

Course Schedule - Spring 2006

Animal Sciences

100 *Intro to Animal Sciences* Credit: 4 hours.

Survey of beef and dairy cattle, companion animals, horses, poultry, sheep, and swine. Includes the importance of product technology and the basic principles of nutrition, genetics, physiology, and behavior as they apply to breeding, selection, feeding, and management. Lecture and lab.

Additional Lab Fee Required. Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
29911	laboratory	AB1	08:00 AM - 09:50 AM	T	room ARENA Stock Pavilion	Parrett, D
29911: ACES Lab 10.00 dollars.						
29915	laboratory	AB2	03:00 PM - 04:50 PM	T	room ARENA Stock Pavilion	Parrett, D
29915: ACES Lab 10.00 dollars.						
29918	lecture	AL1	11:00 AM - 11:50 AM	MWF	room 131 Animal Sciences Laboratory	Parrett, D

103 *Working With Farm Animals* Credit: 2 hours.

Introductory course that will provide novice students with the fundamentals of animal-animal and animal-human interactions for domestic farm animals. Emphasizes hands-on experiences to develop a background in the concepts and practice of recognizing and understanding the animal's physiology and behavior, animal well being, and animal responses to human interactions. Prerequisite: ANSC 100.

CRN	Type	Section	Time	Days	Location	Instructor
29919	laboratory	AB1	03:00 PM - 04:50 PM	T	room 131 Animal Sciences Laboratory	Cobb, A; Hurley, W; Parsons, C
29920	lecture	AL1	02:00 PM - 02:50 PM	R	room 131 Animal Sciences Laboratory	Cobb, A; Hurley, W; Parsons, C

110 *Life With Animals and Biotech* Credit: 3 hours.

Lecture/discussion course that will provide students an overview of biotechnology and animals. Focuses on biotechnological achievements involving animals and how they influence the global development of agriculture, medicine, and industry. Topics will be covered from scientific, discovery, historical, social, and political perspectives.

This course satisfies the General Education Criteria for a Life Sciences course.

CRN	Type	Section	Time	Days	Location	Instructor
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39451	lecture-discussion	A	03:00 PM - 03:50 PM	W	room 131 Animal Sciences Laboratory	Kesler, D
39451: Discovery, and Life Sciences course.						
	lecture-discussion	A	03:00 PM - 04:50 PM	M	room 131 Animal Sciences Laboratory	Kesler, D
: Discovery, and Life Sciences course.						
: First Year Discovery Program Course. Registration restricted to freshmen. Students should enroll in only one Discovery course. Students who enroll in more than one Discovery course may be dropped from the additional Discovery Courses. For course descriptions, see the Discovery Program booklet.						

199 Undergraduate Open Seminar Credit: 1 to 5 hours.

An experimental course on a special topic in animal sciences. Topic may not be repeated except in accordance with the Code. May be repeated to a maximum of 12 hours. No more than 12 hours may be counted toward graduation.

CRN	Type	Section	Time	Days	Location	Instructor
10232	independent study		ARRANGED			
10232: Instructor Approval Required						

204 Intro Dairy Cattle Evaluation Credit: 2 hours.

Evaluation of physical traits of dairy cattle in relation to economic value and genetic improvement; sire selection, mating systems, and genetic merit for dairy cattle. Field trip required. See Class Schedule for approximate cost of field trip. Prerequisite: ANSC 100 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
29923	laboratory	AB1	03:00 PM - 04:50 PM	W	room 292 Animal Sciences Laboratory	McCoy, G; Miller, D
29924	lecture	AL1	03:00 PM - 04:50 PM	M	room 292 Animal Sciences Laboratory	McCoy, G; Miller, D

205 World Animal Resources Credit: 3 hours.

Examination of the world's animals, domesticated and wild, and their uses in various climatic, economic and cultural contexts. Exploration of their contemporary management and their future prospects. Provides background for international experiences, such as ACES 298 and ACES 299. Prerequisite: Completion of the campus Composition I general education requirement.

