

## AGRICULTURAL SYSTEMS TECHNOLOGY CURRICULUM

Department of Agricultural and Biosystems Engineering, Iowa State University

Agricultural and Biosystems Management option - 120 credits required for graduation (2019-2020 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                 |
|   |                     | BIOL 212 (F.S.)  | Principles of Biology II                |
|   |                     | BIOL 251 (S.)  | Biological Processes in the Environment |
| 3 | Life Sciences       | (College of Agriculture and Life Sciences list)<br><a href="http://www.cals.iastate.edu/student-services/life-science">http://www.cals.iastate.edu/student-services/life-science</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.

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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 (F.S.) Occupational Safety   |
| 3 | Humanities                 | <b>(From approved lists:</b> College of Agriculture and Life Science list)<br><a href="http://www.cals.iastate.edu/student-services/humanities">http://www.cals.iastate.edu/student-services/humanities</a>                    |
| 3 | International Perspectives | <b>(From approved lists:</b> University list)<br><a href="http://www.registrar.iastate.edu/students/div-ip-guide/IntlPerspectives-current">http://www.registrar.iastate.edu/students/div-ip-guide/IntlPerspectives-current</a> |
| 3 | U.S. Diversity             | <b>(From approved lists:</b> University list)<br><a href="http://www.registrar.iastate.edu/students/div-ip-guide/usdiversity-courses">http://www.registrar.iastate.edu/students/div-ip-guide/usdiversity-courses</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 214 (F.S.)    | Managing Technology Projects                                |
| 3 | TSM 270 (F.S.)    | Principles of Injury Prevention                             |
| 3 | TSM 310 (F.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.)    | Applied Project Management in Technology                    |
| 3 | TSM 416 (F.S.)    | Technology Capstone   |

### Option Core (24 credits)

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|---|-----------------|---|
| 2 | TSM 322 (S.)    | Preservation of Grain Quality               |
| 1 | TSM 322L (S.)   | Preservation of Grain Quality Laboratory    |
| 3 | TSM 324 (S.)    | Soil and Water Conservation Management      |
| 3 | TSM 325 (F.)    | Biorenewable Systems                        |
| 3 | TSM 327 (F.)    | Animal Production Systems                   |
| 3 | TSM 330 (S.)    | Agricultural Machinery and Power Management |
| 3 | TSM 433 (F.)    | Precision Farming Systems                   |
| 3 | TSM 455 (F.)    | Feed Processing and Technology              |
| 3 | ECON 230 (F.S.) | Farm Business Management                    |

### Electives (10 credits)

Electives to strengthen degree