**Southwestern Community College Transfer Guide**

**Southwestern Community College / Iowa State University  
Department of Agriculture and Biosystems Engineering**

**Machine systems**

SWCC Catalog; ISU 2012-2013 Catalog

**Recommended Core Courses for Agricultural & Biosystems Engineering Students with an emphasis on Machine Systems:**

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| --- | --- | --- | --- |
| ***SWCC Courses*** | ***Title*** | ***Cr.*** | ***ISU Course*** |
|  |  |  |  |
| **Communications** |  |  |  |
| ENG 105 | Composition I | 3 | ENGL 150 |
| ENG 106 | Composition II | 3 | ENGL 250 |
| SPC 101 | Fundamentals of Oral Communication | 3 | SPCM 212 |
|  |  |  |  |
| **Mathematical, Physical, and Life Science** |  |  | Either Math 142 in combination with Math 160 at ISU or Math 165 |
| MAT 127 | College Algebra and Trigonometry | 5 | MATH 142 |
| MAT 210 | Calculus I | 4 | MATH 165 |
| PHY 162 | College Physics I (with lab) | 4 | PHYS 111 |
|  | *and* |  |  |
| PHY 172 | College Physics II (with lab) | 4 | PHYS 112 |
| MAT 156 | Statistics | 3 | STAT 104 |
| CHM 101 | Fundamentals of Chemistry | 3 | CHEM 163 |
| BIO 105 | Introductory Biology (with lab) | 4 | BIOL 101 |
|  | or |  |  |
| BIO 112 | General Biology I | 3 | BIOL 211 |
|  |  |  |  |
| **Life Sciences** *(3 credits needed)* |  |  |  |
| AGA 114 | Principles of Agronomy | 3 | AGRON 114 |
| AGA 212 | Grain and Forage Crops | 4 | AGRON 212 |
| AGS 112 | Survey of the Animal Industry | 3 | AN S 114 |
|  | Survey of the Animal Industry | 1 | AN S 101 |
|  | *or* |  |  |
| AGS 810 | Animal Science | 3 | AN S 114 |
| BIO 162 | Essentials of Anatomy and Physiology | 3 | BIOL 155 |
| ENV 115 | Environmental Science | 3 | BIOL 173 |
|  |  |  |  |
| **Social Sciences** |  |  |  |
| ECN 130 | Principles of Microeconomics | 3 | ECON 101 |
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| **Humanities** *(3 credits needed)* |  |  |  |
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|  |  |  |  |
| ART 203 | Art History I | 3 | ART H 280 |
| ART 204 | Art History II | 3 | ART H 281 |
| LIT 101 | Introduction to Literature | 3 | ENGL 201 |
| LIT 105 | Children’s Literature | 3 | HD FS 240 |
| HIS 110 | West Civilization: Ancient to Early Modern | 3 | HIST 201 |
| HIS 111 | West Civilization: Early Modern to Present | 3 | HIST 202 |
| HIS 151 | U.S. History to 1877 | 3 | HIST 221 |
| HIS 152 | U.S. History since 1877 | 3 | HIST 222 |
| MUS 100 | Music Appreciation | 3 | MUSIC 102 |
| PHI 101 | Introduction to Philosophy | 3 | PHIL 201 |
| PHI 105 | Introduction to Ethics | 3 | PHIL 230 |
| REL 101 | Survey of World Religions | 3 | RELIG 205 |
| FLS 142\* | Elementary Spanish II | 4 | SPAN 102 |
|  | *\*or higher level foreign language* |  |  |
|  |  |  |  |
| **Ethics**  *(3 credits needed)* |  |  |  |
| PHI 105 | Introduction to Ethics | 3 | PHIL 230 |
|  |  |  |  |
| **International Perspective**  *(3 credits needed)* |  |  |  |
| ANT 105 | Cultural Anthropology | 3 | ANTHR 201 |
| ART 203 | Art History I | 3 | ART H 280 |
| ART 204 | Art History II | 3 | ART H 281 |
| CLS 150 | Latin American History and Culture | 3 | HIST 2T\*\* |
| CLS 164 | Japanese History and Culture | 3 | HUM 2T\*\* |
| GEO 121 | World Regional Geography | 3 | S SCI 1T\*\* |
| HIS 110 | West Civilization: Ancient to Early Modern | 3 | HIST 201 |
| HIS 111 | West Civilization: Early Modern to Present | 3 | HIST 202 |
| LIT 178 | Mythological & Biblical Literature | 3 | HUM 2T\*\* |
| MUS 100 | Music Appreciation | 3 | MUSIC 102 |
| MUS 200 | Music History I | 3 | MUSIC 2T\*\* |
| MUS 201 | Music History II | 3 | MUSIC 2T\*\* |
| REL 101 | Survey of World Religions | 3 | RELIG 205 |
| FLS 142 | Elementary Spanish II\* | 4 | SPAN 102 |
|  | *\*or higher level foreign language course* |  |  |
|  |  |  |  |
| **U.S. Diversity**  *(3 credits needed)* |  |  |  |
| HIS 257 | African American History | 3 | HIST 2T\*\* |
| LIT 105 | Children’s Literature | 3 | HD FS 240 |
| SOC 115 | Social Problems | 3 | SOC 235 |
|  |  |  |  |
| **Business Core** |  |  |  |
| *(6 credits needed)* |  |  |  |
| ACC 131 | Principles of Accounting I | 4 | ACCT 284 *Required* |
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| **Technical Elective List** |  |  |  |
| *(5 credits needed)* |  |  |  |
| AGA 114 | Principles of Agronomy | 3 | AGRON 114 |
| MAT 216 | Calculus II | 4 | MATH 166 |
|  |  |  |  |
| *A total of 65 community college credits can be applied towards your major at Iowa State University.* | | | |