

# Agricultural Education and Studies

## Undergraduate Study

For undergraduate curricula in agriculture and life sciences education, and agricultural studies, leading to the degree of bachelor of science, see College of Agriculture and Life Sciences, Curricula.

The department offers two curricula for students desiring to enter careers in agriculture and related fields. These curricula are agriculture and life sciences education, and agricultural studies. The agricultural and life sciences education curriculum prepares persons for careers as agricultural education instructors, and educational specialists for industry, nonprofit organizations, and governmental agencies. The agriculture and life sciences education curriculum has two options, teacher certification and communications. The agricultural studies curriculum prepares persons for careers in production agriculture and agricultural industry. Graduates of both curricula accept positions in agricultural business, industry, agencies, and production agriculture.

Graduates will have a broad base of agricultural knowledge, and will be skilled in decision making, planning, organizing, presenting, and evaluating information. Through the successful completion of the required coursework, active participation in clubs and organizations, and the acquisition of technical skills and experiences associated with work experiences, internships, and international travel, graduates of our baccalaureate programs meet the university, college, and departmental outcomes in the following nine areas:

1. professional, interpersonal, and cross-cultural communications
2. Problem solving and critical thinking
3. leadership
4. entrepreneurship
5. life-long learning
6. ethics
7. environmental awareness
8. U.S. diversity
9. international perspectives.

More information regarding the departmental learning outcomes can be found at [www.ageds.iastate.edu/assessment/agedsindex.htm](http://www.ageds.iastate.edu/assessment/agedsindex.htm).

## Minor - Agriculture and Life Sciences Education

The department offers a minor in agriculture and life sciences education which may be earned by completion of a minimum of 15 credits in agricultural education and studies courses, with a minimum of two courses at the 400 level. Courses that can be taken for a minor are:

AGEDS 211	Early Field Based Experience	1
AGEDS 310	Foundations of Agricultural Education Programs	3
AGEDS 311	Presentation and Sales Strategies for Agricultural Audiences	3
AGEDS 412	Internship in Agricultural Education and Studies	2-6
DANCE 160	Ballroom Dance I	1
AGEDS 414	Developing Agricultural Education Programs in Non-Formal Settings	2
ECON 401	Topics in Microeconomics	3
AGEDS 450	Farm Management and Operation	3
AGEDS 490	Independent Study in Agricultural Education and Studies	1-3
AGEDS 496	Agricultural Travel Course	1-3
AGEDS 499	Undergraduate Research	arr †
Total Credits		20-28 †

† Arranged with instructor.

Visit the departmental website at [www.AgEds.iastate.edu/](http://www.AgEds.iastate.edu/).

## Graduate Study

The department offers the degrees of master of science, and doctor of philosophy, with a major in agricultural education; master of agriculture, with a major in professional agriculture; a specialization in agricultural extension education; opportunities for emphasis in international agricultural education; and a minor for students majoring in other curricula. Graduate students who have earned a bachelor's degree in an agricultural discipline may plan a course of study that leads to teacher certification. Candidates pursuing the master of science degree may do so by completing either a thesis or nonthesis program of study. The master of agriculture, professional agriculture degree is nonthesis only; this interdepartmental graduate program in professional agriculture is designed for off-campus students; see Off-Campus Credit Courses and Programs.

Students have an opportunity to develop competence in disciplinary foundations and ethics, program planning, learning theory, instructional methods, program leadership and administration, program evaluation, research methodologies, data analysis and interpretation, writing for publication, and grant proposal writing.

The department also cooperates in the international development studies option of the General Graduate Studies Program. Courses and workshops are offered, both on and off campus, for extension educators, teachers, and industry and government personnel.

## Curriculum in Agricultural and Life Sciences Education

Administered by the Department of Agricultural Education and Studies. Students majoring in Agricultural Education choose between two options: Teacher Certification or Communications.

**Total Degree Requirement: 128 cr.**

Only 65 cr. from a two-year institution may apply which may include up to 16 technical cr.; 9 P-NP cr. of free electives; 2.00 minimum GPA. Teacher certification requires 2.5 GPA at particular points in the program of study, and C- in selected courses.

**International Perspective: 3 cr.**

**U.S. Diversity: 3 cr.**

**Communications Proficiency:**

6 cr. of English composition with a C or better and 3 cr. of speech fundamentals with a C or better.

