



## **BS: Animal Science**

### **Major requirements—40**

AGRI100, 405; ANSI114, 305, 425, plus 24-25 credits in a special area of emphasis and 4-5 major electives chosen in consultation with an advisor.

### **Cognate requirements—18**

BIOL165, 166; CHEM131, 132

### **Animal Science Areas of Emphasis**

Students may choose an area of emphasis from the following or develop a personalized program in consultation with their advisor to meet specific career goals.

### **Pre-Veterinary Medicine—24**

AGRI137 (2); ANSI340 (3 species), 379, 420, 440, 445.

Recommended electives for entry into veterinary college:

\* BCHM421, 422; CHEM231, 232; MATH166, 167; PHYS141, 142.

\* Courses may vary depending on entrance requirements of the veterinary college of choice.

### **Management—25**

AGRI137 (2), 395; ANSI340 (4 species); ACCT121; ECON226.

Electives can be tailored to meet a specific student's interest, such as animal behavior, business management or marketing, journalism, or communication.

## **BS: Horticulture**

### **Major requirements—40**

AGRI100, 118, 240, 308, 405; HORT105, 378, plus 18 credits in a special area of emphasis.

### **Cognate requirements—18**

Select 8-10 credits from BIOL165, 166; BOT430, 475; ZOOL459; CHEM131, 132.

### **Horticulture Program Emphases in BS Degree Programs**

Students may choose an area of emphasis from the following or develop a personalized program in consultation with their advisor to meet specific career goals.

### **Landscape Design—18**

Select from the following: HORT135, 226, 228, 315, 350, 355, 365, 375, 429, 448

### **Landscape/Turf Management—18**

Select from the following: HORT135, 208, 211, 212, 217, 226, 228, 315, 346, 350, 359, 360, 367, 417

## **BT: Agribusiness**

### **Major requirements—44**

AGRI100, 118, 206, 240, 300, 304, 308, 405; ANSI114; HORT105, 378; plus 10 major elective credits chosen in consultation with advisor.

### **Cognate requirement—4**

CHEM110

### **Business Emphasis—18**

ACCT121, 122; BSAD341, 355; ECON226; FNCE317

**Landscape Design—13**  
HORT135, 226, 228, 350

**Landscape/Turf Management—16**  
HORT208, 211, 217, 226, 228, 239

## **Minors in Agriculture, Animal Science or Horticulture—20**

Selected from AGRI, ANSI or HORT courses in consultation with advisor.

### **Pre-Professional Program in Veterinary Medicine**

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Entrance requirements vary among the colleges of veterinary medicine. Therefore, interested students must write to the schools of choice for the most current and detailed information. A list of accredited colleges of veterinary medicine may be obtained from the American Veterinary Medical Association, 930 North Meacham Road, Schaumburg, IL 60196; <http://www.avma.org>.

*Students in consultation with their advisors in the Agriculture Department can design individualized programs of study to meet the entrance requirements of the veterinary school of choice. The required prerequisite pre-veterinary courses are usually general biology, general and organic chemistry, physics, biochemistry, mathematics, courses in animal science, and general education.*

site and type of farm machines, their capacity, efficient use, adjustment and repair. Weekly: 2 lectures and a 3-hour lab. *Fall*

**AGRI240** **Alt (3)**  
***Fundamentals of Irrigation***

Design, installation, drawing, interpretation and maintenance of plastic or metal irrigation systems and control devices for proper sprinkler coverage. *Fall*

**AGRI270** **Alt (3)**  
***Management of Agriculture Enterprises***

An introduction to acquiring and analysis of management information for decision making; an understanding of basic economic principles that impact biological production systems and implementation of the principles for total quality management for increased productivity. *Fall*

**AGRI300** **Alt (3)**  
***Field Crop Production***

Importance, distribution, economic adaptation, and botany of leading farm crops, emphasizing rotation, seedbed preparation, and economic production. *Spring*

## **Courses**

(Credits)

See inside front cover for symbol code.

### **AGRICULTURE**

**AGRI100** **(1)**  
***College Success Seminar***

A survey of the history of agriculture in the U.S. and career opportunities in production agriculture, animal science, landscaping and related areas. Students also learn how to improve their study skills and become familiar with the academic resources available to them on campus. *Fall*

**AGRI118** **\$ (5)**  
***Soil Science***

Factors affecting soil formation, soil texture, particle size, pore space and their impact on soil air/water relations, and chemical characteristics of soils, including pH, ion exchange, and maintenance of soil fertility. Weekly: 4 lectures and a 3-hour lab. *Spring*

**AGRI137** **(1-3)**  
***Practicum in \_\_\_\_\_***

Fifty hours per credit of supervised practical experience in one area of concentration. May be repeated in different areas for a maximum of 6 credits. Topics to be chosen in consultation with an advisor. *Fall, Spring*

**AGRI206** **\$ Alt (3)**  
***Farm Machinery***

Selection and operation of farm equipment, based on the initial cost and economic performance, including factors governing the

## ANIMAL SCIENCE

**ANSI114** (3)

### ***Introduction to Animal Science***

Basic farm animal anatomy, reproductive and digestive physiology, housing, health management with information on how animal products are processed and marketed. Efficient, effective management is emphasized throughout course. *Fall*

**ANSI240** \$ Alt (4)

### ***Fundamentals of Veterinary Clinical Techniques***

Topics covered and skills learned include (not limited to) animal restraint and handling, anesthesia, surgical instruments and aseptic technique, surgical assistance, post-surgical nursing, pain management, wound management and bandaging, euthanasia and client bereavement, diagnostic imaging. Laboratory included.

