

EASTERN MICHIGAN UNIVERSITY

ARTICULATION GUIDE

April 2006

Henry Ford Community College –Associate in Applied Science in Electrical Technology
Eastern Michigan University – Bachelor of Science in Electronic Engineering Technology

Purpose:

Bring a copy of this articulation agreement to all advising sessions.

This three plus one articulation agreement is designed to provide a smooth curriculum transition for students who want to complete the Electrical Technology Program at Henry Ford Community College and transfer to EMU to earn a Bachelor of Science in Electronic Engineering Technology. The agreement is designed to minimize loss of credits and duplication of coursework.

Requirements:

1. Complete the Electrical Technology Transfer program at Henry Ford Community College and the coordinated program of study for the Bachelor of Science in Electronic Engineering Technology at Eastern Michigan University. Any course substitutions should be made with the guidance of an advisor or counselor to assure that all requirements are met.
2. Students whose transcripts are endorsed as “MACRAO Satisfied” will only be required to meet EMU’s additional four general education requirements, noted with a “1” on the articulation guide and listed below:
 - a) A course in advanced written composition, advanced speech, or a foreign language [ENG 236 at HFCC]
 - b) A course in mathematical reasoning [MATH 180 at HFCC] or [MATH 120 at EMU]
 - c) A cross-cultural course [ENG 243 or 248 at HFCC] or [an approved cross-cultural course at EMU]
 - d) A course in computer literacy [CIS 170 at HFCC] or [COSC 246 at EMU]

To use MACRAO, students must request a MACRAO evaluation of their transcript from the HFCC Registration and Records Office. Students who do not satisfy MACRAO will have to complete all of EMU’s general education requirements.

3. Only courses with a grade of 2.0 or better on a 4.0 scale will be accepted for transfer to EMU. A Course completed with a grade less than 2.0, which is counted toward graduation at the community college, may be used to satisfy MACRAO. However, the course will not transfer and will have to be repeated if it is a requirement of the Engineering Technology Program.
4. Under this agreement, EMU will waive the 60-hour rule and require that a minimum of 30 credit hours must be taken at EMU, 21 hours of which must be in the major with 15 hours at the 300/400 level. 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. HFCC students will receive equal consideration with other students seeking admission and financial aid.
6. Students should contact the EMU Electronic Engineering Technology Program Advisor, listed below, before completing an admission application to EMU. To facilitate the evaluation of transcript(s), students should include a copy of this articulation guide with their application to EMU and bring a copy of this guide to all advising sessions.

Effective Dates: April 1, 2006 until April 1, 2009. In the fall semester of 2007 this agreement will be updated to be consistent with EMU’s new general education requirements that go into effect at that time. HFCC students who began this articulated program prior to fall 2007 may continue to follow the requirements in place at the time they started. Students who begin at HFCC during or after the fall semester of 2007 will have to satisfy the new general education requirements. 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.

Contacts:

Henry Ford Community College
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ARTICULATION GUIDE**

April 2006

HFCC-Electrical Technology /EMU-Electronic Engineering Technology

Henry Ford Community College Courses:

Transfer to EMU as:

| MACRAO Requirements | (34 credits) | (34 credits) |
|---|---------------------|---|
| 1. English Writing Requirement (6 credits) | | |
| ENG 131 Composition I | 3 | ENGL 120 English Comp I (university elective) |
| ENG 132 Composition II | 3 | ENGL 121 English Composition II..... |
| 2. Math/Science Requirement (10credits) | | |
| * ¹ MATH 180 Calculus I | 5 | MATH 120 Calculus I (4) +1 |
| PHYS 231 Engineering Physics..... | 5 | PHY 223 Mechanics, Sound, and Heat..... |
| 3. Social Science Requirement (9 credits) | | |
| BEC 151 Principles of Macro Economics | 3 | ECON 201 Principles of Macroeconomics..... |
| Choose two courses: | 6 | Two courses: |
| BEC 152 Principles of Microeconomics (3) | | ECON 202 Principles of Microeconomics (3) |
| POLS 131 Intro to American Government (3) | | PLSC 112 American Government (3) |
| PSY 131 Introductory Psychology (3) | | PSY 101 General Psychology (3) |
| 4. Humanities Requirement (9 credits) | | |
| ¹ ENG 236 American Autobiography | 3 | ENGL 225 Writing/Chng World (sub for ENGL 324) .. |
| ¹ Choose one course:..... | 3 | One course that meets the cross cultural reqmt. |
| ENG 243 Women's Lives in Literature (3) | | LITR BASX Cross Cultural Credit |
| ENG 248 African American Literature (3) | | LITR 260 African American Literature |
| Choose one MACRAO humanities course:..... | 3 | One course: |
| See the list of HFCC courses that satisfy the | | Courses may transfer as equivalent courses, general |
| MACRAO Humanities requirement on page 3. | | education transfer courses, or general transfer credit. |
| Electronics Courses (46-47 credits) | | |
| ELEC 115 Digital Circuits I (or ELEC 175) | 3 | ELEC 214 Digital Circuit Analysis I..... |
| ELEC 155 Analog Electronics (or ELEC 230) | 3 | ELEC 300 Analog Circuit Analysis I..... |
| ELEC 195 AC/DC Circuit Analysis (or ELEC 180) | 3 | ELEC 200 Circuit Analysis I..... |
| ELEC 200 Ladder Diag & Motor Cntrls (or ELEC 210) | 3 | ELEC 218 Motors and Controls..... |
| ELEC 215 Digital Circuits II (or ELEC 240) | 3 | ELEC 314 Digital Circuit Analysis II..... |
| ELEC 245 Program Logic Controllers (or ELEC 260) .. | 3 | CET 427 Programmable Logic Controllers..... |
| ELEC 295 Microprocessor Systems (or ELEC 285)..... | 3 | ELEC 320 Microcomputer Circuits..... |
| DRAF 110 Intro to Industrial Drafting (or EG 31) | 3 | CADM 122 Engineering Graphics I..... |
| ELEC 103 Basic Electricity | 4 | General Transfer Credit |
| ELEC 106 Basic Electronics..... | 3 | General Transfer Credit |
| ELEC 145 AC/DC Rotating Machines | 3 | General Transfer Credit..... |
| ELEC 205 Analog Electronics II | 3 | General Transfer Credit..... |
| ELEC 260 Automation Controls & Robotics | 3 | General Transfer Credit..... |
| ELEC 255 Intrumentation Systems (or ELEC 230) | 3 | General Transfer Credit..... |
| Choose one course:..... | 3-4 | General Transfer Credit..... |
| ELEC 120 Basic Hydraulics or (ELEC 170) (3) | | Students who complete ELEC 255 or ELEC 230 |
| ELEC 185 Pneumatics (3) | | and one course from (ELEC 120, 170, 185, or |
| MPS 140 Introduction to CNC (4) | | MPS 140) with a "C" or better will receive waivers |
| | | for ET 100 and MET 312. See program Coordinator. |
| Courses May be Taken at HFCC or EMU (a maximum of 23 credits may be taken at HFCC) | | |
| A minimum of 3 credits from courses below must be completed at EMU | | |
| CHEM 141 Principles of General Inorganic Chem..... | 5 | CHEM 121/122 General Chemistry w/lab (4) +1 |
| ¹ CIS 170 "C" Programming..... | 3 | COSC 246 Programming in C++ |
| HPE 140 Lifetime Wellness | 2 | PEGN 210 Lifetime Wellness & Fitness |
| MATH 183 Calculus II..... | 5 | MATH 121 Calculus II (4) +1 |
| MATH 283 Linear Algebra | 3 | MATH 122 Elementary Linear Algebra..... |
| PHYS 232 Engineering Physics Continued | 5 | PHY 224 Electricity and Light |
| MET 150 SPC in Manufacturing | 3 | QUAL 320 Industrial Quality Control..... |
| ² Credits at HFCC: | 103 | Credits that transfer to EMU for the degree..... |
| | | 94 |

* Students must pass a placement test or complete prerequisite math courses before taking MATH 180.

¹ Meets one of EMU's four requirements in addition to MACRAO. See page one, #2 for more information.

² All 103 credits may transfer to EMU but only 94 credits are needed to reach the 124 credits required for graduation.

Note: For the AAS degree, students must pass the computer literacy test or complete an approved course in computer literacy.

Community College Relations

E-mail: pcygnar@emich.edu

Copies of this guide are also available on-line at: <http://www.emich.edu/ccr/artguide.htm>

October 18, 2006

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| <p><u>Completion of the Electronic Engineering Technology Program at EMU</u></p> <p>Required Credits (3 credits) A minimum of 3 credits from courses listed on the previous page under “Courses that can be taken at HFCC or EMU” must be completed at EMU. A minimum of 30 credits must be completed at EMU and a minimum of 124 total credits is required to graduate.</p> <p>Major Requirements (27 Credits) ELEC 210 Circuit Analysis II..... 3 ELEC 215 Computer-Aided Electronics 3 ELEC 310 Analog Circuit Analysis II 3 ELEC 387 Co-op in Electronic Technology 3 ELEC 415 Communication Circuits 3 ELEC 420 Advanced Microprocessors..... 3 ELEC 450 Senior Design Project 3 ELEC 479 (subst for CADM 426)..... 3 ELEC 479 (subst for COSC 238)..... 3</p> <p>Minimum Credits at EMU:30 ²Minimum Credits to Graduate: 124-133</p> | <p>Suggested Sequence for completing the program:</p> <p>Fall Semester (12 Credits) ENGL 324 Principles of Technical Communication..... 3 ELEC 210 Circuit Analysis II 3 ELEC 387 Co-op in Electronic Technology 3 ELEC 479 Special Topics..... 3</p> <p>Winter Semester (12 Credits) ELEC 215 Computer-Aided Electronics 3 ELEC 310 Analog Circuit Analysis II 3 ELEC 420 Advanced Microprocessors 3 ELEC 479 Special Topics..... 3</p> <p>Fall Semester (6 Credits) ELEC 415 Communication Circuits..... 3 ELEC 450 Senior Design Project 3</p> |
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¹Meets one of EMU's four requirements in addition to MACRAO. See page one, #2 for more information.

²A minimum of 124 credits is required to graduate.

Courses that satisfy the MACRAO Humanities Requirement at HFCC:

- ART 120, 121, 122, 123, 124;
- ENG 121, 139, 231, 232, 233, 234, 235, 236, 237, 239, 241, 243, 245, 246, 248;
- MUS 130, 132, 133, 134, 138, 139, 147;
- PHIL 131,133, 135, 137, 139;
- SPC 131, 145, 232;
- STH 131, 238;
- TCM 131, 132, 261, 263;
- WR 130, 131;
- FRE/GER/SPN 131, 132, 231, 232;
- HON 151, 231, 232, 233, 234, 251