

# AGRICULTURAL AND LIFE SCIENCES EDUCATION

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. (<http://catalog.iastate.edu/previouscatalogs/2020-2021/collegeofagricultureandlifesciences/>)

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/](http://www.ageds.iastate.edu/). (<http://www.ageds.iastate.edu/>)

## 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.

### Teacher Certification Option

#### 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 a minimum grade of C- in selected courses.

#### 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.

#### Interpersonal and Public Communication 10 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
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 140	College Algebra	3
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: 34 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
AN S 101	Working with Animals	2
AN S 114	Survey of the Animal Industry	2
AGRON 181	Introduction to Crop Science	3
AGRON 182	Introduction to Soil Science	3
ECON 230	Farm Business Management	3
HORT 221	Principles of Horticulture Science	3
NREM 120	Introduction to Renewable Resources	3
Select 6 Credits from Approved List		6
<b>Total Credits</b>		<b>34</b>

**Professional Credits -Teacher Certification option: 32 cr.**

All courses minimum grade C is required.

AGEDS 110A	Agriculture and Life Sciences Education (Fall only)	1
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	14
EDUC 333	Educational Psychology	3
SP ED 401	Teaching Secondary Students with Exceptionalities in General Education	3
<b>Total Credits</b>		<b>32</b>

**Electives:** Select courses to get to 128 credits.

**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. 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.

**Interpersonal and Public Communication 13 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
AGEDS 327	Survey of Agriculture and Life Sciences Communication	3

**Total Credits** **13**

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

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

**Total Credits** **9**

**Ethics: 3 cr. from approved list****Math, Physical and Life Sciences: 17 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 140	College Algebra	3
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	

**Total Credits** **17-18**

**Agricultural Sciences and Economics: 33 cr.**

12 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 technical agriculture; 9 credits agricultural sciences and economics electives.

**Professional Communications: 33 cr.**

AGEDS 110A	Agriculture and Life Sciences Education (Fall only)	1
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 of communication electives from approved list		21

**Total Credits** **29-33**

**Electives: 14 cr.****Agricultural and Life Sciences Education, B.S - communications option**

**First Year**

Fall	Credits Spring	Credits
AGEDS 110	1 BIOL 212	3
Ag elective	3 ENGL 250	3
BIOL 211	3 Psych elective	3
ENGL 150	3 Free Elective	3
LIB 160	1 Ag Elective	3
ECON 101 or 102	3	
MATH 140	3	
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	<b>17</b>	<b>15</b>

**Second Year**

Fall	Credits Spring	Credits
CHEM 163	4 Prof Comm Elective	3
CHEM 163L	1 Ag Elective	6
Prof Comm Elective	3 Intl Perspectives Elective	3
Ag Elective	3 AGEDS 215	1
Ethics Elective	3 AGEDS 211	1
STAT 104	3 AGEDS 327	3
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	<b>17</b>	<b>17</b>

**Third Year**

Fall	Credits Spring	Credits
AGEDS 315	3 Prof Comm Elective	6
Prof Comm Elective	3 Ag Elective	6
U.S. Diversity Elective	3 AGEDS 311	3
Ag Elective	3 Humanities Elective	3
Elective	3	
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	<b>15</b>	<b>18</b>

**Fourth Year**

Fall	Credits Spring	Credits
AGEDS 412	6 Prof Comm Elective	3
Ag Elective	6 Elective	6-7
Prof Comm Elective	3 Ag Elective	5
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	<b>15</b>	<b>14-15</b>

\* Communications Option: In addition, students would have to meet requirements in the following areas.  
 Select one technical agricultural area in which you will complete at least 12 credits (6 of these must be 300-400 level courses)  
 Select two other technical agricultural areas in which you will complete at least 6 credits (2 courses) in each area.  
 Select 9 credits of any agricultural science and economics electives.  
 A 2.0 grade point average is required.