**ANSI250** \$ Alt (3)

### ***Dairy Facilities***

A study of various types of milking systems, housing and manure handling systems of dairy cattle of all ages and production levels. Ventilation, stall and barn dimensions, and bedding will be some of the topics covered. Weekly: 2 lectures and one 3-hour laboratory. *Summer*

**ANSI278** \$ Alt (3)

### ***Dairy Health and Disease***

A study of the cause, prevention and treatment of infectious and metabolic diseases of dairy cattle. Weekly: 2 lectures and one 3-hour laboratory. *Spring*

**ANSI305** \$ Alt (3)

### ***Animal Nutrition***

Principles of digestion, absorption, metabolism of feeds by farm species are examined for practical, profitable feeding. Common and non-traditional feedstuffs, feed-related diseases and ration formulation are included. Weekly: 2 lectures and a 3-hour lab. Recommended: CHEM110 or 131. *Fall*

**ANSI340** \$ (3)

### ***Production/Management of \_\_\_\_\_***

Production methods and management practices of domesticated livestock species including nutrition, reproduction, housing, health and specialized care of a particular species. Course is repeatable for study of avian, beef cattle, dairy cattle (includes a lab), equine (includes a lab), porcine, and wool and lamb production. *Fall, Spring*

**ANSI379** Alt (2)

### ***Small Animal Health and Disease***

A survey of proper handling and care, nutritional needs, and common health problems of companion animals such as dogs, cats, and birds. *Fall*

**ANSI420** \$ Alt (4)

### ***Canine Gross Anatomy***

Study of macroscopic skeleton, muscles, internal organs, blood vessels and nerves using preserved, latex-injected specimens. Comparisons made with the live dog through palpation. Weekly: 2 lectures and 2 three-hour labs. Recommended: BIOL166. *Fall*

**ANSI425** Alt (3)

### ***Issues in Animal Agriculture, Research and Medicine***

Study of the ethical issues that challenge animal researchers, producers, caretakers, and veterinarians to treat animals humanely yet effectively in society today. *Spring*

**ANSI430** Alt (2)

### ***Lactation Physiology***

Anatomy and physiology of the udder, milk secretion, disease prevention and treatment, milking management and milking systems.

**ANSI440** \$ Alt (3)

### ***Animal Reproduction***

Study of anatomy and physiology of farm animal reproduction including lactation, which explores the cellular component as well as the management aspects. Weekly: 2 lectures and a 3-hour lab. Recommended: BIOL166. *Spring*

**ANSI445** \$ Alt (3)

### ***Physiology of Farm Animals***

Physiology of digestive, reproductive, lactation, cardiovascular, pulmonary, excretory, nervous, and skeletomuscular systems in domesticated ruminants and monogastrics. Weekly: 2 lectures and a 3-hour lab. Recommended: BIOL166. *Fall*

## HORTICULTURE

**HORT105** \$ (5)

### ***Plant Science***

Intended to acquaint students with the requirements of plant growth and development. Understanding of these processes is gained by studying topics such as plant cells, tissue, and organ structure; photosynthesis, cellular respiration, plant reproduction, including flowering, fruit development, seed set, the role of hormones, and plant nutrition. Weekly: 4 lectures and a 3-hour lab. *Fall*

**HORT135** \$ (4)

### ***Landscape Drafting and Design***

Develops proficiency in technical drafting for landscape design including symbols, title blocks, plant legends and plan organization. Principles of design, site analysis, functional diagraming, circulation, spatial planes, design schematics and plant selection are explored. Laboratory puts the design process to work in drawing plans for residential design. Weekly: 3 lectures and a 3-hour lab. *Fall*

**HORT208** \$ Alt (3)

### ***Propagation of Horticultural Plants***

Intended to acquaint students with the processes of asexual reproduction, especially as it applies to the horticultural industry. Fall/TJT\* TT6 1 T) and 2 three-hour labs. Recommended: BIO

~~ANSI430~~ **Lactation Physiology**

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**HORT217** **Alt (3)**

***Turfgrass Management***

Principles of turfgrass management for parks, grounds, golf courses, and athletic fields. Topics include cool and warm season genera, growth and adaptation criteria, cultural considerations including irrigation, mowing, soil fertility, compaction and drainage; thatch, plant protection (weeds, insects, diseases) establishment and renovation. *Fall*

**HORT226** **Alt (3)**

***Woody Plant Identification***

Introduction to the identification and recognition of shape, size, color, texture, environmental requirements and landscape value of common deciduous and evergreen trees, shrubs and vines. *Fall*

**HORT228** **Alt (3)**

***Herbaceous Plant Identification***

Identification and recognition of shape, size, color, texture, and environmental requirements of the nonwoody plants providing color and ground cover in the landscape. *Fall*

**HORT315** **\$ Alt (4)**