Department Head: Bruce E. Miller
Location: Agricultural Systems Technology and Education 101C
Phone: (435) 797-2230
FAX: (435) 797-4002
E-mail: bruce.miller@usu.edu
WWW: http://www.aste.usu.edu

Agricultural Systems Technology and Agricultural Education Advisor:
Eric B. Worthen, ASTE 117, (435) 797-7091, eric.worthen@usu.edu

Agricultural Machinery Technology Advisor:
Evan P. Parker, ASTE 137, (435) 797-1928, epparker@cc.usu.edu

Family and Consumer Sciences Education Advisor:
Betty J. Murri, Family Life 303A, (435) 797-1565, betty.murri@usu.edu

Degrees offered: Bachelor of Science (BS) in Agricultural Education; BS, Master of Science (MS) in Agricultural Systems Technology; BS in Family and Consumer Sciences Education; Associate of Applied Science (AAS) in Agricultural Machinery Technology; One-year Certificate in Agricultural Machinery Technology

Undergraduate emphases: *BS—Agricultural Systems Technology*: Agribusiness and Agricultural Mechanization

Graduate specializations: *MS*—Agricultural Extension Education, Agricultural Mechanization, Family and Consumer Sciences Education and Extension, International Agricultural Extension, and Secondary/Postsecondary Agricultural Education

Undergraduate Programs

Objectives

The programs offered in the Agricultural Systems Technology and Education Department are for students who are preparing for positions as family and consumer sciences *or* agricultural education teachers, as well as for positions in family and consumer sciences education *or* agricultural extension, agricultural mechanization, agribusiness, and agricultural production and management.

The facilities for these programs include laboratories with specially designed equipment for practical instruction in agricultural systems and mechanization, including computer applications, agribusiness, agricultural buildings, engines, electricity, hydraulics, machinery, and repair welding. Family and Consumer Sciences Education students use laboratories equipped for instruction in secondary education, clothing production, textile science, early childhood, nutrition, and interior design.

Requirements

Departmental Admission Requirements

Admission requirements for the Department of Agricultural Systems Technology and Education are the same as those described for the University on pages 16-19. Students in good standing may apply for admission to the department.

Bachelor of Science in Agricultural Education

Preparation in Agricultural Education includes technical agriculture, economics, and business. Students selecting the teaching option will also enroll in principles and techniques of teaching courses.

Students interested in teaching agricultural production and processing, agricultural mechanics, horticulture, or natural resources will be guided into areas of their major interest. Agricultural backgrounds or summer agricultural experiences are necessary for teacher certification.

An application for admission to teacher education should ordinarily be completed before the junior year (see College of Education and Human Services requirements, page 108). Approval for admission to teacher education is a prerequisite to enrollment in education and psychology courses. A 2.75 GPA is required for admission to the teacher education program.

Requirements for the **Bachelor of Science in Agricultural Education** are listed briefly. For more detailed information on courses and the recommended sequence for taking them, see the major requirement sheet available from the Agricultural Systems Technology and Education Department.

The Agricultural Education major involves four teaching areas, which correspond with the Utah agricultural education program model design. Students must complete the University Studies requirements (see pages 46-54). In addition, students must complete the following courses in preparation for teacher licensure:

Professional Education (14 credits)
SCED 3100 Motivation and Classroom Management (F,Sp) 3
SCED 3210 (CI/DSS) Educational and Multicultural Foundations (F,Sp) 3
SCED 4200 (CI) Reading, Writing, and Technology (F,Sp) 3
SCED 4210 Cognition and Evaluation of Student Learning (F,Sp) 3
SPED 4000 Education of Exceptional Individuals (F,Sp,Su) 2

Agricultural Education (26 credits)
ASTE 2710 Orientation to Agricultural Education (F) 2
ASTE 3100 Leadership Applications in Agricultural Science, Management, and Development (Sp) 2
ASTE 3240 (CI) Teaching in Laboratory Settings (Sp) 3
ASTE 3300 Clinical Experience I in Agricultural Education (Sp) 1
ASTE 3620 Managing the FFA and SAE Programs (Sp,Su) 2
ASTE 4150 (CI) Methods of Teaching Agriculture (F) 3
ASTE 4300 Clinical Experience II in Agricultural Education (F) 1
ASTE 5500 Agricultural Education Secondary Curriculum Seminar (Sp) 2
ASTE 5630 Agricultural Education Student Teaching in Secondary Schools (Sp) 10