**Agricultural and Life Sciences Education, B.S - teacher certification option**

**Freshman**

Fall	Credits Spring	Credits
AGEDS 110A	1 ENGL 250	3
AN S 114	2 ECON 101	3
AN S 101	2 AGRON 181	3
BIOL 211	3 BIOL 212	3
BIOL 211L	1 BIOL 212L	1
ENGL 150	3 Choose from Approved Ag Elective List	3
LIB 160	1	
MATH 140	3	
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	<b>16</b>	<b>16</b>

**Sophomore**

Fall	Credits Spring	Credits
CHEM 163	4 PSYCH 230	3
CHEM 163L	1 Ethics Elective	3
NREM 120	3 STAT 104	3
Choose from Approved Ag Elective List	3 American History Elective	3
ACCT 284	3 AGEDS 211	1
AGEDS 310	3 HORT 221	3
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	<b>17</b>	<b>16</b>

**Junior**

Fall	Credits Spring	Credits
ECON 230	3 Intl Perspectives Elective	3
AGEDS 315	3 AGEDS 311	3
EDUC 333	3 Elective	6
AGEDS 488	3 AGRON 182	3
Elective	3	
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	<b>15</b>	<b>15</b>

**Senior**

Fall	Credits Spring	Credits
AGEDS 401	3 AGEDS 416	1
AGEDS 402	3 AGEDS 417	1-16
Elective	6	
SP ED 401	3	
US Diversity	3	
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	<b>18</b>	<b>2-17</b>

## 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. The minor must include at least 9 credits that are not used to meet any other department, college, or university requirement. A minor will not meet state licensure requirements for teaching high school agriculture. 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 312	Science With Practice	3
AGEDS 315	Personal, Professional, and Entrepreneurial Leadership in Agriculture	3
AGEDS 327	Survey of Agriculture and Life Sciences Communication	3
AGEDS 388	Agricultural Mechanics Applications	3
AGEDS 402	Methods of Teaching in Agriculture and Life Sciences	3
AGEDS 412	Internship in Agricultural Education and Studies	2-6
AGEDS 414	Developing Agricultural Education Programs in Non-Formal Settings	2
AGEDS 450	Farm Management and Operation	3
AGEDS 451	Agricultural Law	3
AGEDS 461	Technology Transfer and the Role of Agricultural and Extension Education	3
AGEDS 488	Methods of Teaching Agricultural Mechanics	3
AGEDS 490	Independent Study in Agricultural Education and Studies	1-3
AGEDS 496	Agricultural Travel Course	1-3
AGEDS 499	Undergraduate Research	arr †

† Arranged with instructor.

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

## Graduate Study

The department offers the degrees of master of science and doctor of philosophy, with a major in agricultural education; 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.

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.

### Courses primarily for undergraduates:

#### AGEDS 110: Orientation

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

Orientation to the department. Careers in agriculture.

#### AGEDS 110A: Agriculture and Life Sciences Education (Fall only)

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

Orientation to the department. Careers in agriculture.

#### AGEDS 110B: Agricultural Studies (Fall only)

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

Orientation to the department. Careers in agriculture.

#### AGEDS 110C: Agricultural and Life Sciences exploration

(1-0) Cr. 1. 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. F.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: Survey of Agriculture and Life Sciences Communication**

(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 a set of communication skills applicable to agriculture and life science contexts and for various audiences.

**AGEDS 388: Agricultural Mechanics Applications**

(2-3) Cr. 3. Repeatable, maximum of 2 times. F.S.SS.

Introduction to SMAW (Arc), GMAW (Mig), GTAW (Tig), Oxy-Fuel welding, Oxy-Fuel cutting, and Plasma cutting theories and applications. Emphasis will be on theoretical foundation of welding, safety, welding skill development, and management of equipment, and materials. Introduction to small engines and applications. Emphasis will be on theory of operating systems, maintenance, troubleshooting, failure analysis, and safety.

**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: 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, communications and/or environmental practices and principles.

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

(2-0) Cr. 2. S.

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.

**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.

**AGEDS 451: Agricultural Law**

(3-0) Cr. 3. 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.

**AGEDS 461: Technology Transfer and the Role of Agricultural and Extension Education**

(Dual-listed with AGEDS 561). (3-0) Cr. 3. S.

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 475: Agri-Marketing and Communications Competition**

(2-0) Cr. 1-2. Repeatable, maximum of 6 credits. F.S.

*Prereq: Admission by invitation.*

Specialized training in communication and agricultural marketing knowledge and skills in preparation for intercollegiate competition. Maximum of 6 credits can be applied toward graduation.

**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.

**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.

**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.

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.

**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 401*

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 517: Student Teacher Education Practicum**

Cr. 2-6. F.S.

*Prereq: AGEDS 590B, AGEDS 501, AGEDS 502 Admission to the University Teacher Education program*

Supervised 5th-12th grade public and private schools teaching practicum for graduate students in Masters degree teacher certification program.  
NA

**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 561: Technology Transfer and the Role of Agricultural and Extension Education**

(Dual-listed with AGEDS 461). (3-0) Cr. 3. S.

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 even-numbered years.

*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.