

Agricultural and Extension Education, B.S.Agr.

Degree Offered

- Bachelor of Science in Agriculture

Nature of the Program

The Agricultural and Extension Education curriculum is designed to prepare students for entry into agricultural teaching, extension, or other professional employment in government, industry, or entrepreneurship where competence in communications and leadership are required. In order to prepare career-ready graduates, the curriculum provides flexibility to develop programs in options emphasizing teacher preparation, extension education, or production and technical agriculture. Courses are selected by the student in consultation with an advisor that will prepare the student to achieve their aspirations.

Admissions for 2025-2026

First time students who meet University requirements are directly admitted to the Agricultural and Extension Education program.

All Agricultural and Extension Education students will enter the major in a basic program of study. Students will devote their freshman and sophomore years (first 58 hours) to the completion of GEF and basic agriculture curricula.

To continue in the major beyond the sophomore year, a student must apply for and be accepted into one of three areas of emphasis: teacher education, extension education, or agricultural and environmental technology. The application process will occur during the semester a student has completed or will complete the requirements for "junior" status (59 hours or greater) at West Virginia University. Once a student enters an area of emphasis, he/she will proceed through key courses as a member of a cohort composed of students entering the area of emphasis during the same year.

To be admitted into one of three areas of emphasis, a student must complete the following courses: Engl 101, Engl 102, Math 124, Chem 111, Biol 101/103, and AGEE 103.

To enter the teacher education area of emphasis, students must meet the following:

- 2.50 or greater GPA
- Complete AGEE 202

To enter the extension education area of emphasis, students must meet the following:

- 2.00 or greater GPA

To enter the agricultural and environmental technology areas of emphasis, students must meet the following:

- 2.00 or greater GPA

Due to Covid-19, admission requirements may differ from what is listed on this page. Please review the most up-to-date program admission requirements for the Bachelor of Science in Agriculture and Extension Education major (<https://admissions.wvu.edu/academics/majors/agricultural-and-extension-education/>).

Major Code: 1710

General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. (<http://registrar.wvu.edu/gef/>)

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

Code	Title	Hours
General Education Foundations		
F1 - Composition & Rhetoric		3-6
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
F2A/F2B - Science & Technology		4-6
F3 - Math & Quantitative Reasoning		3-4
F4 - Society & Connections		3

F5 - Human Inquiry & the Past	3
F6 - The Arts & Creativity	3
F7 - Global Studies & Diversity	3
F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)	9
Total Hours	31-37

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

Curriculum Requirements

Code	Title	Hours
	University Requirements	25
	Agriculture Extension Education Major Requirements	95
Total Hours		120

University Requirements

Code	Title	Hours
	General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
	Outstanding GEF Requirements 1, 3, 5, and 6	15
ANRD 191	First-Year Seminar	1
	General Electives	9
Total Hours		25

Agriculture Extension Education Major Requirements

Code	Title	Hours
AGEE 101	Global Food and Agricultural Industry (GEF 7)	3
AGEE 102	Educational Colloquium in Agricultural and Extension Education	1
AGEE 103S	Basics of Agricultural Mechanization	3
AGEE 110	Microcomputer Applications in Agricultural Education	3
or CS 101	Intro to Computer Applications	
AGEE 203	Agriculture Mechanics Practica	3
AGEE 220	Group Organization and Leadership (GEF 4)	3
AGEE 421	Agricultural and Natural Resource Communications	3
AGEE 431	Adult Education in Agriculture and Natural Resources	2
AGEE 440	Principles of Cooperative Extension	2
Select one of the following:		12
AGEE 488	Professional Agricultural Internship	
AGEE 491	Professional Field Experience	
AGEE 489	Agriculture and Extension Education Reflective Seminar (Capstone - fulfills Writing and Communication Skills requirement)	1
ESWS 202	Principles of Soil Science	3
ESWS 202L	Principles of Soil Science Laboratory	1
ARE 204	Agribusiness Management	3
or ARE 380	Agribusiness Sales and Management	
A&VS 251 & 251L	Principles of Animal Science and Principles of Animal Science Laboratory	4
PLSC 206 & 206L	Principles of Plant Science and Principles of Plant Science Laboratory	4
or HORT 220 & 220L	General Horticulture and General Horticulture Laboratory	
PSYC 101	Introduction to Psychology (GEF 8)	3
PSYC 241	Introduction to Human Development (GEF 8)	3
Select one of the following (GEF 8):		4

