Agricultural Systems and Education

The Agricultural Systems and Education major is administered through the School of Agricultural Sciences. The Agricultural Systems and Education program includes six specialized areas of study. The primary objectives of this major are: to provide specialized academic preparation in agriculture appropriate for the specializations of the major, to provide a program for the student desiring a broad-based agriculture major, optionally combined with another discipline and to provide the quality academic and professional preparation necessary for success in the various career fields of the specializations.

The following statements identify typical career opportunities for persons completing the respective specialization.

**Agricultural Systems Technology Management Specialization:** This specialization is intended for students interested in technical management of an agricultural related business involved in production, processing, or manufacturing. This specialization combines an understanding of the agricultural, biological, and physical sciences with managerial and technical skills. This understanding of science, systems management, and applications engineering can be used in a career in the production and processing of food, fiber, feed, and fuel. Students focus on the application of engineering principles, the study of agricultural technology, and integration of business management concepts in the food and agricultural industry.

**Agricultural Education Specialization:** This specialization is intended for those students who plan to be involved in agricultural programs as a teacher in secondary and post-secondary education, as well as in the fields of communication, extension, and industry. Students will complete course requirements for teacher licensure in secondary Agricultural Education, and can optionally complete training for teacher licensure in other majors, including biology, math, physical sciences, and social sciences.

**Agricultural Production Management Specialization:** This specialization provides the student with the background and preparation for careers in production based areas of agriculture, including sales and service positions in the supply and marketing chain, support industries, and agribusiness as well as production management positions and farming.

**General Agriculture Specialization:** This program is designed to provide the student with a broad-based background in agriculture and the flexibility so that the student, in conjunction with their advisor, can design a program of study that prepares them to meet their career goals. These customized programs often include emphasis in other disciplines.

**Agricultural Communications Specialization:** This specialization is designed to provide the student competencies in both agriculture (animal science, horticulture, crop/soil sciences, agricultural business/economics, and agricultural engineering/technology) and communications (print/broadcast journalism, marketing/advertising, publications, journalism law and ethics) for careers within the agricultural industry, agricultural extension service, or agricultural news agencies.

**Food and Process Engineering Technology Specialization:** This specialization is designed for students to be able to manage and supervise operations in the food processing industry as food processing technologists or managers. The students will gain a fundamental understanding of the science of food processing and preservation operations. The students will gain applied knowledge of food handling, food safety, food packaging, process automation, and operations management. Courses are designed to provide hands-on experience on modern food processing industrial practices through interactive classes including labs, projects, field trips, and internships in food industry. Qualified candidates for the Capstone Option are accepted in the major. For a number of courses taught in the major, there will be additional charges for field trips, lab manuals, or supplies.

**Technology Fee**

The College of Agricultural Sciences assesses College of Agricultural Sciences undergraduate majors a technology fee of $4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semesters.
Bachelor of Science Degree in Agricultural Systems and Education

Agricultural Systems Technology Management Specialization

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Core Curriculum Requirements</td>
<td>39</td>
</tr>
<tr>
<td>Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108 or MATH 125, UNIV 101</td>
<td>13</td>
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<tr>
<td>Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115, ABE 204 or ECON 113, Social Science</td>
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<tr>
<td>Integrative Studies (Multicultural/Diversity)</td>
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<tr>
<td>Requirements for Agricultural Systems Technology Management Specialization</td>
<td>40-41</td>
</tr>
<tr>
<td>AGSE 318, AGSE 361, AGSE 375</td>
<td>9</td>
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<tr>
<td>AGSE 371 or PHYS 101, PHYS 203A, PHYS 203B, PHYS 205A, or PHYS 205B</td>
<td>4</td>
</tr>
<tr>
<td>AGSE 497 or ABE 360</td>
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<tr>
<td>Choose from AGSE 372, AGSE 463, AGSE 472, AGSE 473, AGSE 476, AGSE 483, AGSE 488, AGSE 495, ME 102</td>
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<tr>
<td>ANS 121, ANS 122, or CSEM 200</td>
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<td>ABE 204</td>
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<tr>
<td>Electives</td>
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Agricultural Education Specialization

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<tbody>
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### Agricultural Education Specialization Requirements

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Disciplinary Studies: Fine Arts, Human Health, EA 102 or HIST 101A or HIST 101B, Humanities, CHEM 106, PLB 115, EDUC 214, PSYC 102</td>
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<tr>
<td>Integrative Studies (Multicultural/Diversity): EDUC 211</td>
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Other required courses:

- AGSE 110, AGSE 170, AGSE 311A, AGSE 311B, AGSE 314, AGSE 318                        | 19           |
- AGRI 323                                                                              | 3            |
- ANS 121, ANS 122                                                                     | 4            |
- CSEM 200 or HORT 200                                                                 | 3            |
- ABE 204                                                                              | 3            |
- PLB 200                                                                              | 4            |
- EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401                | 24           |
- CI 360                                                                               | 3            |

**Electives** 18

**Total** 120

### Agricultural Production Management Specialization

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>University Core Curriculum Requirements</td>
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<tr>
<td>Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108 or MATH 125, UNIV 101</td>
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<td>Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204 or ECON 113, Social Science</td>
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Requirements for Agricultural Production Management Specialization 10
### Degree Requirements

