

AGRICULTURAL SYSTEMS TECHNOLOGY CURRICULUM
Department of Agricultural and Biosystems Engineering, Iowa State University
Machine Systems option - 120 credits required for graduation (2023-2024 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, 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
3	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
1	LIB 160 (F.S.SS.)	Introduction to College Level Research	

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	
4	PHYS 131 (F.S.SS.)	General Physics I	
1	PHYS 131L (F.S.SS.)	General Physics I Laboratory	
3	STAT 104 (F.S.SS.)	Introduction to Statistics	
4	CHEM 163 (F.S.SS.)	College Chemistry	
1	CHEM 163L (F.S.SS.)	Laboratory in College Chemistry	
3	BIOL 101 (F.S.SS.)	Introductory Biology or	
		BIOL 211 (F.S.)	Principles of Biology I or
		BIOL 212 (F.S.)	Principles of Biology II or
		BIOL 251 (S.)	Biological Processes in the Environment
3	Life Sciences Course	(College of Agriculture and Life Sciences list) http://www.cals.iastate.edu/student-services/life-science	

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

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

Technical Core (28 credits)

1	TSM 110 (F.)	Introduction to Technology
1	TSM 111 (F.S.)	Experiencing Technology
3	TSM 115 (F.S.)	Solving Technology 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.)	Electrical Power and Control Systems for Agriculture and Industry
R	TSM 397 (F.S.SS.)	Internship 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 (F.S.)	Engineering Applications of Parametric Solid Modeling or	
		ABE 272 (F.S.)	Parametric Solid Models, Drawings, and Assemblies Using Creo Parametric or
		ABE 273 (F.S.)	CAD for Process Facilities and Land Use Planning
3	TSM 240 (F.S.)	Introduction to Advanced Manufacturing and Metals Processing	
3	TSM 330 (S.)	Agricultural Machinery and Power Management	

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4	TSM 335 (F.)	Tractor Power
3	TSM 337 (F.S.)	Fluid Power Systems Technology
3	TSM 433 (F.)	Precision Agriculture
3	TSM 443 (F.S.)	Statics and Strength of Materials for Technology
3	TSM 465 (F.S.)	Automation Systems

Electives (11 credits) Electives to strengthen degree