**Interpersonal and Public Communication 9.5 cr.:**

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
AGEDS 311	Presentation and Sales Strategies for Agricultural Audiences	3
LIB 160	Information Literacy	1
Total Credits		10

**Humanities and Social Sciences: 6 cr.**

PSYCH 230	Developmental Psychology	3
3 credits from approved American history list		3

**Ethics: 3 cr.**

From approved list.

**Math, Physical and Life Sciences: 19 cr.**

CHEM 163	College Chemistry	4
or CHEM 177	General Chemistry I	
CHEM 163L	Laboratory in College Chemistry	1
or CHEM 177L	Laboratory in General Chemistry I	
MATH 104	Introduction to Probability and Matrices	3
or MATH 150	Discrete Mathematics for Business and Social Sciences	
BIOL 211	Principles of Biology I	3
BIOL 211L	Principles of Biology Laboratory I	1
BIOL 212	Principles of Biology II	3
BIOL 212L	Principles of Biology Laboratory II	1
STAT 104	Introduction to Statistics	3
Total Credits		19

**Agricultural Sciences and Economics: 31 cr.**

All courses minimum grade C- is required.

ACCT 284	Financial Accounting	3
AGEDS 315	Personal, Professional, and Entrepreneurial Leadership in Agriculture	3
AGEDS 488	Methods of Teaching Agricultural Mechanics	3
AGRON 114	Principles of Agronomy	3
AGRON 154	Fundamentals of Soil Science	3
AN S 101	Working with Animals	2
AN S 114	Survey of the Animal Industry	2
ECON 101	Principles of Microeconomics	3
ECON 230	Farm Business Management	3
HORT 221	Principles of Horticulture Science	3
NREM 120	Introduction to Renewable Resources	3

Total Credits 31

**Electives:**

No more than 4 cr. of ECON 297 Internship, ( and/or 397) may count toward graduation.

**Options****Teacher Certification option: 40.5 cr.**

All courses minimum grade C is required.

AGEDS 110A	Agriculture and Life Sciences Education (Fall only)	0.5
AGEDS 211A	High School Agriculture Programs	1
AGEDS 310	Foundations of Agricultural Education Programs	3
AGEDS 401	Planning Agriculture and Life Sciences Education Programs	3
AGEDS 402	Methods of Teaching in Agriculture and Life Sciences	3
AGEDS 416	Pre-Student Teaching Experience in Agricultural Education	1
AGEDS 417	Supervised Teaching in Agriculture and Life Sciences	1-16
C I 202	Learning Technologies in the 7-12 Classroom	3
C I 204	Social Foundations of Education in the United States	3
C I 333	Educational Psychology	3
C I 406	Multicultural Foundations of School and Society: Introduction	3
SP ED 401	Teaching Secondary Students with Exceptionalities in General Education	3

Total Credits 27.5-42.5

**Communications option: 128 cr.**

Only 65 cr. from a two-year institution may apply which may include up to 16 technical cr.; 9 P-NP cr. of free electives; 2.00 minimum GPA.

**International Perspective: 3 cr.****U.S. Diversity: 3 cr.****Communications Proficiency:**

6 cr. of English composition with a C or better and 3 cr. of speech fundamentals with a C or better.

**Interpersonal and Public Communication 9.5 cr.:**

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
AGEDS 311	Presentation and Sales Strategies for Agricultural Audiences	3
LIB 160	Information Literacy	1

Total Credits 10

**Humanities and Social Sciences: 9 cr.**

ECON 101	Principles of Microeconomics	3
or ECON 102	Principles of Macroeconomics	3
Psychology elective		3
Approved humanities elective		3

**Ethics: 3 cr.**

From approved list.

**Math, Physical and Life Sciences: 23-24 cr.**

CHEM 163	College Chemistry	4
or CHEM 177	General Chemistry I	
CHEM 163L	Laboratory in College Chemistry	1
or CHEM 177L	Laboratory in General Chemistry I	
MATH 104	Introduction to Probability and Matrices	3
or MATH 150	Discrete Mathematics for Business and Social Sciences	
BIOL 211	Principles of Biology I	3
BIOL 212	Principles of Biology II	3
STAT 101	Principles of Statistics	3-4
or STAT 104	Introduction to Statistics	
Life science elective		3
BBMB 221	Structure and Reactions in Biochemical Processes	3-4
or PHYS 115	Physics for the Life Sciences	

**Agricultural Sciences and Economics: 32 cr.**

10 credits in a selected area of agricultural sciences and economics including 6 credits at the 300-400 level; 6 credits each in two additional areas of agricultural sciences and economics; 10 credits agricultural sciences and economics electives.

