Students who begin college in September 2014 or later cannot use the MACRAO agreement. The MTA agreement will take its place to satisfy EMU’s General Education Core requirements. New MTA guides will be posted to the CCR website soon. In the meantime, please see a community college advisor for more information about the MTA.

### ARTICULATION GUIDE

**Henry Ford Community College – AAS in CIS – Information Assurance – Transfer Track**

**Eastern Michigan University – BS in Information Assurance – All Concentrations**

**January 2013**

### HFCC CIS - Information Assurance Requirements

<table>
<thead>
<tr>
<th>Required Core Courses</th>
<th>Transfer to Eastern Michigan University as:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(21 credits)</td>
<td>(32 credits)</td>
</tr>
<tr>
<td>CIS 100</td>
<td>University Elective (IS 215)</td>
</tr>
<tr>
<td>*CIS 112</td>
<td>IA 210 Concepts of Network &amp; Business Technology</td>
</tr>
<tr>
<td>*CIS 158</td>
<td>IA 215 Systems Support &amp; Trouble Shooting (3)+1</td>
</tr>
<tr>
<td>*CIS 280</td>
<td>IA 103 Information Security Overview</td>
</tr>
<tr>
<td>*CNT 260</td>
<td>IA 202 Risk-Vulnerability Analysis (3)+1</td>
</tr>
<tr>
<td>*CIS 296</td>
<td>IA 415 Research Techniques (IAM, AIA, or IAE Conc)</td>
</tr>
<tr>
<td>4CIS 124, CIS 272, CRJ 234 and CRJ 235 are waived under this agreement.</td>
<td></td>
</tr>
</tbody>
</table>

### Required Support Electives

<table>
<thead>
<tr>
<th>18 credits</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*CIS 129 Intro to UNIX w/Shell Scripting</td>
<td>IA 212 Open Systems Platform &amp; Network Admin (3)+1</td>
</tr>
<tr>
<td>*CIS 125 Princ of Programming Logic</td>
<td>subs for COSC 146 Applied Programming</td>
</tr>
<tr>
<td>*CIS 130 Visual Basic.NET Programming (3)</td>
<td></td>
</tr>
<tr>
<td>*CIS 162 Perl Prog (4) and</td>
<td></td>
</tr>
<tr>
<td>*CIS 170 “C” Programming (3)</td>
<td></td>
</tr>
</tbody>
</table>

### Credits at HFCC: 71

### Credits that transfer to EMU: 71

* Required for EMU’s Information Assurance program (all concentrations).
* 1 Complete MATH 141 at HFCC to satisfy EMU’s quantitative reasoning requirement.
* 2 Satisfies the Perspectives on a Diverse World Requirement
* 3 Applies to the IAM, AIA, and IAE concentrations
* 4 Contact Marcri Conner, HFCC Program Coordinator for course waivers.

**NOTE:** Students who have completed the CCNA Computer Networking Academy may use this agreement to transfer into the Information Assurance Network Security Administration Concentration at EMU. **In addition to the CCNA Computer Networking Academy (CNT 110, 120, 210, and 220 which are equivalent to IA 350 and 354) students may also transfer CIS 112, CIS 129, CIS 125, CIS 130, CIS 158, CIS 162, CIS 170, CIS 280, and CNT 260.** See the Information Assurance Program Advisor for more information.

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

All students will take a placement examination prior to enrolling in IA 300-level courses. This exam is offered on-line.

#### Major Requirements (54-57 credits)

**Foundation Courses:** (15 credits)
- **IA 213** Privacy and Technology ................................................ 3
- **IA 240** Intelligence Analysis I ..................................................... 3
- **IA 329** Policy Development in Info Assurance ............................. 3
- **LEGL 320** Cyber Law and Compliance ....................................... 3
- **STS 300W** Research & Writing: Tech Perspective ......................... 3

**Concentration Requirements:**
Complete one of the following concentrations:

**Information Assurance Management: (IAM)** (39 credits)
- **IA 343** Intelligence Analysis II ..................................................... 3
- **IA 344** Admin of Computer Systems ............................................. 3
- **IA 400** Malware Analysis & Reverse Engineering ............................ 3
- **IA 422** Networks: Planning & Design ............................................. 3
- **IA 425** Cyber Crime Investigation I ............................................... 3
- **IA 427** Digital Forensics I ............................................................ 3
- **IA 430** Network Forensics ............................................................ 3
- **IA 445** Ethical Hacking and Offensive Security ............................. 3
- **IA 480** SQL Database Security .................................................... 3
- **MGMT 386** Organizational Behavior and Theory ......................... 3
- **MGMT 403** Managerial Communication: Theory & Appl .................. 3
- **MGMT 480W** Management Responsibility and Ethics .................... 3
1. Choose one: .................................................................................. 3
   - **IA 387** Cooperative Education (3)
   - **IA 416** Applied Research Project (3)

