**AGRICULTURAL SYSTEMS TECHNOLOGY CURRICULUM**  
Department of Agricultural and Biosystems Engineering, Iowa State University  
Machine Systems option - 120 credits required for graduation (2021-2022 Catalog)

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

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

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

- MATH 145 (F.S.) Applied Trigonometry
- MATH 151 (F.S.SS.) Calculus for Business and Social Sciences
- PHYS 131 (F.S.) General Physics and
- STAT 104 (F.S.SS.) Introduction to Statistics
- CHEM 163 (F.S.SS.) General Chemistry
- CHEM 163L (F.S.SS.) Laboratory in General Chemistry
- BIOL 101 (F.S.SS.) Introductory Biology or
- BIOL 211 (F.S.) Principles of Biology I
- BIOL 212 (F.S.) Principles of Biology II
- BIOL 251 (S.) Biological Processes in the Environment
- Life Sciences (College of Agriculture and Life Sciences list) [http://www.cals.iastate.edu/student-services/life-science](http://www.cals.iastate.edu/student-services/life-science)

**Business, Humanities, Ethics and Social Sciences** (18 credits) Certain courses in this section may be double counted to fulfill more than one academic requirement.

- ACCT 284 (F.S.SS.) Financial Accounting
- ECON 101 (F.S.SS.) Principles of Microeconomics
- Ethics Course TSM 370 (S.) Occupational Safety
- Humanities (College of Agriculture and Life Science list) [http://www.cals.iastate.edu/student-services/humanities](http://www.cals.iastate.edu/student-services/humanities)
- International Perspectives (From approved lists: University list) [http://www.registrar.iastate.edu/students/div-guide/intlperspectives-current](http://www.registrar.iastate.edu/students/div-guide/intlperspectives-current)
- U.S. Diversity (From approved lists: University list) [http://www.registrar.iastate.edu/students/div-guide/usdiversity-courses](http://www.registrar.iastate.edu/students/div-guide/usdiversity-courses)

**Technology Core** (30 credits)

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

**Option Core** (25 credits)

- TSM 216 (F.S.) Advanced Technical Graphics, Interpretation, and CAD
- ABE 271, 272, or 273 (F.S.SS.) Solid Modeling, Pro/ENGR, or CAD Process Facilities & Land Use Planning
- TSM 240 (F.S.) Introduction to Manufacturing Processes for Metals
- TSM 330 (S.) Agricultural Machinery and Power Management
- TSM 335 (F.) Tractor Power
- TSM 337 (F.S.) Fluid Power Systems Technology
- TSM 433 (F.) Precision Farming Systems
- TSM 443 (F.S.) Statics and Strength of Materials for Technology
- TSM 465 (F.S.) Automation Systems

**Electives** (9 credits)

Electives to strengthen degree