**Professional Communications: 32.5 cr.**

AGEDS 110A	Agriculture and Life Sciences Education (Fall only)	0.5
AGEDS 211	Early Field Based Experience	1
AGEDS 215	Career Seminar	1
AGEDS 315	Personal, Professional, and Entrepreneurial Leadership in Agriculture	3
AGEDS 412	Internship in Agricultural Education and Studies	2-6
21 credits from approved electives		21

**Electives: 12-13 cr.****Curriculum in Agricultural Studies**

Administered by the Department of Agricultural Education and Studies. Students are encouraged to develop one or more areas of concentration in agricultural sciences and economics.

**Total Degree Requirement: 128 cr.**

Only 65 cr. from a two-year institution may apply which may include up to 16 technical cr.; 9 P-NP cr. of free electives; 2.00 minimum GPA.

**International Perspective:**

3 cr. from approved list.

**U.S. Diversity:**

3 cr. from approved list.

**Communications Proficiency:**

6 cr. of English composition with a C or better and 3 cr. of speech fundamentals with a C or better.

**Communication/Library 12.5 cr.:**

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
AGEDS 311	Presentation and Sales Strategies for Agricultural Audiences	3
AGEDS 327	Advanced Communications for Agriculture and Life Sciences	3
LIB 160	Information Literacy	1
Total Credits		13

**Humanities and Social Sciences: 6 cr.**

ECON 101	Principles of Microeconomics	3
Plus 3 credit hours from approved humanities list		3
Total Credits		6

**Ethics: 3 cr.**

3 cr. from approved list.

**Math Physical and Life Sciences: 19 crs.**

BIOL 211	Principles of Biology I	3
BIOL 211L	Principles of Biology Laboratory I	1
BIOL 212	Principles of Biology II	3
BIOL 212L	Principles of Biology Laboratory II	1
CHEM 163	College Chemistry	4
or CHEM 177	General Chemistry I	
CHEM 163L	Laboratory in College Chemistry	1
or CHEM 177L	Laboratory in General Chemistry I	
MATH 104	Introduction to Probability and Matrices	3
or MATH 150	Discrete Mathematics for Business and Social Sciences	
STAT 104	Introduction to Statistics	3
Total Credits		19

**Agricultural Sciences and Economics: 43.5 cr.**

AGEDS 110B	Agricultural Studies (Fall only)	0.5
AGEDS 215	Career Seminar	1
AGEDS 315	Personal, Professional, and Entrepreneurial Leadership in Agriculture	3
AGEDS 450	Farm Management and Operation	3
AGEDS 451	Agricultural Law	4
AGRON 114	Principles of Agronomy	3
AGRON 154	Fundamentals of Soil Science	3
AGRON 212	Crop Growth, Productivity and Management	3
AN S 101	Working with Animals	2
AN S 114	Survey of the Animal Industry	2
ECON 230	Farm Business Management	3
ECON 235	Introduction to Agricultural Markets	3
ECON 334	Entrepreneurship in Agriculture	3
NREM 120	Introduction to Renewable Resources	3
or NREM 130	Natural Resources and Agriculture	
And 6 credit hours from AN S, any level.		6
Total Credits		42.5

**Other Required Course:**

ACCT 284 Financial Accounting

**Electives:**

No more than 4 cr. of ECON 297 Internship or 397 may count toward graduation.

**Preveterinary Studies**

Preparation for admission to veterinary medicine may be accomplished through the agricultural studies curriculum.

**Courses primarily for undergraduates:****AGEDS 110. Orientation.**

(1-0) Cr. 0.5. F.S.

Orientation to the department. Careers in agriculture.

**AGEDS 110A. Agriculture and Life Sciences Education (Fall only).**

(1-0) Cr. 0.5. F.S.

Orientation to the department. Careers in agriculture.

