Department of Animal and Dairy Sciences

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Animal and Dairy Sciences is a multidisciplinary science that focuses on livestock and companion animal growth, health and safety, as well as food and fiber production. Professionals in the diverse fields of animal and dairy sciences strive to provide healthy and wholesome food as well as quality fiber products to support the growing population. Students in Animal and Dairy Sciences will learn about the newest technologies and experience progressive management strategies that will prepare them to be leaders in agriculture.

Joining Animal and Dairy Sciences will give students hands-on education and experience needed to be successful in areas such as breeding, feeding and nutrition, growth and development, reproductive and lactation physiology, biotechnology, marketing, management, and evaluation as it relates to livestock species. The curriculum is designed to provide students with academic and experiential learning while also allowing them flexibility to tailor their program by taking courses that best prepare and support their professional goals. Students of the Animal and Dairy Sciences will be challenged to think critically and exercise knowledge of discipline content through scientific writing and presentation. Students pursuing veterinary medicine or graduate studies will find the academic setting of the Animal and Dairy Sciences is an ideal fit.

Concentrations:
Science/Veterinary Science
Business and Industry
Production Management

BS in Animal and Dairy Sciences (ADS)

Degree Requirements

English Composition		
EN 1103	English Composition I	3
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	3
or EN 1173	Accelerated Composition II	
Mathematics		
MA 1323	Trigonometry	3
MA 2113	Introduction to Statistics	3
Science		
See Concentration Requirements		
Humanities		
Choose from General Education courses		6
Fine Arts		
Choose from General Education courses		3
Social Sciences		
AEC 2713	Introduction to Food and Resource Economics	3
or EC 2113	Principles of Macroeconomics	
Choose from General Education courses		3
Major Core		
ADS 1111	Orientation in Animal Science	1
ADS 1113	Animal Science	3
ADS 1121	Animal Science Laboratory	1
ADS 2111	Animal Science Career Planning	1
ADS 3314	Introduction to Meat Science	4
ADS 4114	Animal Nutrition	4
ADS 4123	Animal Breeding	3
ADS 4213	Feeds and Feeding	3
ADS 4613	Physiology of Reproduction	3
ADS 4611	Practices in Physiology of Reproduction	1
ADS 4221	Capstone in Animal and Dairy Science	1

ADS 4420	Animal and Dairy Science Internship	1-3
or ADS 4440	Research Experience Practicum	
or ADS 4520	Livestock Extension Experience	
PO /GNS /BIO 3103	Genetics I	3
VS 3014	Anatomy and Physiology	4
Plant and Soil Science Elective	Consult advisor	3

Choose one of the following concentrations:

Science/Veterinary Science Concentration

Chemistry Sequence		8
CH 1213 & CH 1211	Chemistry I and Investigations in Chemistry I *	
CH 1223 & CH 1221	Chemistry II and Investigations in Chemistry II *	
Organic Chemistry & Lab		4
CH 2503 & CH 2501	Elementary Organic Chemistry and Elementary Organic Chemistry Laboratory	
or CH 4513 & CH 4511	Organic Chemistry I and Organic Chemistry Laboratory I	
BIO 1134	Biology I *	4
BIO 1144	Biology II	4
BIO 3304	General Microbiology	4
BCH 4013	Principles of Biochemistry	3
or BCH 4603	General Biochemistry	
CO 1003	Fundamentals of Public Speaking	3
or CO 1013	Introduction to Communication	
Evaluation Elective [1]		2-3
Production Electives [1]		6-8
Science Electives [1]		12
Free Electives		6-9
Total Hours		124

* Satisfies General Education Requirements.

[1] See advisor for approved electives.