CHEM 111 & 111L	Survey of General, Organic, and Biological Chemistry 1 and Survey of Chemistry 1 Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory	
Select one of the following (GEF 2):		4
BIOL 101 & 101L	General Biology 1 and General Biology 1 Laboratory	
BIOL 102 & 102L	General Biology 2 and General Biology 2 Laboratory	
Area of Emphasis (Select One)		18
Upper-Division Restricted Electives		12
Courses from the following subjects: A&VS, AEM, AGBI, AGEE, AGRN, ANNU, ANPH, ANPR, ANRD, ARE, CDFS, DSGN, ENTO, ENVM, ENVP, FDM, FDST, FMAN, FOR, GEN, HORT, ID, LARC, PLSC, PPTH, RESM, RPTR, WDSC, or WMAN		
Total Hours		95

Areas of Emphasis

- Agricultural & Environmental Technology (p. 3)
- Agricultural Teacher Education (p.)
- Extension Education (p. 6)

AGRICULTURAL & ENVIRONMENTAL TECHNOLOGY AREA OF EMPHASIS

Today agriculture faces a tremendous challenge to provide food, fiber, and industrial raw supplies for billions of people at a time when resources are becoming more limited. Agriculture, meanwhile, has become more technical and complex, and qualified college graduates are needed to meet the future demands in this vital field.

This option is an undergraduate studies program that allows students some measure of flexibility in meeting their own educational objectives, particularly when those objectives may not be fulfilled entirely by any other single college major. This option prepares students to enter into the broad field of production and technical agriculture. The curriculum combines a broad range of technical courses in animal science, crop and soil science, horticulture, biological systems, agricultural mechanics, and agricultural economics. Additional courses in interpersonal and group leadership and communications training give students a competitive edge in the job market.

Students who desire to become owners, managers, or employees in production and or technical agriculture realize that they need a broad-based preparation. Agriculture presents opportunities in the farming and ranching business and industry, research and development, education, communications, governmental employment, and conservation and recreation.

The experiences gained through coursework and internships prove invaluable. General agriculture internships in production and technical agriculture, agribusiness, and commodity organizations enable students to enhance their communications, problem-solving and technical abilities, and management and decision making abilities. A twelve credit, twelve week internship related to the student's career objective is required.

REQUIREMENTS

Code	Title	Hours
Upper-Level courses selected from the other divisions in the college in consultation with Advisor		18
Courses from the following subjects: AEM, AGBI, AGRN, AGEE, AGRN, ANNU, ANPH, ANPR, ARE, A&VS, CDFS, DSGN, ENTO, ENVM, ENVP, FDM, FDST, FNRS, GEN, HORT, ID, LARC, PLSC, PPTH, RESM, RPTR, or WMAN		
Total Hours		18

SUGGESTED PLAN OF STUDY FOR AGRICULTURAL & ENVIRONMENTAL TECHNOLOGY AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
AGEE 102		1 MATH 121 (GEF 3)	3
AGEE 103S		3 AGE 101 (GEF 7)	3
ENGL 101 (GEF 1)		3 AGE 110	3
A&VS 251 & 251L		4 AGE 220 (GEF 4)	3