**AGEDS 110B. Agricultural Studies (Fall only).**

(1-0) Cr. 0.5. F.S.

Orientation to the department. Careers in agriculture.

**AGEDS 110C. Agricultural and Life Sciences exploration (Spring only).**

(1-0) Cr. 0.5. F.S.

Orientation to the department. Careers in agriculture.

**AGEDS 111. Dean's Leadership Seminar.**

(1-0) Cr. 1. F. Prereq: Permission of the Associate Dean for Academic Programs, College of Agriculture and Life Sciences

Introduction to leadership in agriculture and the life sciences, problem solving applied to current case studies, global perspective required by leaders, and designing programs to respond to societal needs in the agricultural and life sciences.

**AGEDS 112. Agriculture Biotechnology Colloquium.**

(1-0) Cr. 1. S. Prereq: Enrollment as an agricultural excellence scholar  
The scientific basis of biological and social sciences in agriculture.

**AGEDS 113. Access to Success Seminar I.**

(1-0) Cr. 1. Repeatable. F.S.

Course provides career skills, learning strategies and social and academic integration techniques to student members of Step Forward Learning Community. Utilization of campus resources, encouragement of self-exploration, and development of academic skills. Offered on a satisfactory-fail basis only.

**AGEDS 116. Initial Field Experience in Agricultural Education.**

(1-2) Cr. 1. F. Prereq: AGEDS majors only.

Field experience in a formal education setting designed to explore teaching as a career through guided observation and interviews, reflection, and on-campus dialogue.

**AGEDS 211. Early Field Based Experience.**

(1-0) Cr. 1. Repeatable, maximum of 3 credits. F.S.SS. Prereq: AGEDS 110

Forty hours on-site in an agricultural setting. Students will have an opportunity outside the classroom for career guidance, role modeling, and reflection on their observations that they can apply to their courses and other educational experiences.

**AGEDS 211A. High School Agriculture Programs.**

(1-0) Cr. 1. Repeatable, maximum of 3 credits. F.S.SS. Prereq: AGEDS 110

Forty hours on-site in an agricultural setting. Students will have an opportunity outside the classroom for career guidance, role modeling, and reflection on their observations that they can apply to their courses and other educational experiences.

**AGEDS 211C. Agricultural Industries and Agencies.**

(1-0) Cr. 1. Repeatable, maximum of 3 credits. F.S.SS. Prereq: AGEDS 110

Forty hours on-site in an agricultural setting. Students will have an opportunity outside the classroom for career guidance, role modeling, and reflection on their observations that they can apply to their courses and other educational experiences.

**AGEDS 215. Career Seminar.**

(1-0) Cr. 1. F.S. Prereq: Sophomore classification

Overview of career opportunities. Evaluation of interests and accomplishments and setting career goals. Development of job search and interviewing skills. Establishing networks of job contacts.

**AGEDS 310. Foundations of Agricultural Education Programs.**

(3-0) Cr. 3. S.

Historical development of agricultural education programs. Philosophic premises, program goals and objectives. Educational and social issues impacting the implementation of agricultural education programs.

**AGEDS 311. Presentation and Sales Strategies for Agricultural Audiences.**

(3-0) Cr. 3. F.S.

Utilizing instructional methods, techniques, and problem solving, presentation and sales strategies with agricultural audiences.

**AGEDS 312. Science With Practice.**

(1-6) Cr. 3. Repeatable. F.S. Prereq: College of Agriculture and Life Sciences majors only

A planned learning experience wherein each student and faculty mentor develops a learning agreement that encompasses specific activities and expectations. Students are engaged in reflective activities that include journals, micro-reflections, formal presentations, and a comprehensive portfolio.

**AGEDS 315. Personal, Professional, and Entrepreneurial Leadership in Agriculture.**

(3-0) Cr. 3. F.S.

Leadership principles and strategies to influence and motivate team members to achieve personal, professional, and entrepreneurial goals in production agriculture, agricultural education, and agricultural organizations.

**AGEDS 327. Advanced Communications for Agriculture and Life Sciences.**

(2-2) Cr. 3. F.S. Prereq: ENGL 250 or equivalent.