This course satisfies the General Education Criteria for a Advanced Composition course.

CRN	Type	Section	Time	Days	Location	Instructor
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29921	lecture-discussion	AA	03:30 PM - 04:50 PM	TR	room 150 Animal Sciences Laboratory	Parsons, C; Pettigrew, J
29921: Advanced Composition course.						

209 Meat Animal Carcass Eval Credit: 3 hours.

Study principles and techniques used in meat animal and carcass evaluation along with factors that influence composition, meat quality and preparation. Students planning to enroll in ANSC 310 and 312 should take ANSC 209 in their sophomore year. Prerequisite: ANSC 100.

CRN	Type	Section	Time	Days	Location	Instructor
29926	laboratory	AB1	01:00 PM - 02:50 PM	MW	room 120 Meat Science Laboratory	Carr, T
29927	lecture-discussion	AE1	01:00 PM - 01:50 PM	F	room 120 Meat Science Laboratory	Carr, T

211 Breeding Animal Evaluation Credit: 3 hours.

Application of current scientific tools, methods, and performance programs available to livestock breeders for improving beef cattle, swine, sheep, and horses; emphasis on the changing nature of modern breeds of livestock as influenced by selection, economics, and consumer and market trends. Sophomore standing; credit or concurrent registration in ANSC 209.

CRN	Type	Section	Time	Days	Location	Instructor
29928	laboratory	AB1	03:00 PM - 04:50 PM	MW	room ARENA Stock Pavilion	Parrett, D
29929	lecture	AL1	03:00 PM - 03:50 PM	F	room ARENA Stock Pavilion	Parrett, D

213 Beef and Swine Management Credit: 3 hours.

Examines basic principles of beef cattle and swine management for students other than animal sciences majors. Credit is not given for both ANSC 213 and ANSC 401 or ANSC 403. Prerequisite: ANSC 100.

CRN	Type	Section	Time	Days	Location	Instructor
29956	lecture	A	01:00 PM - 02:20 PM	TR	room 107 Animal Sciences Laboratory	Ellis, M; Berger, L

215 Humane Edu With Companion Anim Credit: 3 hours.

Course explores humane education as it pertains to companion animals, primarily cats and dogs. The historical aspects of domestication and humane education as well as modern-day relationships between humans and

companion animals are addressed. Pet over population and resulting animal shelter issues are discussed in detail. Selection, behavior, and care of companion animals are studied with a focus on promoting the human-companion animal bond, behavioral wellness, and safety. Animal protection laws, animal control laws, and the connection between animal cruelty and violent behavior toward humans are also examined. Prerequisite: Sophomore standing.

This course satisfies the General Education Criteria for a Advanced Composition course.

CRN	Type	Section	Time	Days	Location	Instructor
43702	laboratory	AB1	11:00 AM - 12:20 PM	R	room 292 Animal Sciences Laboratory	Helmink, S
43702: Advanced Composition course.						
43705	laboratory	AB2	12:30 PM - 01:50 PM	R	room 292 Animal Sciences Laboratory	Helmink, S
43705: Advanced Composition course.						
29934	lecture	AL1	11:00 AM - 12:20 PM	T	room 131 Animal Sciences Laboratory	Helmink, S
29934: Advanced Composition course.						

293 Internship Off Campus Credit: 1 to 4 hours.

Supervised, off-campus learning experience in an animal-related enterprise. May be repeated in the same or subsequent terms to a maximum of ten hours. Prerequisite: good academic standing; ANSC 100.

CRN	Type	Section	Time	Days	Location	Instructor
10235	independent study		ARRANGED			
10235: Instructor Approval Required						

294 Intern On Campus Practical Exp Credit: 1 to 5 hours.

Supervised, on-campus learning experience associated with subject matter specific to animal sciences. Approved for both S/U and letter grading. May be repeated in the same or subsequent terms to a maximum of ten hours. Prerequisite: good academic standing; ANSC 100.