All students in the Agricultural Education major will complete a core of technical agricultural courses to include:

ASTE 1010 Introduction to Agricultural Systems Technology (F) 3
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) 3
ADVS 1110 Introduction to Animal Science (F,Sp) 4
BIOL 1110 Elementary Microbiology (F) 4
BIOL 1210 Biology I (F) 4
CHEM 1110 (BPS) General Chemistry I (F,Sp) 4
SOIL 3000 Fundamentals of Soil Science (F,Sp) 4

Students are required to designate a program emphasis for the following areas: Production and Processing; Agricultural Systems; Horticulture; and Natural Resources. Approximately 50 credits in a technical agriculture specialization are required in each of the four program area choices.

Emphasis Areas (50-57 credits)

These emphasis areas will *not* appear on a student's transcript. They are emphasis areas approved by the Utah State Office of Education.

Production and Processing (50 credits)

ADVS 1110 Introduction to Animal Science (F,Sp) 4
ADVS 4560 (QI) Principles of Animal Breeding (F) 3
ASTE 2200 Electricity in Agricultural Systems (Sp) 3
ASTE 2830 Agribusiness Sales and Marketing (F) 3
ASTE 3030 Metal Welding Processes and Technology in Agriculture (F) 3
ASTE 3040 (QI) Fabrication Practices in Agricultural Buildings (Sp) ... 2
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) 3
BIOL 1210 Biology I (F) 4
CHEM 1110 (BPS) General Chemistry I (F,Sp) 4
ECON 3030 (DSS) Introduction to Agribusiness Marketing (F) (3 cr) **or**
ECON 3050 (DSS) Introduction to Agribusiness Management (Sp) (3 cr) 3
PLSC 3050 Greenhouse Management and Crop Production (Sp) 4
PLSC 3700 Plant Propagation (F) 4
PLSC 4280 Field Crops (F) 3
SOIL 3000 Fundamentals of Soil Science (F,Sp) 4

Horticulture (57 credits)

ADVS 1110 Introduction to Animal Science (F.Sp) 4
ASTE 2830 Agribusiness Sales and Marketing (F) 3
ASTE 3040 (QI) Fabrication Practices in Agricultural Buildings (Sp) 2
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) 3
BIOL 1210 Biology I (F) 4
CHEM 1110 (BPS) General Chemistry I (F,Sp) 4
PLSC 2200 Pest Management Principles and Practices (Sp) 3
PLSC 2600 Annual and Perennial Plant Materials (F) 1.5
PLSC 2610 Indoor Plants and Interiorscaping (F) 1.5
PLSC 2620 Woody Plant Materials: Trees and Shrubs for the Landscape (F) 3
PLSC 2650 Identification and Selection of Plants in Production Agriculture (F) 1
PLSC 3010 Basic Flower Arranging (F) 2
PLSC 3050 Greenhouse Management and Crop Production (Sp) 4
PLSC 3300 Residential Landscapes (Sp) 3
PLSC 3700 Plant Propagation (F) 4
PLSC 3800 Turfgrass Management (F) 3
PLSC 4500 Fruit Production (Sp) 4
SOIL 3000 Fundamentals of Soil Science (F,Sp) 4

Agricultural Systems (57 credits)

ADVS 1110 Introduction to Animal Science (F,Sp) 4
ASTE 1010 Introduction to Agricultural Systems Technology (F) 3
ASTE 1640 Agricultural Equipment and Parts Marketing and Communications (F) 3
ASTE 2200 Electricity in Agricultural Systems (Sp) 3
ASTE 3030 Metal Welding Processes and Technology in Agriculture (F) 3
ASTE 3040 (QI) Fabrication Practices in Agricultural Buildings (Sp) 2
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) 3
ASTE 3200 Irrigation Principles and Practices (Sp) 3
ASTE 3600 (QI) Management of Agricultural Machinery Systems (Sp) 3
ASTE 4100 Agricultural Structures and Environment (Sp) 3
ASTE 5100 Electrical Controls and Motors for Agri-Industrial Applications (Sp) 3
ASTE 5260 (CI) Environmental Impacts of Agricultural Systems (F) 3
CHEM 1110 (BPS) General Chemistry I (F,Sp) 4
ECON 3030 (DSS) Introduction to Agribusiness Marketing (F) (3 cr) **or**
ECON 3050 (DSS) Introduction to Agribusiness Management (Sp) (3 cr) 3
PHYX 1200 (BPS) Introduction to Physics by Hands-on Exploration ... 4
PLSC 4280 Field Crops (F) 3
SOIL 3000 Fundamentals of Soil Science (F,Sp) 4

