Agricultural Education (BS): Agronomy Concentration

To see more about what you will learn in this program, visit the Learning Outcomes website (https://apps.oirp.ncsu.edu/pgas/).

The Agricultural Education major within the Department of Agricultural and Human Sciences prepares graduates to teach agriculture, serve as FFA advisors, and supervise agricultural experiences (SAE) in public and private schools.

The Agronomy concentration is one of seven concentrations offered for the Bachelor of Science in Agricultural Education.

- Students interested in Agricultural Education may be eligible to apply for the North Carolina Teaching Fellows Program at NC State.
- Student teachers of agriculture may apply for Ed Scholars through NC State.
- Many alumni pursue careers in middle and high schools, universities and community colleges, county extension offices, and in the agricultural industry.

Teacher Licensure


For more information about this program, including contact information, visit our website (https://cals.ncsu.edu/agricultural-and-human-sciences/undergraduate/#agricultural-education-major).

Contact

Dr. Travis Park
Director of Undergraduate Programs
919.515.9441
tdpark@ncsu.edu

Plan Requirements

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<td>AEE 103</td>
<td>Fundamentals of Agricultural and Extension Education</td>
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<td>or ALS 103</td>
<td>Freshman Transitions and Diversity in Agriculture &amp; Life Sciences</td>
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Sciences

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<td>Introductory Biology: Ecology, Evolution, and Biodiversity</td>
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<td>BIO 183</td>
<td>Introductory Biology: Cellular and Molecular Biology</td>
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<td>CH 101 &amp; CH 102</td>
<td>Chemistry - A Molecular Science and General Chemistry Laboratory</td>
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Agricultural Education

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<td>Computer Applications and Information Technology in Agricultural &amp; Extension Ed 1</td>
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Other Professional Education
### Agricultural Education (BS): Agronomy Concentration

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<td>ELP 344</td>
<td>School and Society</td>
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<tr>
<td>ED 311 &amp; ED 312</td>
<td>Classroom Assessment Principles and Practices and Classroom Assessment Principles and Practices Professional Learning Lab</td>
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#### Teaching Content Courses

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<td>or TDE 110</td>
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<td>ANS 150 &amp; ANS 151</td>
<td>Introduction to Animal Science and Introduction to Animal Science Lab</td>
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<tr>
<td>SSC 200 &amp; SSC 201</td>
<td>Soil Science and Soil Science Laboratory</td>
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Select one of the following Economics courses:

- ARE 201 | Introduction to Agricultural & Resource Economics | 3     |
- EC 201 | Principles of Microeconomics | 3     |
- EC 205 | Fundamentals of Economics | 3     |

#### Agronomy Concentration

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<td>Soil Fertility and Nutrient Management</td>
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<td>Soil and Plant Nutrient Analysis</td>
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#### GEP Courses In The Major

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- A grade of C- or higher is required.
- Courses graded "S" for Satisfactory are allowed.

#### Free Electives

3

#### Total Hours

120

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1  A grade of C- or higher is required.
2  Courses graded "S" for Satisfactory are allowed.
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<td>ARE 301</td>
<td>Intermediate Microeconomics</td>
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<td>ARE 303</td>
<td>Farm Management</td>
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<td>ARE 304</td>
<td>Agribusiness Management</td>
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<td>ARE 306</td>
<td>Agricultural Law</td>
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<td>ARE 309</td>
<td>Environmental Law &amp; Economic Policy</td>
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<td>ARE 311</td>
<td>Agricultural Markets</td>
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<td>ARE 312</td>
<td>Agribusiness Marketing</td>
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<td>ARE 321</td>
<td>Agricultural Financial Management</td>
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<td>ARE 323</td>
<td>Agribusiness Finance</td>
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<td>ARE 332</td>
<td>Human Resource Management for Agribusiness</td>
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<td>ARE 336</td>
<td>Introduction to Resource and Environmental Economics</td>
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<td>ARE 345</td>
<td>Global Agribusiness Management</td>
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<td>ARE 370</td>
<td>Agribusiness New Venture Development</td>
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<td>ARE 413</td>
<td>Applied Agribusiness Marketing</td>
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<td>ARE 415</td>
<td>Introduction to Commodity Futures Markets</td>
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<td>ARE 420</td>
<td>Taxation in Agriculture, Production, and Agribusiness</td>
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<td>ARE 425</td>
<td>Contracts and Organizations in Agriculture</td>
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<td>ARE 433</td>
<td>U.S. Agricultural Policy</td>
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<td>ARE 444</td>
<td>Ethics in Agribusiness</td>
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<td>ARE 448</td>
<td>International Agricultural Trade</td>
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<td>ARE 455</td>
<td>Agribusiness Analytics</td>
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<td>ARE 470</td>
<td>Agribusiness Entrepreneurship Clinical Skills Development</td>
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<td>ARE 475</td>
<td>Food Policy</td>
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<td>External Learning Experience</td>
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<td>ARE 493</td>
<td>Special Problems/ Research Exploration</td>
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<td>ARE 494</td>
<td>Agribusiness Study Abroad</td>
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<td>EC 336</td>
<td>Introduction to Resource and Environmental Economics</td>
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**Group C - Applied Sci & Tech**

