Animal Nutritional Sciences, B.S., B.S.Agr.

Degrees Offered

- Bachelor of Science
- Bachelor of Science in Agriculture

Bachelor of Science - Animal & Nutritional Sciences Major

The curriculum in science, with its flexible design, provides the necessary background in biochemistry, chemistry, mathematics, physics, and modern concepts of biology in preparation for professional schools of dentistry, human medicine, optometry, pharmacy, veterinary medicine or graduate study in such fields as animal breeding, animal physiology, biochemistry and nutrition.

Bachelor of Science in Agriculture - Animal & Nutritional Sciences Major

This curriculum provides the necessary background in agricultural economics, agronomy, breeding, nutrition, and physiology to prepare for careers in production and management of cattle, small ruminants, pigs, horses, companion animals or poultry, and in food processing and technology.

Admissions

- First-Time Freshman are admitted directly into the Animal and Nutritional Science major.
- Students transferring from another major within WVU are directly admitted to the Animal and Nutritional Science major if they are in good academic standing (2.0 or higher GPA).
- Students transferring from another institution are directly admitted to the Animal and Nutritional Science major if they are in good academic standing (2.0 or higher GPA).

ADMISSION REQUIREMENTS 2024-2025

The Admission Requirements above will be the same for the 2024-2025 Academic Year.

Major Code: 0724

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	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research	
or ENGL 103	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		51
Animal and Nutritional Sciences Program Requirements		24
Animal and Nutritional Sciences Major Requirements		45
Total Hours		120

University Requirements

Code	Title	Hours
General Education Foundations (GEF) Requirements 1, 2, 3, 4, 5, 6, 7 and 8 (31-37 Credits)		
Outstanding GEF Requirements 1, 4, 5, 6, and 7		18
ANRD 191	First-Year Seminar	1
General Electives		32
Total Hours		51

Animal and Nutritional Sciences Program Requirements

Code	Title	Hours
Biology Requirement:		8
BIOL 101 & 101L & BIOL 102 & BIOL 102L	General Biology 1 and General Biology 1 Laboratory and General Biology 2 and General Biology 2 Laboratory	
BIOL 115 & 115L & BIOL 117 & BIOL 117L	Principles of Biology and Principles of Biology Laboratory and Introductory Physiology and Introductory Physiology Laboratory	
A&VS 251	Principles of Animal Science	
PLSC 206	Principles of Plant Science	
Chemistry Requirement		8
CHEM 111 & 111L & CHEM 112 & CHEM 112L	Survey of Chemistry 1 and Survey of Chemistry 1 Laboratory and Survey of Chemistry 2 and Survey of Chemistry 2 Laboratory	
CHEM 115 & 115L & CHEM 116 & CHEM 116L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory and Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory	
MATH 124	Algebra with Applications (or higher)	3
Science Electives		5
Total Hours		24

CURRICULUM REQUIREMENTS FOR BACHELOR OF SCIENCE IN AGRICULTURE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

Code	Title	Hours
Courses in Agriculture		**39**
21-Credits at the 300 or 400-Level		
Elect a minimum of a three-credit course, excluding Assigned Topics, in each of the following categories. Elect additional courses to obtain a total of 45 hours in the college.		
Animal Science		
Plant Science		
Soil Science		
Agriculture Economics		
Capstone Experience		**3**

A&VS 402	Values and Ethics	
A&VS 491	Professional Field Experience	
A&VS 496	Senior Thesis	
Fulfills Writing and Communication Skills Requirement		**3**
A&VS 402	Values and Ethics	
A&VS 451	Current Literature in Animal Science	
Total Hours		45

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Students completing A&VS 402 as the Writing and Capstone requirements will be required to complete an additional Course in Agriculture.

SUGGESTED PLAN OF STUDY FOR BACHELOR OF SCIENCE IN AGRICULTURE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

First Year

Fall	Hours	Spring	Hours
ENGL 101 (GEF 1)	3	A&VS 150	2
A&VS 191	1	ARE 150 (GEF 4)	3
Select one of the following:	4	Select one of the following:	4
BIOL 101 & 101L		BIOL 102 & 102L	
A&VS 251		A&VS 251	
PLSC 206		PLSC 206	
CHEM 111 & 111L (GEF 2)	4	CHEM 112 & 112L (GEF 8)	4
MATH 124 (GEF 3)	3	GEF 5	3
	15		16

Second Year

Fall	Hours	Spring	Hours
ENGL 102 (GEF 1)	3	ANPH 301	3
WMAN 150 (GEF 7)	3	Science elective	3
Science elective	3	Electives	6
GEF 6	3	Agriculture Course or Elective	3
Agriculture Course or Elective	4		
	16		15

Third Year

Fall	Hours	Spring	Hours
ANNU 361	3	ESWS 202 & 202L	4
ANPR 341	3	ANPH 400	3
ANPR 341L	1	ANPR 338L	3
ARE 382	3	Agriculture Courses	5
GEF 8 or Elective	3		
Agriculture Course	3		
	16		15

