



ILLINOIS VALLEY COMMUNITY COLLEGE

COURSE OUTLINE

DIVISION: Natural Science and Business

COURSE: AGR 1003 Introduction to Animal Science

Date: Fall 2019

Credit Hours: 4

Prerequisite(s): None

Delivery Method: **Lecture** **2 Contact Hours (1 contact = 1 credit hour)**
 Seminar **0 Contact Hours (1 contact = 1 credit hour)**
 Lab **4 Contact Hours (2-3 contact = 1 credit hour)**
 Clinical **0 Contact Hours (3 contact = 1 credit hour)**
 Online
 Blended

Offered: **Fall** **Spring** **Summer**

IAI Equivalent –**Only for Transfer Courses**-go to <http://www.itransfer.org>: AG 902

CATALOG DESCRIPTION:

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.

GENERAL EDUCATION GOALS ADDRESSED

[See last page for Course Competency/Assessment Methods Matrix.]

Upon completion of the course, the student will be able:

[Choose up to three goals that will be formally assessed in this course.]

- To apply analytical and problem solving skills to personal, social, and professional issues and situations.
- To communicate successfully, both orally and in writing, to a variety of audiences.
- To construct a critical awareness of and appreciation for diversity.
- To understand and use technology effectively and to understand its impact on the individual and society.
- To develop interpersonal capacity.
- To recognize what it means to act ethically and responsibly as an individual and as a member of society.
- To recognize what it means to develop and maintain a healthy lifestyle in terms of mind, body, and spirit.
- To connect learning to life.

EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

[Outcomes related to course specific goals. See last page for more information.]

Upon completion of the course, the student will be able to:

1. Generalize the scope, history, and importance of the animal industry.
2. Explain general management and production practices used in the animal science industry.
3. Identify and name breeds of livestock and companion animals.
4. Identify and explain animal anatomy and physiology.
5. Interpret breeding data and select appropriate sires.
6. Explain animal nutritional needs and recommend feed rations.
7. Analyze current animal welfare issues and make and defend resolutions to current issues.

MAPPING LEARNING OUTCOMES TO GENERAL EDUCATION GOALS

[For each of the goals selected above, indicate which outcomes align with the goal.]

Goals	Outcomes
First Goal	
To apply analytical and problem solving skills to personal, social, and professional issues and situations.	<ol style="list-style-type: none"> 1. Generalize the scope, history, and importance of the animal industry. 2. Explain general management and production practices used in the animal science industry. 3. Identify and name breeds of livestock and companion animals. 4. Identify and explain animal anatomy and physiology. 5. Interpret breeding data and select appropriate sires. 6. Explain animal nutritional needs and recommend feed rations.

	7. Analyze current animal welfare issues and make and defend resolutions to current issues.
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COURSE TOPICS AND CONTENT REQUIREMENTS:

- I. Introduction
 - a. Scope and Importance
 - b. History, Growth, and Development of Animal Industries
 - c. Careers and Opportunities
- II. Breeds
 - a. Beef, Dairy, Horses, Companion Animals, Poultry, Sheep and Swine
- III. Breed and Selection
 - a. Principle of Genetics
 - b. Selection Systems
 - c. Improvement Program
 - d. Mating System
- IV. Anatomy and Physiology
 - a. Skeletal and Muscular Systems
 - b. Respiratory Circulatory Systems
 - c. Endocrine Systems
 - d. Reproductive Systems
 - i. Male
 - ii. Female
 - 1. Milk Secretion
 - 2. Physiology of egg laying
 - e. Digestive Systems
- V. Nutrition
 - a. Nutrients and Food Analysis
 - b. Requirements
 - c. Feedstuffs
- VI. Growth
 - a. Measurement of Growth
 - b. Factors affecting Growth
- VII. Environment
 - a. Temperature
 - b. Humidity
 - c. Light
 - d. Space
 - e. Adaptation
- VIII. Health and Sanitation
 - a. Sanitation Program
 - b. Disease Control Program
 - c. Parasite Control Program
 - d. Public Health
 - e. Biosecurity
- IX. Product
 - a. Meat
 - b. Milk
 - c. Eggs

- d. Wool
- X. Marketing
 - a. Systems
 - b. Grading and Classification
- XI. Production, Technology, and Economics
 - a. Performance Standards
 - b. Livestock Enterprises
 - i. Contract Farming
 - ii. Vertical Integration
 - iii. Independent Farming
 - c. Enterprise Cost Analysis
- XII. Animal Behavior
 - a. Types of Animal
- XIII. Current Issues
 - a. Animal Welfare and Ethics
 - b. Waste Management
 - c. Biotechnology
 - d. Food Safety

INSTRUCTIONAL METHODS:

- Lecture
- Discussion
- Student Reports
- Lab Demonstration
- Hands-On Activity

INSTRUCTIONAL MATERIALS:

Bundy, J., L.K. Karr, R.A. Nold, B.A. Reiling, J.A. Sterle. 2016. Introduction to Animal Science – ISU. 1st Edition. Great River Learning. ISBN: 978-1-68-075794-9

Damron, W. Stephen. 2013. Introduction to animal science: global, biological, social, and industry perspectives. 5th Edition. Pearson. ISBN: 978-0-13-262389-6.

STUDENT REQUIREMENTS AND METHODS OF EVALUATION:

A= 90-100

B= 80-89

C= 70-79

D= 60-69

F= 0-59

Homework: 10%

Exams and Quizzes: 50%

Lab Assignments: 40%

OTHER REFERENCES:

Blakely and Blade, The Science of Animal Husbandry

Ensminger, Animal Science

Taylor and Field, Scientific Farm Animal Production

University of Illinois Extension publications.

<http://web.extension.illinois.edu/state/index.php>

Course Competency/Assessment Methods Matrix

(Dept/# Course Name)	Assessment Options																																	
For each competency/outcome place an "X" below the method of assessment to be used.	Assessment of Student Learning	Article Review	Case Studies	Group Projects	Lab Work	Oral Presentations	Pre-Post Tests	Quizzes	Written Exams	Artifact Self Reflection of Growth	Capstone Projects	Comprehensive Written Exit Exam	Course Embedded Questions	Multi-Media Projects	Observation	Writing Samples	Portfolio Evaluation	Real World Projects	Reflective Journals	Applied Application (skills) Test	Oral Exit Interviews	Accreditation Reviews/Reports	Advisory Council Feedback	Employer Surveys	Graduate Surveys	Internship/Practicum /Site Supervisor Evaluation	Licensing Exam	In Class Feedback	Simulation	Interview	Written Report	Assignment		
Assessment Measures – Are direct or indirect as indicated. List competencies/outcomes below.	Direct/ Indirect	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	I	I	I	I	D	D									
Generalize the scope, history, and importance of the animal industry.				X	X	X	X	X	X		X	X	X	X		X		X										X				X	X	
Explain general management and production practices used in the animal science industry.				X	X	X	X	X	X		X	X	X	X		X		X											X				X	X
Identify and name breeds of livestock and companion animals.				X	X	X	X	X	X		X	X	X	X		X		X											X				X	X
Identify and explain animal anatomy and physiology.				X	X	X	X	X	X		X	X	X	X		X		X											X				X	X
Interpret breeding data and select appropriate sires.				X	X	X	X	X	X		X	X	X	X		X		X											X				X	X