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<td>AEE 208</td>
<td>Agricultural Biotechnology: Issues and Implications</td>
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<td>Introduction to Cooperative Extension</td>
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<td>Communication Methods and Media</td>
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<td>Leadership Development in Agriculture and Life Sciences</td>
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<td>Planning and Delivering Non-Formal Education</td>
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<td>Personal Leadership Development in Agriculture and Life Sciences</td>
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<td>Developing Team Leadership in Agriculture and Life Sciences</td>
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<td>Leadership and Management of Volunteers in Agricultural and Extension Education</td>
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<td>Professional Presentations in Agricultural Organizations</td>
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<td>Advanced Issues in Extension Education</td>
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PO 340  Live Poultry and Poultry Product Evaluation, Grading, and Inspection  3
PO 410  Production and Management of Game Birds in Confinement  3
PO 411  Agrosecurity  3
PO 421  Commercial Egg Production  3
PO 425  Feed Manufacturing Technology  3
PO 433  Poultry Processing and Products  3
PO 525  Feed Manufacturing Technology  3
PO 533  Poultry Processing and Products  3
PP 315  Principles of Plant Pathology  4
PP 318  Forest Pathology  3
PP 470  Advanced Turfgrass Pest Management  2
SSC 185  Land and Life  3
SSC 341  Soil Fertility and Nutrient Management  3
SSC 342  Soil and Plant Nutrient Analysis  1
SSC 421  Role of Soils in Environmental Management  3
SSC 440  Geographic Information Systems (GIS) in Soil Science and Agriculture  3
SSC 442  Soil and Environmental Biogeochemistry  3
SSC 452  Soil Classification  4
SSC 461  Soil Physical Properties and Plant Growth  3
SSC 462  Soil-Crop Management Systems  3
SSC 470  Wetland Soils  3
SSC 540  Geographic Information Systems (GIS) in Soil Science and Agriculture  3
SSC 570  Wetland Soils  3
TOX 201  Poisons, People and the Environment  3
TOX 401  Principles of Toxicology  4
TOX 415  Environmental Toxicology and Chemistry  4
TOX 501  Principles of Toxicology  4

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**Semester Sequence**

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<td>GEP 312</td>
<td>Mathematical Sciences (<a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/</a>)</td>
<td>3</td>
</tr>
<tr>
<td>GEP 314</td>
<td>Health and Exercise Studies (<a href="http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/">http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/</a>)</td>
<td>1</td>
</tr>
</tbody>
</table>

### Hours 17

#### Spring Semester

- **AEE 226**: Computer Applications and Information Technology in Agricultural & Extension Ed^1 3
- **CS 213**: Crop Science 3
- **BIO 183**: Introductory Biology: Cellular and Molecular Biology 4
- **GEP 312**: Mathematical Sciences (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/) 3
- **GEP 314**: Health and Exercise Studies (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/) 1

**Hours**: 14

### Second Year

#### Fall Semester

- **AEE 206**: Introduction to Teaching Agriculture^1 3
- **CS 230**: Introduction to Agroecology 3
- **BAET 201**: Shop Processes and Management 3
- **Economics Elective (p. 1)** 3
- **GEP 312**: Interdisciplinary Perspectives (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-interdisciplinary-perspectives/) 2

**Hours**: 14

#### Spring Semester

- **ANS 150**: Introduction to Animal Science 3
- **ANS 151**: Introduction to Animal Science Lab 1
- **CH 101**: Chemistry - A Molecular Science 3
- **CH 102**: General Chemistry Laboratory 1
- **Agronomy Elective (p. 12)** 3
- **GEP 312**: Humanities (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-humanities/) 3
- **PB 321**: Introduction to Whole Plant Physiology or Plant Physiology 3

**Hours**: 17

### Third Year

#### Fall Semester

- **AEE 322**: Experiential Learning in Agriculture^1 3
- **CS 411**: Crop Ecology 3
- **EDP 304**: Educational Psychology^1 3
- **SSC 200**: Soil Science 3
- **SSC 201**: Soil Science Laboratory 1

**Free Elective^3**: 4

**Hours**: 15

#### Spring Semester

- **AEE 303**: Administration and Supervision of Student Organizations^1 3
- **AEE 326**: Teaching Diverse Learners in AED^1 3
- **ELP 344**: School and Society^1 3
- **GEP 316**: Additional Breadth (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-mathematical-sciences/) 3

**Agriculture Electives (p. 2)** 3

**Hours**: 120

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1. A minimum grade of C- is required for graduation. A minimum grade of C is required for teacher licensure.
2. Incoming freshmen complete AEE 103 Fundamentals of Agricultural and Extension Education. Transfer students may complete ALS 103 Freshman Transitions and Diversity in Agriculture & Life Sciences or ALS 303 Transfer Transitions and Diversity in Agriculture & Life Sciences.
3. Total hours of free electives vary in order to allow the minimum hours required for the degree to equal 120 credit hrs.