Natural Resources (55 credits)

ADVS 1110 Introduction to Animal Science (F,Sp) 4
ASTE 3040 (QI) Fabrication Practices in Agricultural Buildings (Sp) 2
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) 3
ASTE 5260 (CI) Environmental Impacts of Agricultural Systems (F) 3
BIOL 1210 Biology I (F) 4
BIOL 1220 (BLS) Biology II (Sp) 4
BIOL 2220 General Ecology (F,Sp) 3
CHEM 1110 (BPS) General Chemistry I (F,Sp) 4
ENVS 2340 (BSS) Natural Resources and Society (F,Sp) 3
ENVS 3600 Living with Wildlife (Sp) 3
FRWS 3600 Wildland Plant Ecology and Identification (F) 4
FRWS 3610 Wildland Animal Ecology and Identification (F) 4
FRWS 3900 Managing Dynamic Ecological Systems (Sp) 4
FRWS 4000 Principles of Rangeland Management (Sp) 3
SOIL 3000 Fundamentals of Soil Science (F,Sp) (4 cr) **or**
SOIL 4000 Soil and Water Conservation (F) (4 cr) 4

Bachelor of Science in Agricultural Systems Technology (AST)

This major has two emphases: *Agribusiness* and *Agricultural Mechanization*. Preparation in either emphasis includes technical agriculture, economics, and business. The agricultural mechanization emphasis requires additional courses in technical electives and communication skills development.

The Bachelor of Science in Agricultural Systems Technology includes the following courses:

Technical Requirements (20 credits)

ACCT 2010 Survey of Accounting I (F,Sp,Su) 3
CHEM 1110 (BPS) General Chemistry I (F,Sp) 4
ECON 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp) 3
ECON 3030 (DSS) Introduction to Agribusiness Marketing (F) 3
ECON 3050 (DSS) Introduction to Agribusiness Management (Sp) 3
SOIL 3000 Fundamentals of Soil Science (F,Sp) 4

Communications Intensive Courses (6 credits)

ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 5260 (CI) Environmental Impacts of Agricultural Systems (F) 3

Agricultural Systems Courses (minimum of 23 credits)
ASTE 1010 Introduction to Agricultural Systems Technology (F).....3
ASTE 2200 Electricity in Agricultural Systems (Sp) 3
ASTE 2830 Agribusiness Sales and Marketing (F) 3
ASTE 3030 Metal Welding Processes and Technology in Agriculture (F).....3
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) 3
ASTE 3090 Computer Applications in Agriculture (F,Sp) 3
ASTE 4100 Agricultural Structures and Environment (Sp).....3
ASTE 4900 Senior Project Research and Creative Opportunity (Sp).....1-6

Designated Electives (minimum of 24 credits)
Select 24 credits from the following courses. Twelve of these credits must be selected from upper-division (3000-level and above) courses.

ASTE 1610 Agricultural Machinery Engines (F).....6
ASTE 1620 Agricultural Machinery Power Trains (Sp).....6
ASTE 3040 (QI) Fabrication Practices in Agricultural Buildings (Sp) 2
ASTE 3100 Leadership Applications in Agricultural Science, Management, and Development (Sp) 2
ASTE 3200 Irrigation Principles and Practices (Sp).....3
ASTE 3600 (QI) Management of Agricultural Machinery Systems (Sp).....3
ASTE 3900 Special Problems in Agricultural Systems Technology and Education (F,Sp,Su) 1-6
ASTE 4250 Occupational Experiences in Agriculture (F,Sp,Su) 1-6
ASTE 5100 Electrical Controls and Motors for Agri-Industrial Applications (Sp) 3
ADVS courses 6-12
ACCT courses 6-12
ECON courses (Agricultural) 6-12
MHR courses.....6-12
BA courses 6-12
BIS courses 6-12
PLSC courses 6-12
SOIL courses.....6-12

Electives (maximum of 11 credits)

Total Credits for Graduation.....92

Students will complete a minor in Business or Agribusiness. Additional requirements in Animal Science; Plant and Soil Sciences; and Forest, Range, and Wildlife Sciences must also be met. In addition, students must complete the University Studies Requirements.