CRN	Type	Section	Time	Days	Location	Instructor
10242	independent study		ARRANGED			
10242: Instructor Approval Required						
29958	laboratory	QQ	ARRANGED			Cobb, A
29958: Section QQ: Quadrathlon						

295 UG Research or Thesis Credit: 1 to 5 hours.

Individual research in animal sciences. May be repeated in the same or subsequent terms to a maximum of ten hours. Prerequisite: Minimum GPA of 2.5; not open to students on probation; consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10246	independent study		ARRANGED			
10246: Instructor Approval Required						

298 Undergraduate Seminar Credit: 1 hours.

Presentations and discussion of employment opportunities, departmental research activities, and topics relevant to animal agriculture. Prerequisite: Sophomore standing.

CRN	Type	Section	Time	Days	Location	Instructor
29959	lecture	A	12:00 PM - 12:50 PM	R	room 131 Animal Sciences Laboratory	Clark, J

299 Animal Mgt Field Studies Credit: 1 or 2 hours.

Field studies of farms and service industries; discusses and demonstrates management practices on commercial farms. Trip normally taken during spring break, see Class Schedule for approximate cost.

Additional Lab Fee of \$110-200 may be required.

CRN	Type	Section	Time	Days	Location	Instructor
29961	lecture-discussion	A	ARRANGED			Knox, R; Kesler, D
29961: 1 hoursSection A: Food Animal - Registration is by Application only and by Instructor Approval. Contact Instructor for the application and any questions.						
43598	lecture-discussion	B	ARRANGED			Lopez, A; Fischer-Brown, A
43598: 1 hoursSection B: Companion Animal						
29962	lecture-discussion	C	ARRANGED			Shanks, R; McCoy, G
29962: 1 hoursSection: C Dairy Management						

305 Human Animal Interactions Credit: 3 hours.

Explores the relationships between humans and companion animals and the roles and functions that animals play in today's society. Examines the evolution of the human/companion animal bond, benefits and disadvantages of this bond, and working/nonworking roles of companion animals. Controversial issues which are of current concern to

society will be examined in detail. Writing and in-class discussions are emphasized. Prerequisite: Junior standing.

CRN	Type	Section	Time	Days	Location	Instructor
29925	lecture-discussion	A	03:00 PM - 04:20 PM	MW	room 107 Animal Sciences Laboratory	Lopez, A

306 *Equine Science* Credit: 3 hours.

Understand and apply current scientific research and principles of equine science to intensive horse production. An in-depth approach to equine reproductive physiology, nutrition, anatomy and exercise physiology will be followed using a combined lecture and laboratory format. Emphasis on current research and hands-on techniques. Prerequisite: ANSC 206, ANSC 331 and ANSC 362, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
29971	laboratory	AB1	09:00 AM - 10:50 AM	T	room 248 Agricultural Engr Sciences Bld	Kline, K; Hagstrom, D
29974	laboratory	AB2	09:00 AM - 10:20 AM	W	room 208 Agricultural Engr Sciences Bld	Kline, K; Hagstrom, D
29972	lecture	AL1	01:00 PM - 01:50 PM	TR	room 131 Animal Sciences Laboratory	Kline, K; Hagstrom, D

325 *Principles of Animal Nutrition* Credit: 3 hours.

Principles of animal nutrition and their application to veterinary practice; designed primarily for students in veterinary medicine. Lecture and laboratory. Credit is not given for both ANSC 325 and ANSC 321. Prerequisite: MCB 350, or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
29981	laboratory	AB1	10:00 AM - 11:50 AM	R	room 2251 Vet Med Basic Sciences Bldg	Troutt, H; Swanson, K
29982	lecture	AL1	11:00 AM - 11:50 AM	TW	room 2251 Vet Med Basic Sciences Bldg	Troutt, H; Swanson, K

331 *Biology of Reproduction* Credit: 4 hours.

