

**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)**

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)**

3	MATH 145 (F.S.)	Applied Trigonometry	
3	MATH 151 (F.S.SS.)	Calculus for Business and Social Sciences	
5	PHYS 131 (F.S.)	General Physics and	
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) <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.

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 (College of Agriculture and Life Science list)
3	Humanities	<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) <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) <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)**

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.)	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.)	Applied Project Management in Technology
3	TSM 416 (F.S.)	Technology Capstone

**Option Core (25 credits)**

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

**Electives (9 credits)**

Electives to strengthen degree