Agricultural Systems Technology and Agribusiness Composite Major

Economics Courses (27 credits)
ECON 1500 (BAI) Introduction to Economic Institutions, History, and Principles (F,Sp) 3
ECON 1550 (BSS) Introduction to Environmental and Natural Resource Economics (F).....3
ECON 3030 (DSS) Introduction to Agribusiness Marketing (F).....3
ECON 3050 (DSS) Introduction to Agribusiness Management (Sp) 3
ECON 4010 (DSS) Managerial Economics (F,Sp) 3
ECON 4030 (CI) Agribusiness Finance (F) 3
ECON 5030 Agricultural Marketing and Price Analysis (F) 3
ECON 5050 Farm and Ranch Planning and Analysis (Sp) 3
ECON 5350 (CI) Agribusiness, Cooperatives, and Management (Sp)..3

Agricultural Systems Courses (24 credits)
ASTE 1010 Introduction to Agricultural Systems Technology (F).....3
ASTE 2200 Electricity in Agricultural Systems (Sp) 3
ASTE 3030 Metal Welding Processes and Technology in Agriculture (F) (3 cr) **or**
ASTE 4100 Agricultural Structures and Environment (Sp) (3 cr) 3
ASTE 3050 (CI) Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 3090 Computer Applications in Agriculture (F,Sp) 3
ASTE 3200 Irrigation Principles and Practices (Sp) (3 cr) **or**
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) (3 cr).....3
ASTE 3600 (QI) Management of Agricultural Machinery Systems (Sp).....3
ASTE 5260 (CI) Environmental Impacts of Agricultural Systems (F) 3

Technical Requirements (27 credits)
ACCT 2010 Survey of Accounting I (F,Sp,Su).....3
ACCT 2020 Survey of Accounting II (F,Sp,Su).....3
CHEM 1010 (BPS) Introduction to Chemistry (F,Sp) 3
MATH 1050 (QL) College Algebra (F,Sp,Su).....4
MATH 1100 (QL) Calculus Techniques (F,Sp,Su) 3
MHR 2990 Legal and Ethical Environment of Business (F,Sp,Su).....3
SOIL 4000 Soil and Water Conservation (F).....4
STAT 2300 (QL) Business Statistics (F,Sp,Su) 4

University Studies Requirements
(not met as part of above requirements) (18 credits)

Communications Literacy (CL) courses 6
Breadth Creative Arts (BCA) course.....3
Breadth Humanities (BHU) course 3
Breadth Life Sciences (BLS) course 3
Depth Humanities and Creative Arts (DHA) course 3
Computer and Information Literacy (CIL) Exam.....0

General Electives (24 credits)

Total Credits for Graduation.....120

Associate of Applied Science Degree in Agricultural Machinery Technology

The Associate of Applied Science Degree in Agricultural Machinery Technology consists of a minimum of 6 credits of University Studies courses, 45 credits in the major (Agricultural Systems Technology and Education), 9 credits in business or related elective coursework, for a total of not less than 60 credits. The suggested breakdown of coursework is listed below.

University Studies (6 credits)
Classes will be selected from a minimum of two areas for a total of 6 credits. ENGL 1010, Introduction to Writing: Academic Prose (or an equivalent writing or communications class) must be completed as one of these classes.

Core Classes (45 credits)
The following 45 credits are required:
ASTE 1010 Introduction to Agricultural Systems Technology (F).....3
ASTE 1120 Forage and Harvest Equipment (F) 3
ASTE 1130 Planting and Tillage Equipment (Sp).....3
ASTE 1610 Agricultural Machinery Engines (F).....6
ASTE 1620 Agricultural Machinery Power Trains (Sp).....6
ASTE 2200 Electricity in Agricultural Systems (AC) (Sp).....3
ASTE 3030 Metal Welding Processes and Technology in Agriculture (F).....3

ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications (Sp) 3
ASTE 3090 Computer Applications in Agriculture (F,Sp) 3
ASTE 3600 Management of Agricultural Machinery Systems (Sp) 3
ASTE 3710 Agricultural Machinery Hydraulic Systems and Diagnosis (F) 3
ASTE 3720 Agricultural DC Electrical Systems and Diagnosis (F) 3
ASTE 3730 Agricultural Machinery Auxiliary Systems and Diagnosis (Sp) 3