Development of written, oral, visual and electronic communications relevant to agriculture and life sciences. Students develop skills and perspectives consistent ethical and democratic principles applicable to agriculture, natural resource, and life science issues. Provide explanations of scientific and technical concepts to rural, industry, and urban audiences. Field trips.

**AGEDS 398. Cooperative Education.**

Cr. R. F.S.SS. *Prereq: Permission of the department cooperative education coordinator; junior classification*

Required of all cooperative education students. Students must register for this course prior to commencing each work period.

**AGEDS 401. Planning Agriculture and Life Sciences Education Programs.**

(Dual-listed with AGEDS 501). (3-0) Cr. 3. F. *Prereq: AGEDS 310*

Responsibilities of an agricultural education teacher, curriculum development, experiential learning opportunities including FFA and SAE, and assessment and maintenance of program quality.

**AGEDS 402. Methods of Teaching in Agriculture and Life Sciences.**

(Dual-listed with AGEDS 502). (3-0) Cr. 3. F. *Prereq: Concurrent enrollment in AGEDS 401*

Topics include: principles of teaching and learning, individualized and group methods, application of learning, instructional management, special populations, and evaluation.

**AGEDS 412. Internship in Agricultural Education and Studies.**

Cr. 2-6. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: AGEDS 211, junior classification in AGEDS and permission of instructor*

A supervised two to twelve week learning experience in an approved learning setting with application to educational, agricultural and/or environmental practices and principles. Nonmajor graduate credit.

**AGEDS 414. Developing Agricultural Education Programs in Non-Formal Settings.**

(2-0) Cr. 2. S. *Prereq: AGEDS 211 and permission of instructor*

Basic concepts in planning, conducting, and evaluating educational programs in non-formal settings. Includes programming for youth and adults in Extension, agricultural industry, and related agencies. Nonmajor graduate credit.

**AGEDS 416. Pre-Student Teaching Experience in Agricultural Education.**

Cr. 1. F.S. *Prereq: AGEDS 211, AGEDS 402 and admission to teacher education program*

A forty hour field-based experience in an approved secondary agricultural education program. Concurrent enrollment in 417 is required.

**AGEDS 417. Supervised Teaching in Agriculture and Life Sciences.**

Cr. 1-16. Repeatable. F.S. *Prereq: AGEDS 211, AGEDS 402 and admission to teacher education program*

Supervised teaching in public schools.

**AGEDS 450. Farm Management and Operation.**

(2-4) Cr. 3. Repeatable, maximum of 9 credits. F.S.SS. *Prereq: Econ 235, Econ 230, junior classification*

Participation in the management and operation of a diversified Iowa farm. The class is responsible for the plans, records, and decisions for buying and selling the farm's livestock, crops, and equipment. Special speakers on current topics. May be taken for credit 3 times at different times of the year with permission of the instructor. Nonmajor graduate credit.

**AGEDS 451. Agricultural Law.**

(3-2) Cr. 4. S. *Prereq: Senior classification*

The legal framework impinging upon decision-making by firms, families, and individuals, real and personal property, contracts, secured transactions, negotiable instruments, debtor-creditor relations, bankruptcy, farm income tax organization of firms, intergenerational property transfers, trusts and farm estate planning, civil and criminal liabilities, environmental law, federal and state regulatory powers. Nonmajor graduate credit.

**AGEDS 465. Horticulture Enterprise Management.**

(Cross-listed with HORT). (1-6) Cr. 3. F. *Prereq: Econ 230, 6 credits of horticulture, and jr classification*

Participation in the management and operation of fruit and vegetable enterprises for local markets. The class is responsible for the plans, records, and decision for planting, operating, harvesting, and marketing fruit and vegetables. Nonmajor graduate credit.

**AGEDS 465A. Horticulture Enterprise Management - Planting.**

(Cross-listed with HORT). (1-6) Cr. 3. S. *Prereq: Econ 230, 6 credits of horticulture, and jr classification*

Participation in the management and operation of fruit and vegetable enterprises for local markets. The class is responsible for the plans, records, and decision for planting, operating, harvesting, and marketing fruit and vegetables. Nonmajor graduate credit.

**AGEDS 465B. Horticulture Enterprise Management: Harvesting.**

(Cross-listed with HORT). (1-6) Cr. 3. SS. *Prereq: Econ 230, 6 credits of horticulture, and jr classification.*

Participation in the management and operation of fruit and vegetable enterprises for local markets. The class is responsible for the plans, records, and decision for planting, operating, harvesting, and marketing fruit and vegetables. Nonmajor graduate credit.