Study of the basic principles of reproduction, lactation, growth, and hormone regulation of domestic and non-domestic animals as well as humans, including biotechnological methods of reproductive control, manipulation, performance enhancement of lactation and growth, and disease control. Same as IB 331. Prerequisite: Sophomore standing; IB 104 or one introductory level biology course.

This course satisfies the General Education Criteria for a Life Sciences course.

Additional Lab Fee Required. DISSECTION REQUIRED: Alternatives available for all assignments.

CRN	Type	Section	Time	Days	Location	Instructor
29935	laboratory	AB1	10:00 AM - 11:50 AM	M	room 67 Animal Sciences Laboratory	Kesler, D; Miller, D
29935: Life Sciences course.DISSECTION REQUIRED: ALTERNATIVES AVAILABLE FOR ALL ASSIGNMENTSACES Lab 20.00 dollars.						
29937	laboratory	AB2	01:00 PM - 02:50 PM	M	room 67 Animal Sciences Laboratory	Kesler, D; Miller, D
29937: Life Sciences course.DISSECTION REQUIRED: ALTERNATIVES AVAILABLE FOR ALL ASSIGNMENTSACES Lab 20.00 dollars.						
29938	laboratory	AB3	03:00 PM - 04:50 PM	M	room 67 Animal Sciences Laboratory	Kesler, D; Miller, D
29938: Life Sciences course.DISSECTION REQUIRED: ALTERNATIVES AVAILABLE FOR ALL ASSIGNMENTSACES Lab 20.00 dollars.						
29940	laboratory	AB4	10:00 AM - 11:50 AM	T	room 67 Animal Sciences Laboratory	Kesler, D; Miller, D
29940: Life Sciences course.DISSECTION REQUIRED: ALTERNATIVES AVAILABLE FOR ALL ASSIGNMENTSACES Lab 20.00 dollars.						
29941	laboratory	AB5	01:00 PM - 02:50 PM	T	room 67 Animal Sciences Laboratory	Kesler, D; Miller, D
29941: Life Sciences course.DISSECTION REQUIRED: ALTERNATIVES AVAILABLE FOR ALL ASSIGNMENTSACES Lab 20.00 dollars.						
29942	laboratory	AB6	03:00 PM - 04:50 PM	T	room 67 Animal Sciences Laboratory	Kesler, D; Miller, D
29942: Life Sciences course.DISSECTION REQUIRED: ALTERNATIVES AVAILABLE FOR ALL ASSIGNMENTSACES Lab 20.00 dollars.						
29943	lecture	AL1	05:00 PM - 06:15 PM	MW	room 150 Animal Sciences Laboratory	Hurley, W; Kesler, D; Miller, D
29943: Life Sciences course.DISSECTION REQUIRED: ALTERNATIVES AVAILABLE FOR ALL ASSIGNMENTS						
40437	laboratory	BB1	ARRANGED			Kesler, D
40437: Camp Honors/Chanc Schol, and Life Sciences course.This section for Chancellor's Scholars only; other students may only enroll with consent of instructor and the Campus Honors Program.						
40429	lecture	BL1	12:00 PM - 01:20 PM	MW	room 212 1205 W Oregon	Kesler, D
40429: Camp Honors/Chanc Schol, and Life Sciences course.Sections BL1 and BB1 are for Chancellor's Scholars only. Others may only enroll with consent of instructor and the Campus Honors Program.						