**Total Credits at University Level ................................................. 54

**Applied Information Assurance: (AIA)** (39 credits)
- **COSC 343** Intelligence Analysis II ................................................. 3
- **IA 344** Admin of Computer Systems ............................................. 3
- **IA 400** Malware Analysis & Reverse Engineering ............................ 3
- **IA 412** Linux Security Administration ........................................... 3
- **IA 425** Cyber Crime Investigation I ............................................... 3
- **IA 427** Digital Forensics I ............................................................ 3
- **IA 428** Digital Forensics II ........................................................... 3
- **IA 430** Network Forensics ............................................................ 3
- **IA 445** Ethical Hacking and Offensive Security ............................. 3
- **IA 455** Incident Response ............................................................ 3
- **IA 480** SQL Database Security .................................................... 3
1. Choose one: .................................................................................. 3
   - **IA 387** Cooperative Education (3)
   - **IA 416** Applied Research Project (3)

**Total Credits at University Level ................................................. 54

**Information Assurance Encryption (IAE)** (39 credits)
- **COSC 314** Computational Discrete Structures ................................ 3
- **COSC 374** Applied Cryptography .................................................. 3
- **IA 400** Malware Analysis & Reverse Engineering ............................ 3
- **IA 427** Digital Forensics I ............................................................ 3
- **IA 430** Network Forensics ............................................................ 3
- **IA 480** SQL Database Security .................................................... 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** Cryptology ............................................................... 3
1. Choose one: .................................................................................. 3
   - **IA 387** Cooperative Education (3)
   - **IA 416** Applied Research Project (3)

**Total Credits at University Level ................................................. 54

**IA Network Security/Administration (IANS)** (42 credits)
- **IA 344** Admin of Computer Systems ............................................. 3
- **IA 350** Network Connectivity ..................................................... 3
- **IA 354** Multi Level Networking .................................................... 3
- **IA 364** Adv Windows Security ..................................................... 3
- **IA 400** Malware Analysis & Reverse Engineering ............................ 3
- **IA 412** Linux Security Administration ........................................... 3
- **IA 422** Networks: Planning & Design ............................................. 3
- **IA 427** Digital Forensics I ............................................................ 3
- **IA 430** Network Forensics ............................................................ 3
- **IA 445** Ethical Hacking & Offensive Security ............................. 3
- **IA 455** Incident Response ............................................................ 3
- **IA 480** SQL Database Security .................................................... 3
- **IA 495** Networks: Implementation & Evaluation .......................... 3
1. Choose one: .................................................................................. 3
   - **IA 387** Cooperative Education (3)
   - **IA 416** Applied Research Project (3)

**Total Credits at University Level ................................................. 54

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

A minimum of 124 credits is required to graduate. If fewer than 70 credits are transferred, students must take additional credits at EMU to make up the difference.

1. Meets EMU’s Learning beyond the Classroom requirement
2. A minimum of 124 credits is required to graduate. If fewer than 70 credits are transferred, students must take additional credits at EMU to make up the difference.
Additional Information:

1. In completing the coordinated program of study for this articulation agreement, course substitutions should be made with the guidance of the advisors (indicated below) at both institutions to assure that all requirements are satisfied. Each institution will determine the satisfaction of their individual program and degree requirements. HFCC courses indicated with an * are required for EMU’s Information Assurance Program.

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 the 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: [at HFCC: (MATH 141 required for IA program), or [at EMU: (MATH 170 required for IA program)]
   b) An approved course in US Diversity or Global Awareness: [at HFCC: Humanities: ART 224; ENG 243, 248; WR 131, 233, Social Science: ANTH 131, 151, 152, 154; GEOG 132; HIST 112, 113, 225, 255, 257; POLS 152; SOC 152, 251; Other Courses: BBA 250, or BIO 138] or [at EMU: refer to the catalog on the website: http://www.emich.edu/gened/students/approved.php]
   c) One “Learning beyond the Classroom” course or experience offered by EMU: [IA 387, or MGMT or STS internship, or other LBC experience at EMU. See advisor for options.]

   To use MACRAO, students must request that an official community college transcript, with the “MACRAO Satisfied” stamp, be sent to EMU’s Admissions Office. Students, who do not have “MACRAO Satisfied” on their community college transcript, will be required to satisfy EMU’s general education requirements as listed in the Undergraduate Catalog. The MACRAO stamp may be completed after admission to EMU, however, students should inform advisors at EMU that they intend to complete MACRAO, or they may be advised to complete additional courses for the general education program.

3. Only courses with a grade of 2.0 or better (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 54 credit hours must be completed at the four-year college level, of which 30 credit hours must be completed at EMU. 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. All students will take a placement examination prior to enrolling in IA 300-level courses at EMU.

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.php.

Effective Dates: January 1, 2013 until January 1, 2016. This is a renewal of an agreement made in September 2008. Students who began this program prior to the new effective date have the option of using this agreement or continuing to follow the agreement they were using. If this agreement is not renewed at the end of the effective period, students who already started the program will be given three additional years to be admitted to EMU under the terms of this agreement.

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