

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 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.

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.

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.

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.

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.

Bachelor of Science (B.S.) in Agricultural Systems and Education

B.S. Agricultural Systems and Education - Agricultural Communications Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115, ABE 204 or ECON 113, PSYC 102	23
Integrative Studies (Multicultural/Diversity)	3
Agricultural Communications Specialization Requirements	16
AGSE 170, AGSE 180, AGSE 318, AGSE 359, AGSE 411	
Other required courses	9
ANS 121, ANS 122	4
CSEM 200	3
AGRI 323	2
Electives	56
Choose from ABE, AGRI, ANS, CSEM, HORT, HTEM, HND, FOR, MKTG, GEOG, JRNL, RTD, CMST	24
Choose from CMST, JRNL, MKTG, RTD	25
Electives	7
Total	120

B.S. Agricultural Systems and Education - Agricultural Education Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, EA 102 or HIST 101A or HIST 101B, Humanities, CHEM 106, PLB 115, EDUC 214, PSYC 102	23
Integrative Studies (Multicultural/Diversity): EDUC 211	3
Agricultural Education Specialization Requirements	24
AGSE 110, AGSE 170, AGSE 180, AGSE 311A, AGSE 311B, AGSE 314, AGSE 416, AGSE 414	
Other required courses:	49
CSEM 240, FOR 100, HORT 423	8
ANS 121, ANS 122	4
CSEM 200, HORT 220	7
ABE 204	3
EDUC 301, EDUC 302, EDUC 303, EDUC 308, EDUC 313, EDUC 319, EDUC 401	24
CI 360	3
Electives	8
Total	120

B.S. Agricultural Systems and Education - Agricultural Production Management Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108 or MATH 125, UNIV 101	13

Degree Requirements	Credit Hours
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, PLB 200, ABE 204 or ECON 113, Social Science	23
Integrative Studies (Multicultural/Diversity)	3
Requirements for Agricultural Production Management Specialization	10
AGSE 318, AGSE 375	6
AGSE 371 or PHYS 101, PHYS 203A, PHYS 203B, PHYS 205A, PHYS 205B	4
Other required courses	30
PLB 200	4
CHEM 140A	1
ANS 121, ANS 122	4
CSEM 200	3
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	18
Electives	41
Total	120

B.S. Agricultural Systems and Education - Agricultural Systems Technology Management Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108 or MATH 125, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115, ABE 204 or ECON 113, Social Science	23

Degree Requirements	Credit Hours
Integrative Studies (Multicultural/Diversity)	3
Requirements for Agricultural Systems Technology Management Specialization	40-41
AGSE 318, AGSE 361, AGSE 375	9
AGSE 371 or PHYS 101, PHYS 203A, PHYS 203B, PHYS 205A, or PHYS 205B	4
AGSE 497 or ABE 360	3
Choose from AGSE 372, AGSE 463, AGSE 472, AGSE 473, AGSE 476, AGSE 483, AGSE 488, AGSE 495, ME 102	18
ANS 121, ANS 122, or CSEM 200	3-4
ABE 204	3
Electives	40-41
Total	120

B.S. Agricultural Systems and Education - Food and Process Engineering Technology Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 140A, BIOL 211, ABE 204 or ECON 113, Social Science	23
Integrative Studies (Multicultural/Diversity)	3
Food and Process Engineering Technology Specialization Requirements	33
AGSE 318, AGSE 361, AGSE 374, AGSE 375, AGSE 431, AGSE 473, AGSE 483, AGSE 488, AGSE 489, AGSE 495, AGSE 497	
Other required courses	29
BIOL 211, BIOL 213	5

Degree Requirements	Credit Hours
CHEM 140A, CHEM 140B	5
MICR 201	4
PHYS 203A, PHYS 203B	6
IMAE 475	3
MATH 109	3
ABE 318	3
Electives	19
Total	120

B.S. Agricultural Systems and Education - General Agriculture Specialization Degree Requirements

Degree Requirements	Credit Hours
University Core Curriculum Requirements	39
Foundation Skills: CMST 101, ENGL 101, ENGL 102, MATH 108, UNIV 101	13
Disciplinary Studies: Fine Arts, Human Health, Humanities, CHEM 106, PLB 115 or ZOOL 115, ABE 204, Social Science	23
Integrative Studies (Multicultural/Diversity)	3
General Agriculture Specialization Requirements	16
AGSE 170, AGSE 314, AGSE 318, AGSE 371, AGSE 375	
Other required courses	18
AGRI 323	2
ANS 121, ANS 122	4
CSEM 200	3
ANS elective	3
ABE elective	3

Degree Requirements	Credit Hours
CSEM elective	3
Electives	47
Choose a minor from any ABE, AGRI, AGSE, ANS, CSEM, HORT, HND, HTEM, FOR	15
Electives to achieve at least 42 (300- or 400-level)	32
Total	120

Agricultural Education Minor

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 program 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.

Agricultural Systems Minor

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 program must be consulted before selecting this field as a minor.

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

Capstone Option for Transfer Students

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, Life, and Physical Sciences assesses undergraduate majors a technology fee of \$4.58 per credit hour up to 12 credit hours. The fee is charged Fall and Spring semester.

Last updated: 02/01/2023