340 Plant and Animal Genetics Credit: 4 hours.
Same as CPSC 352, and NRES 352. See CPSC 352.

Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
31504	laboratory	AB1	01:00 PM - 02:50 PM	T	room 393 Bevier Hall	Diers, B; Beever, J
31505	laboratory	AB2	03:00 PM - 04:50 PM	T	room 107 Animal Sciences Laboratory	Diers, B; Beever, J
31506	laboratory	AB3	08:00 AM - 09:50 AM	T	room M5 Turner Hall	Diers, B; Beever, J
31508	lecture	AL1	02:00 PM - 02:50 PM	MWF	room W109 Turner Hall	Diers, B; Beever, J

396 UG Honors Research or Thesis Credit: 1 to 5 hours.

Independent study, under the supervision of a faculty member, on a problem of appropriate scope and character that culminates in writing a thesis. Intended primarily for honors students who plan on conducting research or pursuing graduate study. Thesis projects must be supervised by a faculty member and reviewed by a departmental committee. Students must present a satisfactory thesis to receive credit. May be repeated in the same or subsequent terms to a maximum of ten hours. Prerequisite: Junior standing, minimum GPA of 3.4; consent of a faculty member.

CRN	Type	Section	Time	Days	Location	Instructor
10251	independent study		ARRANGED			
10251: Instructor Approval Required						

402 Sheep Production Credit: 3 hours.

Study of management, nutrition, reproduction, genetics, marketing, economics, housing, health and production record programs as they apply to sheep production. History of the U. S. sheep industry will be explored along with a study of wool production, marketing and processing. Prerequisite: ANSC 321 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
29963	lecture-discussion	1	09:00 AM - 09:50 AM	R	room 131 Animal Sciences Laboratory	Cobb, A
	lecture-discussion	1	09:00 AM - 10:50 AM	T	room 131 Animal Sciences Laboratory	Cobb, A

403 *Pork Production* Credit: 3 hours.

Applies science and technology to the selection, breeding, feeding, housing and management of swine in a production enterprise; emphasizes use of research findings in decision making. Credit is not given for both ANSC 213 and ANSC 403. Prerequisite: ANSC 340 ANSC 321, and ANSC 467; and ANSC 331 or ANSC 431.

CRN	Type	Section	Time	Days	Location	Instructor
29964	lecture-discussion	A	08:00 AM - 08:50 AM	MWF	room 131 Animal Sciences Laboratory	Ellis, M

404 *Poultry Science* Credit: 3 or 4 hours.

Basic principles of genetics, physiology, nutrition, and health of avian species; the application of science and technology in solving the breeding, nutrition, disease, housing, and other management problems encountered in commercial egg and poultry meat production. Undergraduate and graduate students must complete research project to obtain 4 hours.

CRN	Type	Section	Time	Days	Location	Instructor
29967	lecture-discussion	1	09:00 AM - 09:50 AM	MWF	room 107 Animal Sciences Laboratory	Parsons, C; Koelkebeck, K
29967: 3 hours						
29968	lecture-discussion	2	09:00 AM - 09:50 AM	MWF	room 107 Animal Sciences Laboratory	Parsons, C; Koelkebeck, K
29968: 4 hours						

409 *Meat Science* Credit: 4 hours.

Fundamental biological principles that influence growth, composition, processing, preservation, and quality of meat and meat products. Prerequisite: CHEM 104 and 105; MCB 100 and MCB 101, or MCB 300 and MCB 301.

CRN	Type	Section	Time	Days	Location	Instructor
29977	laboratory	AB1	01:00 PM - 02:50 PM	T	room 139 Meat Science Laboratory	McKeith, F; Killefer, J
29979	lecture-discussion	AE1	10:00 AM - 10:50 AM	MWF	room 120 Meat Science Laboratory	McKeith, F; Killefer, J

421 *Minerals and Vitamins* Credit: 3 hours.

Nutritional implications and metabolic roles of minerals and vitamins in animal metabolism. The course is designed to instill a basic understanding of vitamin and mineral functions, absorption, metabolism, and excretion. Research methodologies used in the study of vitamin and mineral nutrition will also be discussed. Prerequisite: A nutrition course (ANSC 321, ANSC 325, or equivalent) and credit or concurrent registration in MCB 350 or ANSC 350, or

consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
29980	lecture	A	08:30 AM - 09:50 AM	TR	room 292 Animal Sciences Laboratory	Beverly, J; Murphy, M
29980: Course is taught every other spring semester. Next offering will be Spring 2006.						