BIOL 101 & 101L (GEF 2)		4 PSYC 101 (GEF 8)	3
ANRD 191		1	
		16	15
Second Year			
Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 AGEE 203	3
PLSC 206 & 206L		4 CHEM 111 & 111L (GEF 8)	4
PSYC 241 (GEF 8)		3 GEF 6	3
ARE 204 or 380		3 General Elective	3
GEF 5		3	
		16	13
Third Year			
Fall	Hours	Spring	Hours
ESWS 202		3 AGEE 421	3
ESWS 202L		1 Ag. Elective (Upper Division)	12
AGEE 440		2	
Ag. Elective (Upper Division)		6	
General Elective		3	
		15	15
Fourth Year			
Fall	Hours	Spring	Hours
AGEE 431		2 AGEE 489	1
Ag. Elective (Upper Division)		9 AGEE 491	12
General Elective		3 Ag. Elective (Upper Division)	3
		14	16

Total credit hours: 120

AGRICULTURAL TEACHER EDUCATION AREA OF EMPHASIS

An effective agriculture teacher can assist in the economic and social development of a community. Middle school, high school, and adult classes strengthened by supervised agricultural experience programs are the methods whereby the agriculture teacher helps students become involved and established in production agriculture and off-farm occupations that require agricultural knowledge and skills.

Students completing this program will meet the requirements for certification by the West Virginia Department of Education. The program provides graduates with the opportunity to become qualified to teach in the broad field of agriculture as well as to become prepared to teach in such areas as production, agribusiness, conservation and forestry, agricultural mechanics, processing, horticulture, and natural resources. In addition to teaching, graduates have the opportunity for employment with governmental agencies and in private enterprise.

To be eligible for student teaching and subsequent certification to teach, the student must:

- possess a 2.5 grade point average on the total of all college credits, including hours earned in professional education and technical agriculture courses
- must pass competency tests in reading, writing, mathematics (Praxis Core Academic Skills for Educators) and agriculture content endorsement (Praxis II - Agriculture) prior to student teaching
- must pass the principles of teaching and learning test (Praxis Principles of Learning and Teaching Grades 7-12) for grades 7-12
- complete the required agriculture and professional education courses

REQUIREMENTS

Code	Title	Hours
AGEE 202	Site Based Tutoring in Agriculture and Extension Education	1
AGEE 330	Shop Theory and Methods	3
AGEE 426	Directing Future Farmers of America and Supervised Agricultural Experiences	3
AGEE 430	Methods of Teaching Agriculture	2

AGEE 430L	Methods of Teaching Agriculture Laboratory	1
AGEE 434	Managing Learning Environment	3
AGEE 438	Agriculture Education Curriculum Development	2
AGEE 490	Teaching Practicum	3
RDNG 422	Reading in the Content Areas	3
SPED 404	Special Education in Contemporary Society	3
SPED 460	Differentiation of Instruction	3
Total Hours		27

SUGGESTED PLAN OF STUDY FOR AGRICULTURAL TEACHER EDUCATION AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
AGEE 102		1 MATH 124 (GEF 3)	3
AGEE 103S		3 AGEE 101 (GEF 7)	3
ENGL 101 (GEF 1)		3 AGEE 110	3
A&VS 251 & 251L		4 AGEE 220 (GEF 4)	3
BIOL 101 & 101L (GEF 2)		4 PSYC 101 (GEF 8)	3
ANRD 191		1 AGEE 202	1
		16	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 CHEM 111 & 111L (GEF 8)	4
PLSC 206 & 206L		4 SPED 404	3
PSYC 241 (GEF 8)		3 Ag. Elective (Upper Division)	6
ARE 204 or 380		3	
AGEE 203		3	
		16	13

Third Year

Fall	Hours	Spring	Hours
ESWS 202		3 AGEE 330	3
ESWS 202L		1 AGEE 434	3
AGEE 440		2 Ag. Elective (Upper Division)	3
AGEE 421		3 GEF 5	3
Ag. Elective (Upper Division)		3 GEF 6	3
AGEE 430		2	
AGEE 430L		1	
		15	15

Fourth Year

Fall	Hours	Spring	Hours
AGEE 490		3 AGEE 488	12
AGEE 426		3 AGEE 489	1
AGEE 431		2	
AGEE 438		2	
SPED 460		3	
RDNG 422		3	
		16	13

Total credit hours: 120

EXTENSION EDUCATION AREA OF EMPHASIS

This option prepares students with a foundation for extension education, agribusiness positions related to human resource management, international and corporate training and development, agricultural literacy and public relations, political interests, and commodity service organizations.