**AGEDS 465C. Horticulture Enterprise Management: Marketing.**

(Cross-listed with HORT). (1-6) Cr. 3. F. *Prereq: Econ 230, 6 credits of horticulture, and jr classification.*

Participation in the management and operation of fruit and vegetable enterprises for local markets. The class is responsible for the plans, records, and decision for planting, operating, harvesting, and marketing fruit and vegetables. Nonmajor graduate credit.

**AGEDS 488. Methods of Teaching Agricultural Mechanics.**

(2-3) Cr. 3. F.S.

Methods and management techniques in agricultural mechanics laboratories. Emphasis will be on safety, mechanical skills development and management of students, facilities, equipment, and materials. Nonmajor graduate credit.

**AGEDS 490. Independent Study in Agricultural Education and Studies.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490A. Philosophy, Curriculum, and Methods.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490B. Leadership, Evaluation, and Administration.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490C. Business, Industry, and Production Agriculture.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490D. Extension and International Agriculture.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490E. Instructional Technology.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490F. Environmental Issues.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490G. Entrepreneurship.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490H. Independent Study in Agricultural Education and Studies, Honors.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 490I. Communications.**

Cr. 1-3. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Junior or senior classification, permission of instructor*

**AGEDS 496. Agricultural Travel Course.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: Permission of instructor*  
Limited enrollment. Extended field trips to study agriculture and education related topics. Location and duration of trips will vary. Pre-trip sessions arranged. Trip expenses paid by students. Nonmajor graduate credit.

**AGEDS 496A. International.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: Permission of instructor*  
Limited enrollment. Extended field trips to study agriculture and education related topics. Location and duration of trips will vary. Pre-trip sessions arranged. Trip expenses paid by students. Nonmajor graduate credit.  
Meets International Perspectives Requirement.

**AGEDS 496B. Domestic.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: Permission of instructor*  
Limited enrollment. Extended field trips to study agriculture and education related topics. Location and duration of trips will vary. Pre-trip sessions arranged. Trip expenses paid by students. Nonmajor graduate credit.

**AGEDS 499. Undergraduate Research.**

Cr. arr. F.S.SS. *Prereq: Permission of instructor, adviser, and departmental chair*  
Research experience in agricultural education and studies with application to selected problems.

**Courses primarily for graduate students, open to qualified undergraduates:****AGEDS 501. Planning Agriculture and Life Sciences Education Programs.**

(Dual-listed with AGEDS 401). (3-0) Cr. 3. F. *Prereq: AGEDS 310*  
Responsibilities of an agricultural education teacher, curriculum development, experiential learning opportunities including FFA and SAE, and assessment and maintenance of program quality.

**AGEDS 502. Methods of Teaching in Agriculture and Life Sciences.**

(Dual-listed with AGEDS 402). (3-0) Cr. 3. F. *Prereq: Concurrent enrollment in AGEDS 501*

Topics include principles of teaching and learning, individualized and group methods, application of learning, instructional management, special populations, and evaluation.

**AGEDS 510. Introduction to Research in Agricultural Education.**

(3-0) Cr. 3. S. *Prereq: Graduate classification*

Determining your research focus; developing research problems and objectives; reviewing the literature and establishing a theoretical framework; establishing procedures for data collection and analysis; ethical issues.

**AGEDS 511. Professional Agricultural Presentation Practices.**

(3-0) Cr. 3. F.SS. *Prereq: Graduate Classification*

The identification and use of key planning, delivery and evaluation of presentations using audience engagement techniques focused on research-based principles and field-based practices of professional presenters in agriculture and the life sciences.

**AGEDS 514. Organizing Agricultural Information for Professional and Scientific Meetings.**

(1-2) Cr. 2. F. *Prereq: Graduate classification in agriculture*

Concepts and practices in planning, preparing, and presenting materials used in professional meetings and scientific papers by agriculturalists with special emphasis on computerized delivery methods.

**AGEDS 520. Instructional Methods for Adult and Higher Education in Agriculture and Natural Resources.**

(3-0) Cr. 3. S. *Prereq: Graduate classification*

Theory and practice of adult education. Teaching and learning in formal and non-formal instructional programs for adult learners.

