Muskegon Community College Curriculum Guide

Curriculum: ENGINEERING – B.S.E. – GRAND VALLEY STATE UNIVERSITY

The following courses will fulfill requirements for the Associate in Science and Arts Degree. It is designed for students who plan to transfer to G.V.S.U. and major in Engineering after completing the A.S.A. degree at M.C.C.

**REQUIRED FOUNDATIONAL SKILLS** – You must demonstrate a minimum level of achievement, either by successful testing or satisfactory course completion (a grade of “C” or better) in four areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Writing</td>
<td>English 085, 089, 091 or 114</td>
</tr>
<tr>
<td>2. Reading</td>
<td>Reading 040A or 040C</td>
</tr>
<tr>
<td>3. Math</td>
<td>Mathematics 050 or 107 (or complete higher level course)</td>
</tr>
<tr>
<td>4. Computers</td>
<td>CIS 100 or any other CIS course (Consult a counselor regarding transferability. CIS 110 or 120A are strongly recommended.)</td>
</tr>
</tbody>
</table>

English, Reading and Mathematics Placement Tests may be required and are available in Testing Services, located in Room 134 – 777-0394. English and Reading placement tests may be waived if you show documentation of a proficiency level 1 or 2 on the high school MEAP or MME writing and reading tests or if you have an ACT composite score of 22 or greater. The Mathematics placement test may be waived if you show documentation of a score of 28 or above on the ACT Math test.

**GENERAL EDUCATION**

**COMMUNICATION**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 101 and 102 English Composition</td>
<td>6</td>
</tr>
</tbody>
</table>

**SCIENCE/MATH**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 101 Lec &amp; 101A General &amp; Inorganic, Lec &amp; Lab</td>
<td>5</td>
</tr>
<tr>
<td>Mathematics 161 Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

Chemistry Placement Test is required prior to taking Chemistry 101 Lec & 101A.

**THE HUMAN EXPERIENCE**

**AESTHETIC VALUES**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 104, 105B (was 105), 107, 108, 109, 204B (was 204), 205, 207, 208, 209, 211</td>
<td>3</td>
</tr>
<tr>
<td>Dance 100, 101, 102, 106, 200, 201, 206, 213, 218</td>
<td></td>
</tr>
<tr>
<td>English 208 (or Communications 203), 223</td>
<td></td>
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<tr>
<td>Music – any 100 level or above course</td>
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</tr>
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**ETHICS AND LOGIC**

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Philosophy 202 Introduction to Ethics (recommended)</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 205 Business Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 204 Biomedical Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 207 Environmental Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

**SOCIAL RELATIONSHIPS**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 101 or 102 Principles of Economics (other option available at G.V.S.U.)</td>
<td>4</td>
</tr>
</tbody>
</table>
**HUMAN CULTURES**

**WESTERN WORLD**
- Art 198, 199, 202
- English 200, 201, 204, 205, 206, 210, 213, 225, 226
- History 101, *102, 204
- Humanities 195
- Music 103
- Political Science 203
- Theater 201

**AMERICAN**
- History 201, 202, 207, 211
- Political Science 111, 205

**INTERNATIONAL**
- If the credit hours from AMERICAN CULTURES and SOCIAL RELATIONSHIPS total less than 8 credits, the choices are:
  - Anthropology 103, 110
  - Geography 104 (was 102A, 102C), 105
  - History 195
  - Political Science 202, 211
- If the credit hours from AMERICAN CULTURES and SOCIAL RELATIONSHIPS total 8 credits or more, then **other** options are:
  - English 207, 211, 218
  - French 101, 102, 201, 202
  - German 101, 102, 201, 202
  - History *210
  - Philosophy 203, 210
  - Spanish 101, 102, 201, 202

**PHYSICAL EDUCATION**
- Choose one from PEA 101A, 103, 104A, 118, or 201 **and** one PEA or DNC credit hour of choice.

**CHOSE FROM THE FOLLOWING FOR A TOTAL OF 62 CREDITS**

**ADDITIONAL G.V.S.U. GENERAL EDUCATION REQUIREMENTS**
- Choose one course from the following if not taken to fulfill a general education requirement: 0-4
  - Anthropology 110; English 211; Foreign Language 202; Geography 105; Philosophy 210; Political Science 211
- Choose one course from the following if not taken to fulfill a general education requirement: 0-3
  - Anthropology 103; Sociology 102, 202

**MAJOR RELATED COURSES**
- Mathematics 162 Calculus II 3
- Mathematics 283 Calculus III 4
- Mathematics 295 Differential Equations with Linear Algebra 4
- Physics 203L&L Engineering Physics, Lec and Lab 4
- Physics 204L&L Engineering Physics, Lec and Lab (other option available at G.V.S.U.) 5

**REQUIRED COURSES (If time permits)**
- Biology 103 Lec & 103A Introductory Biology, Lec & Lab 4
  - or
- Biology 100 (10A,F,G,H) or (10A,E,F,G) Introductory Biology 4
  - or
- Biology 110 Environmental Science 4

(Biology 100 modules are no longer being offered.)

**TOTAL 62**
NOTES:

*G.V.S.U. awards the same equivalency credit for M.C.C.’s History 102 and 210. Students are advised not to take both courses at M.C.C. if they wish to transfer to G.V.S.U.

Transfer students are required to have a minimum transfer GPA of 2.5.

After the student receives the A.S.A. at M.C.C. and transfers, the Bachelor of Science in Engineering program at G.V.S.U. involves full-time participation for a minimum of the next nine continuous semesters (36+ months): six academic and at least three cooperative engineering semesters. This time period all depends on what coursework has been completed and what semester the student transfers. G.V.S.U.’s Engineering program is industry-oriented and lab based with integrated co-ops in the Junior and Senior years. After transfer from M.C.C. students complete additional freshman and sophomore engineering courses in Grand Rapids that are not available at M.C.C. The Engineering program is taught on the Grand Rapids campus. Students should contact the G.V.S.U. School of Engineering as soon as possible to determine the best semester in which to transfer as it may be a summer semester.

http://www.gvsu.edu/engineering
ph: 616-331-6750
fax: 616-331-6215

Students should check the M.C.C. catalog for course prerequisites.

It is recommended that Engineering majors become familiar with the Engineering section in the G.V.S.U. catalog; copies are available in Room 1106 in the Stevenson Center for Higher Education.

The information contained in this curriculum guide is accurate as of January 2011 and is subject to change by both institutions.