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>AGSE 318, AGSE 375</td>
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<tr>
<td>AGSE 371 or PHYS 101, PHYS 203A, PHYS 203B, PHYS 205A, PHYS 205B</td>
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<td>PLB 200</td>
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<tr>
<td>CHEM 140A</td>
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<tr>
<td>ANS 121, ANS 122</td>
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<tr>
<td>CSEM 200</td>
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<td>Choose 2 courses from 3 of the following areas 1) ABE 350 or ABE 351, and 1 class from ABE 300-level or 400-level; 2) AGSE 372, AGSE 463, AGSE 472, AGSE 473, AGSE 476, AGSE 483, AGSE 488, AGSE 495, AGSE 497; 3) ANS 315 or ANS 331, and 1 class form ANS 409, ANS 430, ANS 465, ANS 485; 4) CSEM 240, CSEM 300</td>
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<td>Electives</td>
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**Agricultural Communications Specialization**

<table>
<thead>
<tr>
<th>Degree Requirements</th>
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<tbody>
<tr>
<td>University Core Curriculum Requirements</td>
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<tr>
<td>Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115, ABE 204 or ECON 113, PSYC 102</td>
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<tr>
<td>Integrative Studies (Multicultural/Diversity)</td>
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<tr>
<td>Agricultural Communications Specialization Requirements</td>
<td>16</td>
</tr>
<tr>
<td>AGSE 170, AGSE 180, AGSE 318, AGSE 359, AGSE 411</td>
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<tr>
<td>Other required courses</td>
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<tr>
<td>ANS 121, ANS 122</td>
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<tr>
<td>CSEM 200</td>
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### Degree Requirements

<table>
<thead>
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<th>Degree Requirements</th>
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<tr>
<td>AGRI 323</td>
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<tr>
<td>Electives</td>
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<tr>
<td>Choose from ABE, AGRI, ANS, CSEM, HORT, HTA, HND, FOR, MKTG, GEOG, JRNL, RTD, CMST</td>
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<td>Choose from CMST, JRNL, MKTG, RTD</td>
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<td>Electives</td>
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<td>Total</td>
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**General Agriculture Specialization**

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<tbody>
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</tr>
<tr>
<td>Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101</td>
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<tr>
<td>Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115 or ZOOL 115, ABE 204, Social Science</td>
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<td>Integrative Studies (Multicultural/Diversity)</td>
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<td>General Agriculture Specialization Requirements</td>
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<td>AGSE 170, AGSE 314, AGSE 318, AGSE 371, AGSE 375</td>
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<tr>
<td>Other required courses</td>
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<td>AGRI 323</td>
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<td>ANS 121, ANS 122</td>
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<td>CSEM 200</td>
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<td>ANS elective</td>
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<td>ABE elective</td>
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<td>CSEM elective</td>
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<td>Electives</td>
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## Degree Requirements

<table>
<thead>
<tr>
<th>Degree Requirements</th>
<th>Credit Hours</th>
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<tr>
<td>Choose a minor from any ABE, AGRI, AGSE, ANS, CSEM, HORT, HND, HTA, FOR</td>
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<td>Electives to achieve at least 42 (300- or 400-level)</td>
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<td><strong>Total</strong></td>
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</table>

## Food and Process Engineering Technology Specialization

<table>
<thead>
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</tr>
</thead>
<tbody>
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<td>University Core Curriculum Requirements</td>
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<tr>
<td><strong>Foundation Skills:</strong> CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101</td>
<td>13</td>
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<tr>
<td><strong>Disciplinary Studies:</strong> Fine Arts, Human Health, Humanities, CHEM 140A, BIO 211, ABE 204 or ECON 113, Social Science</td>
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<tr>
<td><strong>Integrative Studies (Multicultural/Diversity)</strong></td>
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<tr>
<td><strong>Food and Process Engineering Technology Specialization Requirements</strong></td>
<td>33</td>
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<tr>
<td>AGSE 318, AGSE 361, AGSE 374, AGSE 375, AGSE 431, AGSE 473, AGSE 483, AGSE 488, AGSE 489, AGSE 495, AGSE 497</td>
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<td><strong>Other required courses</strong></td>
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<td>ACCT 210</td>
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<td>IMAE 475</td>
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<td>MATH 109</td>
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<tr>
<td>ABE 318</td>
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<tr>
<td><strong>Electives</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
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</tbody>
</table>
Minor in Agricultural Systems

A minor in Agricultural Systems is offered. A minor consists of 15 semester hours of credit. Normally 12 hours must be taken at Southern Illinois University Carbondale. An advisor within the department must be consulted before selecting this field as a minor.

Minor in Agricultural Education

A minor in Agricultural Education is offered. A minor consists of 15 semester hours of credit. Normally 12 of the 15 hours must be taken at Southern Illinois University Carbondale. An advisor within the department must be consulted before selecting this field as a minor. Note, that the minor in Agricultural Education does not qualify the holder to an Illinois teaching license.

Food and Process Engineering Technology Minor

Requirements: A minor in Food and Process Engineering Technology is available to those students who are interested in the food and processing industry. A total of 15 hours of credit, from the list below, is required: AGSE 361; AGSE 375; AGSE 483; AGSE 488; or AGSE 495

Last updated: 03/11/2020

Southern Illinois University
Carbondale, IL 62901
Phone: (618) 453-2121

Catalog Year Statement:
Students starting their collegiate training during the period of time covered by this catalog (see bottom of this page) are subject to the curricular requirements as specified herein. The requirements herein will extend for a seven calendar-year period from the date of entry for baccalaureate programs and three years for associate programs. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them.