Coursework in this option will focus on a core of agricultural courses along with emphasis in non-formal education, designing educational/training programs and professional presentations, leadership development, teaching/training methods, and interpersonal communications. A twelve credit, twelve week internship related to the student's career objective is required.

REQUIREMENTS

Code	Title	Hours
AGEE 430	Methods of Teaching Agriculture	2
AGEE 430L	Methods of Teaching Agriculture Laboratory	1
MDIA 101	Media and Society	3
POLS 102	Introduction to American Government	3
POLS 220	State and Local Government	3
CDFS 110 or ORGL 410	Families Across the Life Span Youth Leadership Development	3
PR 215	Introduction to Public Relations	3
Total Hours		18

SUGGESTED PLAN OF STUDY FOR EXTENSION EDUCATION AREA OF EMPHASIS

First Year

Fall	Hours	Spring	Hours
AGEE 102		1 MATH 124 (GEF 3)	3
AGEE 103S		3 AGE 101 (GEF 7)	3
ENGL 101 (GEF 1)		3 AGE 110	3
A&VS 251 & 251L		4 AGE 220 (GEF 4)	3
BIOL 101 & 101L (GEF 2)		4 PSYC 101 (GEF 8)	3
ANRD 191		1 AGE 202	1
		16	16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)		3 AGE 203	3
PLSC 206 & 206L		4 CHEM 111 & 111L	4
PSYC 241 (GEF 8)		3 MDIA 101	3
ARE 204 or 380		3 GEF 6	3
GEF 5		3 General Elective	3
		16	16

Third Year

Fall	Hours	Spring	Hours
ESWS 202		3 CDFS 110 or ORGL 410	3
ESWS 202L		1 PR 215	3
AGEE 440		2 AGE 421	3
POLS 102		3 Elective (Upper Division)	6
Elective (Upper Division)		6 AGE 441	2
		15	17

Fourth Year

Fall	Hours	Spring	Hours
AGEE 489		1 AGE 491	12
POLS 220		3	

AGEE 431	2	
General Electives	6	
	12	12

Total credit hours: 120

Major Learning Outcomes

AGRICULTURE AND EXTENSION EDUCATION

All students in the Agricultural and Extension Education undergraduate program will:

- Complete a core curriculum in general education foundations.
- Complete a core curriculum in basic agricultural knowledge.
- Complete a core curriculum in technology, leadership, and communication.
- Complete at least one area of emphasis (teacher education, extension education, or agricultural and environmental technology) in agricultural and extension education.

Students in the teacher education area of emphasis will:

- Develop the pedagogical skills necessary to enter and be successful in a high school teaching position.
- Complete all PRAXIS tests required for teacher certification in West Virginia.
- Complete a twelve week internship/student teaching placement in a middle/high school agricultural education program.

Students in the extension education area of emphasis will:

- Develop the academic knowledge and skills necessary to enter and succeed in a Master of Science program.
- Develop the educational and communication skills necessary to successfully enter and succeed in an Extension position.
- Complete a twelve week internship in an Extension related position.

Students in the agricultural and environmental technology area of emphasis will:

- Develop the educational and communication skills necessary to successfully enter and succeed in an agriculturally related career.
- Develop the academic knowledge and skills needed to enter and succeed in an agriculturally related career.
- Complete a twelve week internship in an area related to their career goal.