**AGEDS 524. Program Development and Evaluation in Agricultural and Extension Education.**

(3-0) Cr. 3. F. *Prereq: Graduate classification*

Theories and practice of program planning for nonformal education. Addresses use of program logic modeling and considers critical theories of planning to address power and interests in program development, needs assessment, and evaluation.

**AGEDS 533. Introduction to Learning Theory in Agricultural Education.**

(3-0) Cr. 3. S. *Prereq: Graduate classification*

Introduction to a variety of theoretical perspectives of learning and how they may be used within the context of agricultural education. Emphasis will be on the major domains of learning, developmental considerations, basic assumptions, concepts, and principles of various learning theories; understanding how each theoretical perspective may be used in both formal and non-formal educational settings.

**AGEDS 550. Foundations of Agricultural Education.**

(3-0) Cr. 3. F. *Prereq: Graduate classification*

Philosophical premises, ethical principles, historical development, contextual applications, and knowledge bases for agricultural education.

**AGEDS 552. Data Analysis and Interpretation.**

(2-0) Cr. 2. F. *Prereq: AGEDS 510*

Strategies for analyzing, interpreting, and reporting quantitative research data in the social and behavioral sciences.

**AGEDS 561. Technology Transfer and the Role of Agricultural and Extension Education.**

(3-0) Cr. 3. Alt. S., offered 2012. *Prereq: Graduate classification*

The impact of agricultural and extension education processes on development and their role in the transfer of agricultural technology. Utilizing situational analysis techniques to analyze and solve problems in international agricultural education programs.

Meets International Perspectives Requirement.

**AGEDS 590. Special Topics in Agricultural Education.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590A. Curriculum.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590B. Methods.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590C. Philosophy.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590D. Evaluation.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590E. Administration.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590F. Leadership.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590G. Guidance.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590I. Instructional Technology.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590J. Extension.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590K. International Agriculture.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 590L. Program Planning.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593. Workshop in Agricultural Education.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593A. Curriculum.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593B. Methods.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593C. Evaluation.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593D. Administration.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593E. Leadership.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593F. Extension.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593G. Program Planning.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593H. Instructional Technology.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 593M. Biotechnology Workshop.**

Cr. 1-3. Repeatable. F.S.SS. *Prereq: 12 credits in agricultural education*

**AGEDS 599. Creative Component.**

Cr. arr. Repeatable. F.S.SS.

For nonthesis masters degree programs.

**Courses for graduate students:****AGEDS 615. Seminar in Agricultural Education.**

(1-0) Cr. 1. Repeatable. F.S.SS.

Offered on a satisfactory-fail basis only.

**AGEDS 615A. Writing for publication.**

(1-0) Cr. 1. Repeatable. F.S.SS.

Offered on a satisfactory-fail basis only.

**AGEDS 615B. Ethics.**

(1-0) Cr. 1. Repeatable. F.S.SS.

Offered on a satisfactory-fail basis only.

**AGEDS 615C. Grant writing.**

(1-0) Cr. 1. Repeatable. F.S.SS.

Offered on a satisfactory-fail basis only.

**AGEDS 615D. Career planning.**

(1-0) Cr. 1. Repeatable. F.S.SS.

Offered on a satisfactory-fail basis only.

**AGEDS 615E. Contemporary issues.**

(1-0) Cr. 1. Repeatable. F.S.SS.

Offered on a satisfactory-fail basis only.

**AGEDS 617. Professional Internship for Agricultural Educators.**

Cr. 1-6. Repeatable, maximum of 6 credits. F.S.SS. *Prereq: Permission of instructor*

Analysis of the roles and activities of professionals in agricultural education.

Supervised professional field-based experience in public and private settings.

Offered on a satisfactory-fail basis only.

**AGEDS 625. Leadership, Administration, Supervision and Management of Agricultural Education Programs.**

(3-0) Cr. 3. Alt. F., offered 2012. *Prereq: Graduate classification*

Principles and best practices for leading, administering, supervising, and managing agricultural education programs. Analyzing selected case studies that apply theory to practice in agricultural situations.

**AGEDS 699. Research.**

Cr. arr. Repeatable.