422 Companion Animal Nutrition Credit: 3 hours.

Digestive physiology and basic nutritional considerations of companion animals including canine, feline, laboratory animals, and some wildlife species. Nutritional idiosyncrasies and the importance of nutrition in various physiological states will be emphasized. Current research findings will be used to illustrate development/refinement of nutritional principles applied to these species. Prerequisite: ANSC 321 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
39489	lecture	A	09:00 AM - 09:50 AM	MWF	room 131 Animal Sciences Laboratory	Swanson, K

423 Advanced Dairy Nutrition Credit: 2 hours.

All aspects of dairy cattle nutrition will be discussed including nutrients, phase feeding (milk curve analysis, dry matter intake, and body weight loss), dry and transition cow programs, forage feeding systems, feed delivery approaches, metabolic disorders related to nutrition, and application of various dairy feeding guides. Prerequisites: ANSC 201 or equivalent, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
41454	online	XM	07:00 PM - 08:00 PM	M	room ARR 508 S Sixth	Hutjens, M
41454: OnlineMeets 23-Jan-06 - 10-Apr-06.AO Tuition 239, AO Tuition 215, AO Fees 36, and AO Fees 36.00 dollars.						
41454: Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu . Class will not meet on 3/20 (spring break). Local students may attend class at 508 S. Sixth Street, Champaign, Illinois if they wish.						

438 Lactation Biology Credit: 4 hours.

Examines the structural and functional development of the mammary gland, cell biology, and control of milk synthesis, and composition and biochemistry of milk. Compares and analyzes the physiological processes of lactation in mammals. Prerequisite: ANSC 331.

CRN	Type	Section	Time	Days	Location	Instructor
29975	discussion-	AD1	01:00 PM - 01:50	F	room 131 Animal	Hurley, W

	recitation		PM		Sciences Laboratory	
29976	lecture-discussion	AE1	01:00 PM - 02:50 PM	MW	room 131 Animal Sciences Laboratory	Hurley, W

440 *Applied Statistical Methods I* Credit: 4 hours.
Same as ABE 440, CPSC 440, FSHN 440, and NRES 440. See CPSC 440.

CRN	Type	Section	Time	Days	Location	Instructor
31593	laboratory	AB1	01:00 PM - 02:50 PM	T	room N120 Turner Hall	Bollero, G
31595	laboratory	AB2	03:00 PM - 04:50 PM	T	room N120 Turner Hall	Bollero, G
31597	laboratory	AB3	05:00 PM - 06:50 PM	T	room N120 Turner Hall	Bollero, G
31603	lecture	AL1	08:00 AM - 09:20 AM	TR	room 106 Lincoln Hall	Bollero, G

441 *Human Genetics* Credit: 3 or 4 hours.
Same as ANTH 441. See ANTH 441.

CRN	Type	Section	Time	Days	Location	Instructor
44655	lecture-discussion	1G	01:00 PM - 01:50 PM	MWF	room 116 Davenport Hall	Roseman, C
44655: 4 hours						
44656	lecture-discussion	1U	01:00 PM - 01:50 PM	MWF	room 116 Davenport Hall	Roseman, C
44656: 3 hours						

444 *Applied Animal Genetics* Credit: 3 hours.
Principles of heredity and their application to the problems of animal improvement. Prerequisite: CPSC 352 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
29969	lecture-discussion	1	10:00 AM - 10:50 AM	MWF	room 131 Animal Sciences Laboratory	Shanks, R
29969: Prerequisite: ANSC 340 (same as CPSC 352) or equivalent.						