Business or Related Elective Classes (select 9 credits)
ADVS 1110 Introduction to Animal Science (F,Sp) 4
ASTE 2250 Occupational Experience in Agriculture (F,Sp) 5
ASTE 2830 Agribusiness Sales and Marketing (F) 3
ASTE 2900 (BSS) Humanity in the Food Web (F,Sp) 3
ASTE 2930 Individualized Projects in Agricultural Mechanics (F,Sp) 1-3
ASTE 3040 Fabrication Practices in Agricultural Buildings (Sp) 2
ASTE 3050 Technical and Professional Communication Principles in Agriculture (F,Sp) 3
ASTE 3090 Computer Applications in Agriculture (F,Sp) 3
ASTE 3100 Leadership Applications in Agricultural Science, Management, and Development (Sp) 2
ASTE 3200 Irrigation Principles and Practices (Sp) 3
ASTE 3900 Special Problems in Agricultural Systems Technology and Education (F,Sp,Su) 1-6
ASTE 4100 Agricultural Structures and Environment (Sp) 3
ASTE 5100 Electrical Controls and Motors for Agri-Industrial Applications (Sp) 3
ASTE 5260 Environmental Impacts of Agricultural Systems (F) 3
AWER 1200 (BLS) Biodiversity: Its Conservation and Future (F) 3
BIOL 1210 Biology I (F) 4
CHEM 1110 (BPS) General Chemistry I (F,Sp) 4
FRWS 4000 Principles of Rangeland Management (Sp) 3
MATH 1030 (QL) Quantitative Reasoning (F,Sp) 3
NR 1010 (BSS) Humans and the Changing Global Environment (F,Sp) 3
PHYX 1200 (BPS) Introduction to Physics by Hands-on Exploration 4
PLSC 2200 Pest Management Principles and Practices (Sp) 3
PLSC 2620 Woody Plant Materials: Trees and Shrubs for the Landscape (F) 3
PLSC 2650 Identification and Selection of Plants in Production Agriculture (F) 1
PLSC 3050 Greenhouse Management and Crop Production (Sp) 4
PLSC 3300 Residential Landscapes (Sp) 3
PLSC 3400 Landscape Management Principles and Practices (F) 3
PLSC 3800 Turfgrass Management (F) 3
PLSC 5550 Weed Biology and Control (F) 4

Elective Courses
Students should select credits approved by the Agricultural Systems Technology and Education Department for flexibility in strengthening areas of insufficient background.

A total of 60 credits are required.

Agricultural Machinery Technology Certificate

This one-year agricultural program meets the needs of persons interested in employment opportunities with agricultural dealerships and companies in the areas of parts and service, as well as with farm suppliers, feed and fertilizer agencies, corporate farms and ranches, and other related industries. The vocationally oriented agricultural technology program includes a cooperative occupational experience placement at the end of the first year of instruction.

Requirements for the one-year program include a minimum of 31 credits, with the following breakdown of suggested coursework:

Fall Semester
ASTE 1010 Introduction to Agricultural Systems Technology 3
ASTE 1120 Forage and Harvest Equipment 3
ASTE 1610 Agricultural Machinery Engines 6
ASTE 3090 Computer Applications in Agriculture 3
ASTE 3710 Agricultural Machinery Hydraulic Systems and Diagnosis 3

Spring Semester
ASTE 1130 Planting and Tillage Equipment 3
ASTE 1620 Agricultural Machinery Power Trains 6
ASTE 2250 Occupational Experience in Agriculture 1-6
ASTE 3080 Compact Power Units for Agricultural and Turfgrass Applications 3

See major requirement sheet, available from the department, for more information.

Minor in Agricultural Systems Technology

A minimum of 18 credits approved by a faculty advisor are required.

Bachelor of Science in Family and Consumer Sciences Education (FCSE)

This major provides professional preparation for teaching Family and Consumer Sciences Education and Occupational Family and Consumer Sciences Education in public schools, or for employment as a family and consumer scientist in business or government agencies, and extension. Many states, including Utah, require a master's degree to work for extension.