Fourth Year

Fall	Hours	Spring	Hours
ARE 435	3	Capstone	3
ANPR 339L	2	Writing and Communication Skills	3
A&VS 409	3	Electives	6
Agriculture Course	4		

Elective	3	
	15	12

Total credit hours: 120

Curriculum Requirements

Code	Title	Hours
University Requirements		50
Animal and Nutritional Sciences Program Requirements		40
Animal and Nutritional Sciences Major Requirements		30
Total Hours		120

University Requirements

Code	Title	Hours
General Education Foundation (GEF)	Requirements 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)	
Outstanding GEF Requirements 1, 4, 5, 6, and 7		18
ANRD 191	First-Year Seminar	1
General Electives		31
Total Hours		50

Animal and Nutritional Sciences Program Requirements

Code	Title	Hours
Biology Requirement:		8
BIOL 101 & 101L & BIOL 102 & BIOL 102L	General Biology 1 and General Biology 1 Laboratory and General Biology 2 and General Biology 2 Laboratory	
BIOL 115 & 115L & BIOL 117 & BIOL 117L	Principles of Biology and Principles of Biology Laboratory and Introductory Physiology and Introductory Physiology Laboratory	
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory	4
CHEM 116 & 116L	Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory	4
Physics Requirement		8
PHYS 101 & 101L & PHYS 102 & PHYS 102L	Introductory Physics 1 and Introductory Physics 1 Laboratory and Introductory Physics 2 and Introductory Physics 2 Laboratory	
OR		
PHYS 111 & 111L & PHYS 112 & PHYS 112L	General Physics 1 and General Physics 1 Laboratory and General Physics 2 and General Physics 2 Laboratory	
Math Requirement (also fulfills GEF 3 requirement)		6
Calculus or Advanced Chemistry Requirement		6
CHEM 231 & 231L	Organic Chemistry: Brief Course and Organic Chemistry: Brief Course Laboratory	
CHEM 233 & 233L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	
CHEM 234 & 234L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	
AGBI 410	Introductory Biochemistry	
MATH 150	Applied Calculus	

MATH 153	Calculus 1a with Precalculus	
MATH 154	Calculus 1b with Precalculus	
MATH 155	Calculus 1	
MATH 156	Calculus 2	
Science Electives (as necessary to reach at least 40 hours of science credits)		4
Total Hours		40

Animal and Nutritional Sciences Major Requirements

Code	Title	Hours
Courses in Agriculture		**24**
12-Credits at the 300 or 400-Level		
Writing and Communication Skills Requirement *		**3**
A&VS 402	Values and Ethics	
A&VS 451	Current Literature in Animal Science	
Capstone Experience *		**3**
A&VS 402	Values and Ethics	
A&VS 491	Professional Field Experience	
A&VS 496	Senior Thesis	
Total Hours		30

*

Students completing A&VS 402 as the Writing and Capstone requirements will be required to complete an additional Course in Agriculture.

SUGGESTED PLAN OF STUDY FOR BACHELOR OF SCIENCE - ANIMAL & NUTRITIONAL SCIENCES MAJOR

First Year

Fall	Hours	Spring	Hours
A&VS 191	1	A&VS 150	2
ENGL 101 (GEF 1)	3	BIOL 117 & 117L (GEF 8)	4
CHEM 115 & 115L (GEF 8)	4	CHEM 116 & 116L (GEF 8)	4
BIOL 115 & 115L (GEF 2)	4	MATH 128 (if needed or Elective)	3
Depending on QRA score select one of the following (GEF 3): MATH 124 MATH 126 MATH 129 MATH 150 MATH 153 MATH 155	3	GEF 4	3
	15		16

Second Year

Fall	Hours	Spring	Hours
A&VS 251	4	ANNU 260	3
CHEM 233	3	CHEM 234	3
CHEM 233L	1	CHEM 234L	1
PHYS 101	4	PHYS 102	4
ENGL 102 (GEF 1)	3	GEF 6	3
		GEF 7	3
	15		17

Third Year

Fall	Hours	Spring	Hours
ANPH 301	3	GEN 371	4
AGBI 410	3	Electives	9
AEM 341	3		
AEM 341L	1		
Electives	6		
	16		13

Fourth Year

Fall	Hours	Spring	Hours
Electives	9	Electives	7
Science Elective	3	Capstone	3
GEF 5	3	Writing and Communication Skills Requirement	3
	15		13

Total credit hours: 120

Major Learning Outcomes

ANIMAL & NUTRITIONAL SCIENCES

1. Graduates will acquire a high level of competency in the basic sciences required for disciplinary competency.
2. Graduates will integrate basic knowledge and managerial skills related to the animal, nutritional and food sciences disciplines.
3. Graduates will acquire sufficient written and oral communication skills, problem solving and critical thinking skills to effectively impact lifelong societal and professional developments critical to their respective discipline of interest.
4. Graduates will attain depth of knowledge relative to the scope of subfields of the animal and nutritional sciences:

    a. Animal production, management and marketing

    b. Animal nutrition

    c. Environmental stewardship