT GUIDE Henry

Ford College – **Computer Information Systems – Cybersecurity**
Eastern Michigan University – **BS in Information Assurance and Cyber Defense**

Additional Information:

1. Each institution will determine the satisfaction of their individual program and degree requirements. Both institutions agree to accept transferrable courses from each other and from other regionally accredited institutions. HFC courses indicated with an * are required for EMU's BS in Information Assurance and Cyber Defense. 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. If already on the transcript, the MACRAO designation will be accepted at EMU after August 2019.

3. Only courses with a grade of "C" or better (2.0 on a 4.0 scale) will be accepted for transfer to either institution.

4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 48 credit hours must be completed in EMU courses, with at least 45 at the 300-level or above. Of the last 30 hours completed before graduating, a minimum of 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. Students must satisfy all admission requirements at the time of application for admission to EMU:
   - Completion of IA 103 and IT 110 with a grade of "B-" or above
   - Inform advisor of the decision to join the IACD program in person or by email
   - Students will be notified by letter and/or through email after a decision has been made.

6. Students are encouraged to contact EMU's BS in Information Assurance and Cyber Defense program coordinator before applying to EMU. To facilitate advising and the evaluation of transcripts, sign up for this articulation agreement and bring a copy of this articulation guide to all advising sessions.

Effective Date: September 1, 2020 until August 31, 2023.
This agreement is consistent with the 2019-2020 catalog. Students have until summer 2027 to graduate from Eastern Michigan University following this agreement. In the event that a student does not complete the program within seven years, they may be required to have their credits reevaluated using the requirements of the current articulation guide.

Contacts:

Henry Ford College	**Eastern Michigan University**
Marrci Conner	College of Engineering & Technology Student Services
Cybersecurity Program Director	734.487.8659
mrconner2@hfcc.edu	cot_advising@emich.edu

INFORMATION ASSURANCE AND CYBER DEFENSE
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Henry Ford College – **AAS in Computer Information Systems – Network Administration**
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Henry Ford College Courses:	Eastern Michigan University Courses:

Michigan Transfer Agreement (MTA) Requirements (30 credits)

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. Courses listed below for the MTA also satisfy program requirements at EMU and/or HFC. For HFC approved MTA courses go to HFC's website. Students without an MTA or MACRAO endorsement must complete EMU's general education program.

1. A course in English Composition
ENG 131 Introduction to College Writing .... 3 — WRTG 120 General Transfer Credit 3

2. A second course in English Composition or Communication
Choose one from the approved MTA list.................... 3 — General Transfer Credit... 3

3. A course in Mathematics
* MATH 141 Introduction to Statistics .... 4 — STAT 170 Elementary Statistics (3)+1 4

4. Two courses in Natural Sciences from different disciplines (one lab required)
Choose from the approved MTA list..................................7-8 — General Transfer Credit.......................................7-8

5. Two courses in Humanities from different disciplines
Choose from the approved MTA list.......................... 6 — General Transfer Credit... 6

6. Two courses in Social Sciences from different disciplines
Choose two from the approved MTA list.................... 6 — General Transfer Credit... 6

If needed, complete additional credits in any of the above categories to meet the 30 credit minimum for the MTA.

EMU's Perspectives on a Diverse World requirement: Complete one course from the following list:
These courses also satisfy an MTA area: Natural Science: BIO 138 (non-lab); Humanities: ART 224, 225, 226, 227; ENG 243, 248
Social Science: ANTH 131, 151, 152, 154; EDU 296; GEOG 132; HIST 113, 243, 252, 261; POLS 152; PSY 296; SOC 152, 251.
This course applies, but does not satisfy the MTA: BBA 250; LGL 248; PHIL 201; PLGL 248; WR 233, 236, 241

HFC CIS Network Administration Program Requirements (48 credits)

CIS 100	Introduction to Information Technology.................. 3	IS 215	General Transfer Credit 3
*CIS 124	Introduction to Windows Server Administration 3	IA 244	Systems Administration 3
*CIS 125	Principles of Programming Logic 4	sub for COSC 146	Applied Programming & Scripting (3)+1.. 4
*CIS 129	Introduction to UNIX with Shell Scripting 4	IA 212	Open Systems Platform & Network Admin (3)+1...... 4
1* CIS 229	UNIX System Administration.............................. 4	IA 412	sub for Restricted Elective 4
CIS 242	Voice Over IP (VoIP)... 2	ISAC 000	General Transfer Credit 2
CIS 244	Storage and Virtualization.................................. 3	ISAC 000	General Transfer Credit 3
* CIS 295	Network Design and Implementation 3	ISAC 000	sub for Restricted Elective 3
*CIS 296	Information Assurance Methodology...................... 3	ISAC 000	sub for Restricted Elective 3
*CNT 110	CCNA: Networking I.. 4	IT 110	Concepts of Network and Business Technology.... 4
* CNT 120	CCNA: Networking II... 4	IT 150	Networking I (3)+1 4
*CIS 280	Information Assurance and Security 4	IA 103	Information Security Overview (3)+1...................... 4

Complete 7 credit hours-Networking, Special Topics, Job Experience:

*CNT 260 Network Security 4	IA 202	Risk-Vulnerability Analysis (3)+1 4
Choose 3 credits from the approved catalog listing 3	General Transfer Credit.. 3

Credits at HFC:...**78**	**Credits that transfer to EMU**...................... **76**

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

¹Credit applied toward the 124 credits required for graduation at EMU, but not toward the required 45 credits at the 300/400 level.
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Completion of the BS in Information Assurance & Cyber Defense

IA 103 and IT 110 (CIS 280 and CNT 110) must be completed with a grade of "B-" or higher for admission to the IACD major and to enroll in IA 300-level courses. **All students must take at least 45 credits at the 300 level or above in the IACD program.**

Major Requirements   (48 credits)

Information Assurance Required Courses (36 credits).

LEGL 320	Cyber Law and Compliance	3
COSC 274	Introduction to Applied Cryptography	3
IA 322	Managing Security Projects	3
[1] IA 329W	Policy Development in Info Assurance (GEWI)	3
IA 385	Database Management & Security	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 (12 hours)

A maximum of 9 hours can be taken with an IA prefix. **All courses should be taken at the 300/400 level to meet the 45 credits at the 300 level or above requirement.**

[2] IA 387L4 Co-operative Education (GELB) (3)
IA 425 Cyber Crime Investigation I (3)
IA 428 Digital Forensics II (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)
ISAC 317 IoT and Embedded Systems Security (3)
ISAC 417 Modern Vehicle Technology & Cyber Security (3)
Any IA, CIS, or COSC 300-level or higher (3)

LBC Requirement

Students must complete one Learning Beyond the Classroom course or noncredit experience offered by EMU. Consult your advisor for options.

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

Total Credits at EMU	48
Transfer Credits	76
Credits to Graduate	124

[1] *Satisfies EMU's Writing Intensive requirement.*
[2] *Satisfies Learning Beyond the Classroom requirement*

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