

AGRICULTURAL SYSTEMS TECHNOLOGY CURRICULUM
Agricultural and Biosystems Management option
(2011-2012 Catalog)
128.5 credits required for graduation

Interpersonal and Public Communication Skills (12.5 credits)

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|-----|--------------------|--|
| 6 | Engl 150 (F.S.SS.) | Critical Thinking and Communications and |
| | 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 |
| | Ag Eds 327(F.S.) | Advanced Communication for Agriculture and Life Sciences |
| 3 | SpCm 212 (F.S.SS.) | Fundamentals of Public Speaking, or |
| | AgEdS 311 (F.S.) | Presentation and Sales Strategies for Agricultural Audiences |
| 0.5 | Lib 160 (F.S.SS.) | Library Instruction |

Mathematical, Physical, and Life Sciences (26-29 credits)

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| 3 | Math 142 (F.S.SS.) | Trigonometry and Analytic and |
| 4 | Math 160 (F.S.) | Survey of Calculus; or |
| 4 | Math 165 (F.S.SS.) | Calculus I |
| 4 | Phys111 (F.S.SS.) | General Physics and |
| 4 | Phys 112 (F.S.SS.) | General Physics |
| 3 | Stat 104 (F.S.SS.) | Introduction to Statistics |
| 4 | Chem 163 (F.S.SS.) | General Chemistry and |
| 1 | Chem 163L (F.S.SS.) | Laboratory in General Chemistry |
| 3 | Biol 101 (F.S.SS.) | Introductory Biology; or |
| | Biol 211 (F.S.) | Principles of Biology I |
| 3 | Life Sciences | (College of Agriculture and Life Science list)
www.agstudent.iastate.edu/agriculturestudentservices/life_science.htm |

Humanities, Ethics and Social Sciences (15 credits)

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|---|-----------------------------|--|
| 3 | Econ 101 (F.S.SS.) | Principles of Microeconomics |
| | From approved lists: | |
| 3 | Humanities | (College of Agriculture and Life Science list)
www.agstudent.iastate.edu/agriculturestudentservices/humanities.htm |
| 3 | Ethics Course | (College of Agriculture and Life Science list)
www.agstudent.iastate.edu/agriculturestudentservices/ethicslist.html |
| 3 | International Perspectives | (University list)
www.iastate.edu/%7eregistrar/courses/ip-list.html |
| 3 | U.S. Diversity | (University list)
www.iastate.edu/~registrar/courses/diversity-list.html |

Technology Core (28 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.) | Entrepreneurship and Internship Seminar |
| 3 | TSM 210 (F.S.) | Fundamentals of Technology |
| 3 | TSM 270 (F.) | Principles of Injury Prevention |
| 3 | TSM 310 (S.) | Total Quality Improvement |
| 4 | TSM 363 (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.) | Technology Capstone I |
| 2 | TSM 416 (F.S.) | Technology Capstone II |

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Business Core (6 credits)

3	Acct 284 (F.S.SS.)	Financial Accounting
3	Econ 230 (F.S.)	Farm Business Management or
	Econ 334 (F.S.)	Entrepreneurship in Agriculture or
	Econ 336 (F.)	Agricultural Selling or
	Econ 355 (F.S.)	International Trade and Finance or
	Mgmt 370 (F.)	Management and Organization or
	Mgmt 414 (F.)	International Management or
	TSM 408 (F.S.SS.)	Interdisciplinary Problem Solving or
	TSM 409 (F.S.SS.)	Interdisciplinary Systems Effectiveness

Option Core (35 credits)

3	TSM 322 (S.)	Preservation of Grain Quality
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 333 (F.)	Precision Farming Systems
17	Technical Electives	See Departmental List

Departmental Technical Elective List for Agricultural and Biosystems Management Option (ABM):

Accounting

3	Acct 215	Legal Environment of Business
3	Acct 285	Managerial Accounting
3	Acct 316	Business Law

Agronomy

3	Agron 114	Principles of Agronomy
3	Agron 154	Fundamentals of Soil Science
3	Agron 206	Introduction to Meteorology
4	Agron 212	Crop Growth, Productivity and Management
3	Agron 317	Principles of Weed Science
3	Agron 334	Forage Crop Management
3	Agron 338	Seed Science and Technology
3	Agron 354	Soils and Plant Growth
4	Agron 356	Site-Specific Crop and Soil Management
3	Agron 360	Environmental Soil Science
3	Agron 450	Issues in Sustainable Agriculture
3	Agron 485	Soil Microbial Ecology