This composite major includes study in nutrition and food sciences, family and human development, interior design, housing, apparel and textiles, and consumer sciences, plus professional education courses.

Student teaching in secondary public schools is required. Internships in extension or business are available.

The following courses are required for the Family and Consumer Sciences Education Major.

Required Support Courses and Prerequisites
MATH 1050 (QL) College Algebra (F,Sp,Su) 4
CHEM 1110 (BPS) General Chemistry I (F) 4
CHEM 1120 (BPS) General Chemistry II (Sp) 4

Major Required Courses (88 credits)
A grade of *C* or better must be earned in these courses

FCHD 1500 (BSS) Human Development Across the Lifespan (F,Sp) 3
FCHD 2400 (BSS) Marriage and Family Relationships (F,Sp) 3
FCHD 2450 (BSS) The Consumer and the Market (F,Sp) 3
FCHD 3350 (DSS/QI) Family Finance (F,Sp) 3
FCHD 4550 Preschool Methods and Curriculum (F,Sp) 3
FCHD 4960 Practice Teaching in Child Development Laboratories (F,Sp,Su) (3 cr) **or**
FCSE 4250 Internship in Family and Consumer Sciences Education (F,Sp,Su) (1-3 cr) 1-3
FCSE 2040 Clothing Production Principles (F,Sp) 3
FCSE 2510 Orientation to Family and Consumer Sciences Education (F) 3
FCSE 3030 (DSC) Textile Science (Sp) 4
FCSE 3040 Advanced Clothing Production Principles (F,Sp) 3

FCSE 3060 (DSS/CI) Human Behavior Related to Dress (F) 3
FCSE 3300 Family and Consumer Sciences Education Clinical Experience I (40 hrs. minimum) (F).....1
FCSE 3400 Family and Consumer Sciences Education Methods I (F).3
FCSE 4300 Family and Consumer Sciences Education Clinical Experience II (40 hrs. minimum) (Sp).....1
FCSE 4400 Family and Consumer Sciences Education Methods II (Sp).....3
FCSE 5500 Student Teaching Seminar (2 weeks) (F).....2
FCSE 5630 Student Teaching in Secondary Schools (13 weeks, full-time) (F).....10
ID 1790 (BCA) Interior Design Theory (Sp) 3
ID 3790 Architectural Systems (F).....3
INST 3500 Technology Tools for Secondary Teachers (F,Sp,Su).....1
NFS 1020 (BLS) Science and Application of Human Nutrition (F,Sp,Su) 3
NFS 1240 Culinary Basics (F,Su).....3
NFS 2020 Nutrition Throughout the Life Cycle (Sp).....3
NFS 4070 Experimental Foods (Sp) 4
SCED 3100 Motivation and Classroom Management (F,Sp) 3
SCED 3210 (DSS/CI) Educational and Multicultural Foundations (F,Sp).....3
SCED 4200 (CI) Reading, Writing, and Technology (F,Sp) 3
SCED 4210 Cognition and Evaluation of Student Learning (F,Sp) 3
SPED 4000 Education of Exceptional Individuals (F,Sp,Su) (May be taken anytime).....2

Departmental Honors

Students who would like to experience greater academic depth within their major are encouraged to enroll in departmental honors. Through original, independent work, Honors students enjoy the benefits of close supervision and mentoring, as they work one-on-one with faculty in select upper-division departmental courses. Honors students also complete a senior project, which provides another opportunity to collaborate with faculty on a problem that is significant, both personally and in the student's discipline. Participating in departmental honors enhances students' chances for obtaining fellowships and admission to graduate school. Minimum GPA requirements for participation in departmental honors vary by department, but usually fall within the range of 3.30-3.50. Students may enter the Honors Program at almost any stage in their academic career, including at the junior (and sometimes senior) level. The campus-wide Honors Program, which is open to all qualified students regardless of major, offers a rich array of cultural and social activities, special classes, and the benefit of Honors early registration. Interested students should contact the Honors Program, Merrill Library 374, (435) 797-2715, honors@cc.usu.edu. Additional information can be found online at:
http://www.usu.edu/honors/

Additional Information

For further information about undergraduate programs and requirements in the Department of Agricultural Systems Technology and Education, see the major requirement sheets, which can be obtained from the department, or accessed online at:
http://www.usu.edu/ats/majorsheets/

Graduate Programs

Admission Requirements

See general admission requirements, pages 93-94. Applications will be considered throughout the year. However, students who wish to be considered for financial aid must apply by February 1 for the coming academic year. No application will be considered until all required information arrives at the office of the School of Graduate Studies.

