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/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 has two options, production and management and multidisciplinary. Graduates are prepared 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/)

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.

University Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 150</td>
<td>Critical Thinking and Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 250</td>
<td>Written, Oral, Visual, and Electronic Composition</td>
<td>3</td>
</tr>
<tr>
<td>LIB 160</td>
<td>Information Literacy</td>
<td>1</td>
</tr>
<tr>
<td>US</td>
<td>Diversity</td>
<td>3</td>
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</tbody>
</table>

Total Credits: 13

CALS Requirements:

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEDS 311</td>
<td>Presentation and Sales Strategies for Agricultural Audiences</td>
<td>3</td>
</tr>
<tr>
<td>American History Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>Principles of Biology I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 211L</td>
<td>Principles of Biology Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 212</td>
<td>Principles of Biology II</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 212L</td>
<td>Principles of Biology Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 163</td>
<td>College Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 163L</td>
<td>Laboratory in College Chemistry</td>
<td>1</td>
</tr>
<tr>
<td>ECON 101</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>Ethics Elective from Approved List</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>MATH 140</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td>STAT 104</td>
<td>Introduction to Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Major Specific Requirements - Agricultural Sciences and Economics (C- or higher required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 284</td>
<td>Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Ag Elective From Approved List</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>AGEDS 315</td>
<td>Personal, Professional, and Entrepreneurial Leadership in Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>AGEDS 488</td>
<td>Methods of Teaching Agricultural Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>AGRON 181</td>
<td>Introduction to Crop Science</td>
<td>3</td>
</tr>
</tbody>
</table>
AGRON 182  Introduction to Soil Science  3
AN S 101  Working with Animals  2
AN S 114  Survey of the Animal Industry  2
HORT 221  Principles of Horticulture Science  3
ECO 230  Farm Business Management  3
NREM 120  Introduction to Renewable Resources  3

Total Credits  34

Major Specific Requirements - Professional Credits (C or higher required except Psych 230):
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  1-16

EDUC 333  Educational Psychology  3
PSYCH 230  Developmental Psychology  3
SP ED 401  Teaching Secondary Students with Exceptionalities in General Education  3

Total Credits  22-37

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.

University Requirements:
ENGL 150  Critical Thinking and Communication  3
ENGL 250  Written, Oral, Visual, and Electronic Composition  3
International Perspectives  3
LIB 160  Information Literacy  1
US Diversity  3

Total Credits  13

CALS Requirements: Communications Proficiency:
6 cr. of English composition with a C or better and 3 cr. of speech fundamentals with a C or better.

AGEDS 311  Presentation and Sales Strategies for Agricultural Audiences  3
BIOL 211  Principles of Biology I  3
BIOL 212  Principles of Biology II  3
CHEM 163  College Chemistry  4
CHEM 163L  Laboratory in College Chemistry  1
ECO 101  Principles of Microeconomics  3
or ECON 102  Principles of Macroeconomics  3
Ethics Elective from Approved List  3
Humanities Elective from Approved List  3
MATH 140  College Algebra  3
STAT 104  Introduction to Statistics  3

Total Credits  29

Major Specific Requirements - Professional Communications:
AGEDS 110A  Agriculture and Life Sciences Education (Fall only)  1
AGEDS 211C  Agricultural Industries and Agencies  1
AGEDS 215  Career Seminar  1
AGEDS 315  Personal, Professional, and Entrepreneurial Leadership in Agriculture  3
AGEDS 327  Survey of Agriculture and Life Sciences Communication  3
AGEDS 412  Internship in Agricultural Education and Studies  6
Psych Elective From Approved List  3
Communications Elective From Approved List  21

Total Credits  39

Major Specific Requirements - Agricultural Sciences and Economics:
Select one CALS area, take 12 credits including 6 credits at 300-400 level  12
Select additional CALS area, take 6 credits any level  6
Select additional CALS area, take 6 credits any level  6
Select any CALS area, take 9 credits any level  9

Total Credits  33

Electives: Select courses to get to 128 credits.

