

## SYLLABUS INTRODUCTION ANIMAL SCIENCE

**Credit: 3-4 semester hours; (includes minimum 1 cr. hr. lab requirement)**

**No prerequisite**

It is recommended by the articulation committee that the maximum semester or quarter hours be included in the course.

### **Course Description**

IAI description: AG 902: *Introduction to Animal Science* (3-4 semester hrs. includes minimum 1 cr. hr. lab requirement @ 1500 minutes per credit hour)

The application of the sciences of genetics, physiology, and nutrition to the improvement of the animal industries and an introduction to management and production practices. Includes animal breeds, breeding and selection; anatomy, physiology, nutrition, growth; environment, health and sanitation; products and marketing; production technology and economics; animal behavior; and current issues in animal science.

### **Objectives:**

1. To demonstrate the application of the science of genetics; physiology and nutrition to the improvement of the animal science.
2. To acquaint the student with the management and production practices of these industries.
3. To familiarize the student with the products of these industries and their contribution to mankind and his environment.

### **Approved Texts:**

Blakely and Blade, *The Science of Animal Husbandry*, current edition

Ensminger, *Animal Science*, current edition

Taylor and Field, *Scientific Farm Animal Production*, current edition

### **Topics:**

### **Periods**

- |   |     |
|---|-----|
| I. Introduction   | 2-4 |
| A. Scope and Importance   |     |
| B. History, Growth, and Development of the Animal Industries        |     |
| C. Careers and Opportunities  |     |
| II. Breeds  | 1-3 |
| A. Beef, Dairy, Horses, Companion Animals, Poultry, Sheep and Swine |     |

III.	Breeding and Selection	7-9
	A. Principle of Genetics	
	B. Selection Systems	
	C. Improvement Program	
	D. Mating System	
IV.	Anatomy and Physiology	8-10
	A. Skeletal and Muscular Systems	
	B. Respiratory Circulatory Systems	
	C. Endocrine Systems	
	D. Reproductive Systems	
	1. Male	
	2. Female	
	a. Milk secretion	
	b. Physiology of egg laying	
	E. Digestive Systems	
V.	Nutrition	7-9
	A. Nutrients and Food Analysis	
	B. Requirements	
	C. Feedstuffs	
VI.	Growth	1-2
	A. Measurement of Growth	
	B. Factors affecting Growth	
VII.	Environment	2-4
	A. Temperature	
	B. Humidity	
	C. Light	
	D. Space	
	E. Adaptation	
VIII.	Health and Sanitation	3-5
	A. Sanitation Program	
	B. Disease Control Program	
	C. Parasite Control Program	
	D. Public Health	
	E. Biosecurity	
IX.	Product	8-10
	A. Meat	
	B. Milk	
	C. Eggs	
	D. Wool	

X.	Marketing	2-4
	A. Systems	
	B. Grading and Classification	
XI.	Production, Technology, and Economics	4-6
	A. Performance Standards	
	B. Livestock Enterprises	
	1. Contract farming	
	2. Vertical integration	
	3. Independent farming	
	C. Enterprise Cost Analysis	
XII.	Animal Behavior	1-3
	A. Types of Animal	
XIII.	Current Issues	2-4
	A. Animal Welfare and Ethics	
	B. Waste Management	
	C. Biotechnology	
	D. Food Safety	

### Recommendation

LABS: Will vary based on facilities/resources of each individual institution, but in general are coordinated with lecture topics.