Course Requirements

Master of Science

The MS program requires the completion of a minimum of 33 credits beyond the bachelor's degree. These credits must be approved by a supervisory committee. However, to optimize a student's academic experiences, 36 credits are recommended. A 15-credit core curriculum is required and includes courses in research/statistics and completion of a Plan A thesis for 6 credits or a Plan C program with a minimum of 37 credits. Students are also expected to select and complete an area of specialization.

In the Family and Consumer Sciences Education and Extension specialization, a Plan B option is available. This plan involves 33 credits of instruction (includes 3 thesis credits) and the development and presentation of a creative project.

The following four specializations are available for the MS in Agricultural Education:

The **Agricultural Extension Education** specialization provides a program for individuals interested in cooperative extension work. The curriculum for the program includes coursework related to managing people; planning, implementing, and evaluating programs to promote technology transfer (adult education); understanding research techniques relevant to agricultural education; and the managing of fiscal affairs.

Electives are selected from each of the following departments: Agricultural Systems Technology and Education; Animal, Dairy and Veterinary Sciences; Economics; Biology; Plants, Soils, and Biometeorology; Forest, Range, and Wildlife Sciences; and Instructional Technology.

The purpose of the **Family and Consumer Sciences Education and Extension** specialization is to expand academic preparation in an area of study such as family studies, housing, textiles and clothing, nutrition and food sciences, and management of personal resources. This specialization places emphasis on teaching and curriculum/program development and/or Extension. Students are prepared for community professions, including secondary teaching (since students earn a teaching license), urban and rural extension, social science, and business. Study may lead to supervisory and administrative positions in business, technical schools, and applied technology colleges, or to consulting positions in mass media and industry. The master's degree *does not* result in a teaching license for public schools.

The **International Agricultural Extension** specialization was developed to prepare agriculturally educated people to perform administrative and supervisory roles in less-developed countries. The curriculum for this program includes coursework related to managing people; planning, implementing, and evaluating programs to promote technology transfer; and managing fiscal affairs. Electives are selected from each of the following departments: Agricultural Systems Technology and Education; Animal, Dairy and Veterinary Sciences; Economics; Biology; Plants, Soils, and Biometeorology; and Instructional Technology.

Research

The Utah Agricultural Experiment Station, a component of the College of Agriculture, supports graduate work in several areas of Agricultural Systems Technology and Education. Other state and federal agencies also support research in agricultural systems.

Financial Assistance

Both departmental and formal grant support are available to graduate students and are awarded on a competitive basis. Students requesting financial support should apply to the department.

Research assistantships are available through faculty members who have ongoing projects with the Utah Agricultural Experiment Station or who hold special research grants from the University, private companies, or state-federal agencies. Acceptance to pursue graduate study does not guarantee the student financial assistance.

Requirement Changes

Graduation requirements described in this catalog are subject to change. Students should check with their departments concerning possible changes.

Agricultural Systems Technology and Education Faculty

Professors
Bruce E. Miller, agricultural systems and mechanization
Weldon S. Sleight, extension education
Gary S. Straquadine, agricultural education/extension

Adjunct Professor
Kevin C. Kesler, 4-H and youth development programs

Professor Emeritus
Gilbert A. Long, agricultural education

Associate Professor
F. Richard Beard, research and extension, agricultural engineering

Assistant Professors
John D. Harrison, agricultural waste management/extension specialist
Rhonda L. Miller, sustainable agriculture/agricultural systems
Rudy S. Tarpley, agricultural education, teacher preparation
Nancy Thompson, family and consumer sciences education
Brian K. Warnick, agricultural education, teacher preparation

Instructor
Betty J. Murri, apparel and textiles

Lecturers
Evan P. Parker, agricultural technology and machinery management
Daryl L. Reece, agricultural engineering and equipment repair
Afifa Sabir, education and outreach, Biotechnology Center
Julie P. Wheeler, family and consumer sciences education

Academic Advisor
Eric B. Worthen

Course Descriptions

Agricultural Systems Technology and Education (ASTE), pages 446-449

Family and Consumer Sciences Education (FCSE), pages 516-517