Business and Industry Concentration

Chemistry Sequence		
Choose one of the following:		
CH 1043 & CH 1053 & CH 1051	Survey of Chemistry I and Survey of Chemistry II and Experimental Chemistry *	7
CH 1213 & CH 1211 & CH 1223 & CH 1211	Chemistry I and Investigations in Chemistry I and Chemistry II and Investigations in Chemistry I *	8
Organic Chemistry		
CH 2503 & CH 2501	Elementary Organic Chemistry and Elementary Organic Chemistry Laboratory	4
or CH 4513 & CH 4511	Organic Chemistry I and Organic Chemistry Laboratory I	
BIO 1134	Biology I *	4
or BIO 1144	Biology II	
Evaluation Electives [1]		4-5
Production Electives [1]		6-8

Business Electives [1]	12
General Agriculture Electives [1]	12
Free Electives	6-10
Total Hours	124

* Satisfies General Education Requirements.

1 See advisor for list of approved electives.

Production Management Concentration

Chemistry Sequence		7-8
Choose one of the following:		
CH 1043	Survey of Chemistry I	
& CH 1053	and Survey of Chemistry II	
& CH 1051	and Experimental Chemistry *	
CH 1213	Chemistry I	
& CH 1211	and Investigations in Chemistry I	
& CH 1223	and Chemistry II	
& CH 1221	and Investigations in Chemistry II *	
Organic Chemistry		
CH 2503	Elementary Organic Chemistry	4
& CH 2501	and Elementary Organic Chemistry Laboratory	
or CH 4513	Organic Chemistry I	
& CH 4511	and Organic Chemistry Laboratory I	
BIO 1134	Biology I *	4
or BIO 1144	Biology II	
Evaluation Electives [1]		4-5
Production Electives [1]		12-16
Business Electives [1]		6
General Agriculture Electives [1]		12
Free Electives		4-10
Total Hours		124

* Satisfies General Education Requirements.

1 See advisor for list of approved electives.

Course requirements for Pre-Veterinary students (3 + 1 program) to obtain a B.S. degree in Animal and Dairy Sciences

Because

1. the entrance requirements for the College of Veterinary Medicine satisfy a portion of the course requirements for the Animal and Dairy Sciences curriculum
2. a number of students are enrolled in Animal and Dairy Sciences while satisfying their pre-veterinary requirements and
3. an Animal and Dairy Sciences degree will be especially helpful to a practicing veterinarian,

the following requirements for those electing to apply for a Bachelor of Science degree in Animal and Dairy Sciences after successfully completing the first year of Veterinary Medicine are listed.

General Education Requirements	27
Dept Core	38
Science/Veterinary Medicine Concentration (excl. Free Electives)	50-53

To qualify for the Bachelor of Science degree in ADS, a student in the 3+1 program must successfully complete the 3 years of above listed undergraduate course work (115-118 hours) and the first year of the Veterinary Medicine curriculum.

ADS Minor Requirements

The addition of the minor program will serve to complement other Bachelor of Science studies at Mississippi State University including by not limited to programs such as:

- Biological Sciences
- Food Science, Nutrition and Health Promotion
- Human Sciences
- Agricultural Economics
- Biochemistry
- Microbiology
- Poultry Science
- Agricultural Information Sciences
- Plant and Soil Sciences
- Wildlife and Fisheries

A minor in Animal and Dairy Sciences would provide an opportunity for students to enhance their undergraduate training and build a platform that will set themselves above their peers upon graduation as they seek permanent employment in their respective industry.

Requirements

ADS 1113 & ADS 1121	Animal Science and Animal Science Laboratory	4
Production Courses		6-7
ADS 2223	Companion Animal	
ADS 3223	Horse Management	
ADS 3314	Introduction to Meat Science	
ADS 4113	Swine Science	
ADS 4223	Goat and Sheep Production	
ADS 4323	Beef Cattle Science	
ADS 4813	Dairy Farm Management	
Evaluation Course		2-3
ADS 2102	Equine Conformation and Performance Evaluation	
ADS 2122	Advanced Equine Evaluation	
ADS 3142	Meats Judging I	
ADS 3213	Livestock Growth, Development and Evaluation	
ADS 3812	Dairy Cattle Appraisal	
ADS 4212	Livestock Evaluation	
ADS 4232	Advanced Livestock Evaluation	
ADS 4123	Animal Breeding	3
or ADS 4114	Animal Nutrition	
ADS 4613	Physiology of Reproduction	3
or ADS 4623	Physiology of Lactation	
Minimum Hours Required		18