

AGRICULTURAL SYSTEMS TECHNOLOGY CURRICULUM
Department of Agricultural and Biosystems Engineering, Iowa State University
Machine Systems option - 120 credits required for graduation (2024-2025 Catalog)

Interpersonal and Public Communication Skills (13 credits)

3cr	ENGL 1500 (F.S.SS.)	Critical Thinking and Communications
3cr	ENGL 2500 (F.S.SS.)	Written, Oral, Visual, and Electronic Composition
3cr	ENGL 3020 (F.S.SS.)	Business Communication, or
	ENGL 3090 (F.S.)	Report and Proposal Writing, or
	ENGL 3140 (F.S.SS.)	Technical Communication, or
	AGEDS 3270 (F.S.)	Advanced Communication for Agriculture and Life Sciences
3cr	SP CM 2120 (F.S.SS.)	Fundamentals of Public Speaking, or
	AGEDS 3110 (F.S.)	Presentation and Sales Strategies for Agricultural Audiences, or
	COMST 2140 (F.S.)	Professional Communications
1cr	LIB 1600 (F.S.SS.)	Introduction to College-Level Research

Mathematical, Physical, and Life Sciences (25 credits)

3cr	MATH 1450 (F.S.)	Applied Trigonometry
3cr	MATH 1510 (F.S.SS.)	Calculus for Business and Social Sciences
4cr	PHYS 1310 (F.S.SS.)	General Physics I
1cr	PHYS 1310L (F.S.SS.)	General Physics I Laboratory
3cr	STAT 1040 (F.S.SS.)	Introduction to Statistics
4cr	CHEM 1630 (F.S.SS.)	College Chemistry
1cr	CHEM 1630L (F.S.SS.)	Laboratory in College Chemistry
3cr	BIOL 1010 (F.S.SS.)	Introductory Biology or
	BIOL 2110 (F.S.)	Principles of Biology I or
	BIOL 2120 (F.S.)	Principles of Biology II or
	BIOL 2510 (S.)	Biological Processes in the Environment
3cr	Life Sciences Course	(College of Agriculture and Life Sciences list)

<http://www.ca.ia.state.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.

3cr	ACCT 2840 (F.S.SS.)	Financial Accounting
	ACCT 2150 (F.S.SS.)	Legal Environment of Business
3cr	ECON 1010 (F.S.SS.)	Principles of Microeconomics
3cr	TSM 3700 (F.S.)	Occupational Safety (meets Ethics requirement)
3cr	Humanities	(College of Agriculture and Life Science list)
		http://www.ca.ia.state.edu/student-services/humanities
3cr	International Perspectives	(From approved lists: University list)
		http://www.registrar.ia.state.edu/students/div-ip-guide/IntlPerspectives-current
3cr	U.S. Cultures and Communities	(From approved lists: University list)
		https://www.registrar.ia.state.edu/students/div-ip-guide/uscultures-courses

Technical Core (28 credits)

1cr	TSM 1100 (F.)	Introduction to Technology
1cr	TSM 1110 (F.S.)	Experiencing Technology
3cr	TSM 1150 (F.S.)	Solving Technology Problems
3cr	TSM 1160 (F.S.)	Introduction to Design in Technology
1cr	TSM 2010 (F.S.)	Preparing for Workplace Seminar
3cr	TSM 2100 (F.S.)	Fundamentals of Technology
1cr	TSM 2140 (F.S.)	Managing Technology Projects
3cr	TSM 2700 (F.S.)	Principles of Injury Prevention
3cr	TSM 3100 (F.S.)	Total Quality Improvement
3cr	TSM 3630 (F.S.)	Electrical Power and Control Systems for Agriculture and Industry
3cr	TSM 3650 (F.S.)	Electrical Controls and Sensors
Rcr	TSM 3970 (SS.)	Summer Internship in Technology
	TSM 3990 (F.S.)	Fall or Spring Internship in Technology
2cr	TSM 4150 (F.S.)	Applied Project Management in Technology
3cr	TSM 4160 (F.S.)	Technology Capstone

Option Core (25 credits)

2cr	TSM 2160 (F.S.)	Advanced Technical Graphics, Interpretation, and CAD
1cr	ABE 2710 (F.S.)	Engineering Applications of Parametric Solid Modeling or
	ABE 2720 (F.S.)	Parametric Solid Models, Drawings, and Assemblies Using Creo Parametric or

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	ABE 2730 (F.S.)	CAD for Process Facilities and Land Use Planning
3cr	TSM 2400 (F.S.)	Introduction to Advanced Manufacturing and Metals Processing
3cr	TSM 3300 (S.)	Agricultural Machinery and Power Management
4cr	TSM 3350 (F.)	Tractor Power
3cr	TSM 3370 (F.S.)	Fluid Power Systems Technology
3cr	TSM 4330 (F.)	Precision Agriculture
3cr	TSM 4430 (F.S.)	Statics and Strength of Materials for Technology
3cr	TSM 4650 (F.S.)	Automation Systems
Electives (9 credits)		Electives to strengthen degree