Animal Science

2	An S 114	Survey of the Animal Industry
3	An S 216	Equine Science
3	An S 223	Poultry Science
3	An S 224	Companion Animal Science
3	An S 225	Swine Science
3	An S 226	Beef Cattle Science
3	An S 229	Sheep Science
3	An S 235	Dairy Cattle Science
3	An S 270	Foods of Animal Origin
3	An S 319	Animal Nutrition
3	An S 311	Animal Reproduction
3	An S 336	Domestic Animal Behavior and Well-Being
3	An S 360	Fresh Meats
3	An S 423	Poultry Systems Management

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3	An S 424	Companion Animal Systems Management
3	An S 425	Swine Systems Management
3	An S 426	Beef Cattle Systems Management
3	An S 429	Sheep Systems Management
3	An S 434	Dairy Systems Management
3	An S 460	Processed Meats
Biology		
3	Biol 212	Principles of Biology II
4	Biol 312	Ecology
4	Biol 381	Environmental Systems: Introduction to Environmental Systems
3	Biol 487	Aquatic and Wetland Microbial Ecology
Economics		
3	Econ 230	Farm Business Management
3	Econ 235	Introduction to Agricultural Markets
3	Econ 301	Intermediate Microeconomics
3	Econ 302	Intermediate Macroeconomics
3	Econ 320	Labor Economics
3	Econ 332	Cooperatives
3	Econ 333	Advanced Farm Business Management
3	Econ 334	Entrepreneurship in Agriculture
3	Econ 336	Agriculture Selling
3	Econ 353	Money, Banking & Financial Institutions
3	Econ 376	Rural, Urban and Regional Economics
Entomology		
2	Ent 211	Insects and Society
3	Ent 370	Insect Biology
3	Ent 374	Insects and Our Health
3	Ent 376	Fundamentals of Entomology and Pest management
Environmental Science		
4	EnSci 402	Watershed Hydrology
3	EnSci 404	Global Change
3	EnSci 486	Aquatic Ecology
1	EnSci 486L	Aquatic Ecology Laboratory
Environmental Studies		
2	Env S 201	Introduction to Environmental Issues
3	Env S 293	Environmental Planning
3	Env S 324	Energy and the Environment
3	Env S 380	Environmental and Resource Economics
3	Env S 382	Environmental Sociology
3	Env S 450	Issues in Sustainable Agriculture
3	Env S 482	Environmental Politics and Policies
3	Env S 491	Environmental Law and Planning
Food Science and Human Nutrition		
3	FS HN 101	Food and the Consumer
3	FS HN 272	Basic Principles of Food Processing
3	FS HN 351	Unit Operations in Food Processing
2	FS HN 403	Food Laws, Reg. & Regulatory Process
3	FS HN 471	Food Processing
2	FS HN 472	Food Processing Lab

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Forestry

3 For 485 Lignocellulosic Composite Materials

History

3 Hist 489 History of American Science

Horticulture

3 Hort 221 Principles of Horticulture

4 Hort 332 Greenhouse Operation and Management

4 Hort 422 Postharvest Technology

Logistics and Supply Chain Management

3 LSCM 360 Business Logistics

3 LSCM 460 Decision tools for Logistics and Operations Management

Management

3 Mgmt 310 Entrepreneurship and Innovation

3 Mgmt 370 Management of Organizations (Note: not if used in business core requirements.)

3 Mgmt 371 Organizational Behavior

Management Information Systems

3 MIS 330 Management Information Systems

3 MIS 331 File Structures and Programming

3 MIS 423 Information Systems for Managerial Decision Making

3 MIS 433 Database Management Systems

3 MIS 437 Project Management

Marketing

3 Mkt 340 Principles of Marketing

3 Mkt 343 Personal Sales

3 Mkt 410 Promotional Strategy

3 Mkt 442 Sales Management

3 Mkt 446 Retailing

3 Mkt 447 Fundamentals of Consumer Behavior

3 Mkt 448 Fundamentals of International Marketing

3 Mkt 451 Marketing Channels

Microbiology

2 Micro 201 Introduction to Microbiology

3 Micro 302 Biology of Microorganisms

3 Micro 419 Foodborne Hazards

3 Micro 420 Food Microbiology

Natural Resources and Ecology Management

3 NREM 345 Natural Resource Photogrammetry and Geographic Information Systems

4 NREM 407 Watershed Management

3 NREM 446 Integrating GPS and GIS for Natural Resource Management

Plant Pathology

2 PI P 391 Practical Plant Health

3 PI P 408 Principles of Plant Pathology

Technology

Any 300 level or higher TSM and AE course not required in the technology or option cores.