

**AGRICULTURAL SYSTEMS TECHNOLOGY CURRICULUM**  
**Machine Systems option 120 credits required for graduation (2016-2017 Catalog)**

**Interpersonal and Public Communication Skills (13 credits)**

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|---|--------------------|--|
| 3 | ENGL 150 (F.S.SS.) | Critical Thinking and Communications   |
| 3 | ENGL 250 (F.S.SS.) | Written, Oral, Visual, and Electronic Composition  |
| 3 | {                  | ENGL 302 (F.S.SS.) Business Communication, <b>or</b>                                     |
|   |                    | ENGL 309 (F.S.) Report and Proposal Writing, <b>or</b>                                   |
|   |                    | ENGL 314 (F.S.SS.) Technical Communication, <b>or</b>                                    |
|   |                    | AGEDS 327 (F.S.) Advanced Communication for Agriculture and Life Sciences                |
| 3 | {                  | SP CM 212 (F.S.SS.) Fundamentals of Public Speaking, <b>or</b>                           |
|   |                    | AGEDS 311 (F.S.) Presentation and Sales Strategies for Agricultural Audiences, <b>or</b> |
|   |                    | COMST 214 (F.S.) Professional Communications   |
| 1 | LIB 160 (F.S.SS.)  | Information Literacy   |

**Mathematical, Physical, and Life Sciences (25 credits)**

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|---|---------------------|--|
| 3 | MATH 145 (F.S.)     | Applied Trigonometry   |
| 3 | MATH 151 (F.S.SS.)  | Calculus for Business and Social Sciences  |
| 5 | PHYS 111 (F.S.)     | General Physics  |
| 3 | STAT 104 (F.S.SS.)  | Introduction to Statistics   |
| 4 | CHEM 163 (F.S.SS.)  | General Chemistry  |
| 1 | CHEM 163L (F.S.SS.) | Laboratory in General Chemistry  |
| 3 | {                   | BIOL 101 (F.S.SS.) Introductory Biology <b>or</b>  |
|   |                     | BIOL 211 (F.S.) Principles of Biology I  |
| 3 | Life Sciences       | (College of Agriculture and Life Sciences list)<br><a href="http://www.agstudent.iastate.edu/agriculturestudentservices/life_science.htm">http://www.agstudent.iastate.edu/agriculturestudentservices/life_science.htm</a> |

**Business, Humanities, Ethics and Social Sciences (18 credits)** Certain courses in this section may be double counted to fulfill more than one academic requirement. Check with your advisor and this link for more details:  
<http://www.abe.iastate.edu/undergraduate-students/advising-for-ast-i-tech/>

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|---|----------------------------|--|
| 3 | ACCT 284 (F.S.SS.)         | Financial Accounting   |
| 3 | ECON 101 (F.S.SS.)         | Principles of Microeconomics   |
| 3 | Ethics Course              | TSM 370 (S.) Occupational Safety   |
| 3 | Humanities                 | <b>(From approved lists:</b> College of Agriculture and Life Science list)<br><a href="http://www.agstudent.iastate.edu/agriculturestudentservices/humanities.htm">www.agstudent.iastate.edu/agriculturestudentservices/humanities.htm</a> |
| 3 | International Perspectives | <b>(From approved lists:</b> University list)<br><a href="http://www.iastate.edu/%7eregistrar/courses/ip-list.html">www.iastate.edu/%7eregistrar/courses/ip-list.html</a>  |
| 3 | U.S. Diversity             | <b>(From approved lists:</b> University list)<br><a href="http://www.iastate.edu/~registrar/courses/diversity-list.html">www.iastate.edu/~registrar/courses/diversity-list.html</a>  |

**Technology Core (30 credits)**

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|---|-------------------|---|
| 1 | TSM 110 (F.)      | Introduction to Technology                                  |
| 1 | TSM 111 (S.)      | Experiencing Technology                                     |
| 3 | TSM 115 (F.S.)    | Solving Technological Problems                              |
| 3 | TSM 116 (F.S.)    | Introduction to Design in Technology                        |
| 1 | TSM 201 (F.S.)    | Preparing for Workplace Seminar                             |
| 3 | TSM 210 (F.S.)    | Fundamentals of Technology                                  |
| 1 | TSM 214x (F.S.)   | Managing Technology Projects                                |
| 3 | TSM 270 (F.)      | Principles of Injury Prevention                             |
| 3 | TSM 310 (S.)      | Total Quality Improvement                                   |
| 4 | TSM 363 (F.S.)    | Electric Power and Electronics for Agriculture and Industry |
| R | TSM 397 (F.S.SS.) | Internship in Technology                                    |
| 2 | TSM 399 (F.S.SS.) | Work Experience in Technology                               |
| 2 | TSM 415 (F.S.)    | Technology Capstone I                                       |
| 3 | TSM 416 (F.S.)    | Technology Capstone II                                      |

**Option Core (25 credits)**

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|---|--------------------------|--|
| 2 | TSM 216 (F.S.)           | Advanced Technical Graphics, Interpretation, and CAD |
| 1 | ABE 271, 272, 273 (F.S.) | SolidWorks, or Pro/ENGR, or 2D AutoCAD               |
| 3 | TSM 240 (F.S.)           | Introduction to Manufacturing Processes              |
| 3 | TSM 330 (S.)             | Agricultural Machinery and Power Management          |
| 3 | TSM 333 (F.)             | Precision Farming Systems                            |
| 4 | TSM 335 (F.)             | Tractor Power  |
| 3 | TSM 337 (F.S.)           | Fluid Power Systems Technology                       |
| 3 | TSM 443 (S.)             | Statics and Strength of Materials for Technology     |
| 3 | TSM 465 (S.)             | Automation Systems                                   |

**Electives (9 credits)** Electives to strengthen degree