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
**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fall Credits</th>
<th>Spring Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 163</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 163L</td>
<td>1</td>
<td>6</td>
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<tr>
<td>Prof Comm Elective</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Ag Elective</td>
<td>3 AGEDS 215</td>
<td>1</td>
</tr>
<tr>
<td>Ethics Elective</td>
<td>3 AGEDS 211</td>
<td>1</td>
</tr>
<tr>
<td>STAT 104</td>
<td>3 AGEDS 327</td>
<td>3</td>
</tr>
<tr>
<td>Prof Comm Elective</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Intl Perspectives Elective</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Ag Elective</td>
<td>3 AGEDS 211</td>
<td>1</td>
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<tr>
<td>Elective</td>
<td>3 AGEDS 327</td>
<td>3</td>
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<td><strong>15</strong></td>
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**Sophomore**

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<tr>
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<th>Spring Credits</th>
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<tbody>
<tr>
<td>CHEM 163</td>
<td>4 PSYCH 230</td>
<td>3</td>
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<tr>
<td>CHEM 163L</td>
<td>1</td>
<td>3</td>
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<tr>
<td>NREM 120</td>
<td>3 STAT 104</td>
<td>3</td>
</tr>
<tr>
<td>Choose from Approved Ag Elective List</td>
<td>3 American History Elective</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 284</td>
<td>3 AGEDS 211</td>
<td>1</td>
</tr>
<tr>
<td>AGEDS 310</td>
<td>3 HORT 221</td>
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**Junior**

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ECON 230</td>
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<td>3</td>
</tr>
<tr>
<td>AGEDS 315</td>
<td>3 AGEDS 311</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 333</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>AGEDS 488</td>
<td>3 AGRON 182</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>6-7</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>6-7</td>
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<tr>
<td>Elective</td>
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<td>6-7</td>
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**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Fall Credits</th>
<th>Spring Credits</th>
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</thead>
<tbody>
<tr>
<td>AGEDS 401</td>
<td>3 AGEDS 416</td>
<td>1</td>
</tr>
<tr>
<td>AGEDS 402</td>
<td>3 AGEDS 417</td>
<td>1-16</td>
</tr>
<tr>
<td>Elective</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>SP ED 401</td>
<td>3</td>
<td>3</td>
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<tr>
<td>US Diversity</td>
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<td>3</td>
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<tr>
<td><img src="#" alt="Credit totals" /></td>
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<td>2-17</td>
</tr>
</tbody>
</table>

**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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Fall Credits</th>
<th>Spring Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEDS 211</td>
<td>Early Field Based Experience</td>
<td>1</td>
</tr>
<tr>
<td>AGEDS 310</td>
<td>Foundations of Agricultural Education Programs</td>
<td>3</td>
</tr>
</tbody>
</table>
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.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 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  
Fifty 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  
Fifty 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  

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  
(3-0) 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.S.S.
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 451: 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.S.S.
Prereq: Junior or senior classification, permission of instructor

AGEDS 490A: Philosophy, Curriculum, and Methods
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.S.S.
Prereq: Junior or senior classification, permission of instructor

AGEDS 490B: Leadership, Evaluation, and Administration
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.S.S.
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.S.S.
Prereq: Junior or senior classification, permission of instructor

AGEDS 490D: Extension and International Agriculture
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.S.S.
Prereq: Junior or senior classification, permission of instructor

AGEDS 490E: Instructional Technology
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.S.S.
Prereq: Junior or senior classification, permission of instructor

AGEDS 490F: Environmental Issues
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.S.S.
Prereq: Junior or senior classification, permission of instructor

AGEDS 490G: Entrepreneurship
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.S.S.
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.S.S.
Prereq: Junior or senior classification, permission of instructor

AGEDS 490I: Communications
Cr. 1-3. Repeatable, maximum of 6 credits. F.S.S.S.
Prereq: Junior or senior classification, permission of instructor
AGEDS 496: Agricultural Travel Course  
Cr. 1-3. Repeatable. F.S.S.  
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.S.  
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.S.  
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.S.  
Prereq: Permission of instructor, advisor, 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.S.S.  
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 590H: 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.S.
For nonthesis masters degree programs.

Courses for graduate students:

AGEDS 615: Seminar in Agricultural Education
(1-0) Cr. 1. Repeatable. F.S.S.
Offered on a satisfactory-fail basis only.

AGEDS 615A: Writing for publication
(1-0) Cr. 1. Repeatable. F.S.S.
Offered on a satisfactory-fail basis only.

AGEDS 615B: Ethics
(1-0) Cr. 1. Repeatable. F.S.S.
Offered on a satisfactory-fail basis only.

AGEDS 615C: Grant writing
(1-0) Cr. 1. Repeatable. F.S.S.
Offered on a satisfactory-fail basis only.

AGEDS 615D: Career planning
(1-0) Cr. 1. Repeatable. F.S.S.
Offered on a satisfactory-fail basis only.

AGEDS 615E: Contemporary issues
(1-0) Cr. 1. Repeatable. F.S.S.
Offered on a satisfactory-fail basis only.

AGEDS 617: Professional Internship for Agricultural Educators
Cr. 1-6. Repeatable, maximum of 6 credits. F.S.S.
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.