445 Statistical Methods Credit: 4 hours.

Design and analysis of experiments: multiple regression, method of fitting constants, factorial experiments with unequal subclass numbers, analysis of covariance, experimental design; computer applications to agricultural experiments using statistical packages. Same as ABE 445, and NRES 445. Prerequisite: CPSC 440, or MATH 263, or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
43570	lecture-discussion	1	10:00 AM - 11:20 AM	WF	room 22 ACES Lib, Info and Alum Ctr	Rodriguez-Zas, S

448 Math Modeling in Life Sciences Credit: 3 or 4 hours.

Introduction to deterministic and stochastic mathematical models for the life sciences, statistical methods for fitting and testing models, and computer simulation programs. Applications to populations, processes, and products of animals, plants, and humans. Same as IB 487, and STAT 458. Students desiring 4 hours credit do additional work in some area of mathematical modeling in the life sciences. Prerequisite: IB 104; a course in calculus, and a course in computer sciences; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
29984	laboratory	A	11:00 AM - 12:50 PM	F	room 23 ACES Lib, Info and Alum Ctr	Murphy, M
	lecture	A	11:00 AM - 11:50 AM	MW	room 23 ACES Lib, Info and Alum Ctr	Murphy, M

450 Comparative Immunobiology Credit: 4 hours.

Advanced concepts of immunophysiology and immunogenetics. Immunophysiology with an emphasis on immune-neuroendocrine interactions. The molecular and cellular basis of self-nonsel self recognition with an emphasis on the major histocompatibility complex in vertebrates and innate immunity in both vertebrates and invertebrates. The mucosal immune system, which requires a complex interplay between innate and acquired immunity to protect mucosal surfaces exposed to the environment. A working knowledge of genetics and cellular and molecular biology is recommended. Same as MCB 442, and PATH 510.

CRN	Type	Section	Time	Days	Location	Instructor
39603	lecture-discussion	A	01:00 PM - 02:20 PM	TR	room 313 Mumford Hall	Gaskins, H; Kelley, K

451 Microbes and the Anim Indust Credit: 3 hours.

Fundamental aspects of the ecology of microorganisms and their biochemical activities related to the degradation of organic matter with emphasis on the gastrointestinal tract of production animals. Prerequisite: MCB 350 or MCB 352 and MCB 353, and MCB 100 or MCB 300 or MCB 424, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
39808	lecture-discussion	1	09:00 AM - 10:20 AM	TR	room 404 Animal Sciences Laboratory	Cann, I

456 **Lab Animal Science 2** Credit: 1 hours.
Same as VCM 656. See VCM 656.

CRN	Type	Section	Time	Days	Location	Instructor
45461	lecture	G	02:00 PM - 02:50 PM	R		Peper, R
37692	lecture	U	02:00 PM - 02:50 PM	R	room 2258 Vet Med Basic Sciences Bldg	Peper, R

466 **Animal Behavior** Credit: 3 hours.
Same as ANTH 442, and IB 429. See IB 429.

CRN	Type	Section	Time	Days	Location	Instructor
34663	lecture	G	03:00 PM - 03:50 PM	MWF	room 116 Roger Adams Laboratory	Weatherhead, P

499 **Seminar** Credit: 1 to 4 hours.
Group discussion or an experimental course on a special topic in animal sciences. May be repeated.

CRN	Type	Section	Time	Days	Location	Instructor
10254	independent study		ARRANGED			
10254: Instructor Approval Required						
41456	online	XM	07:00 PM - 08:00 PM	T	room ARR 508 S Sixth	Dahl, G
41456: 2 hours Milk Sec, Mastitis and Quality Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu . Class will not meet on 3/20 (spring break). Online Meets 31-Jan-06 - 18-Apr-06. AO Tuition 239, AO Tuition 215, AO Fees 36, and AO Fees 36.00 dollars.						

520 **Protein and Energy Nutrition** Credit: 3 hours.
Physiological aspects of protein and amino acids, fats and fatty acids, and carbohydrates as applied to higher animals; includes classification, digestion, absorption, utilization, metabolism, and dietary deficiencies and excesses. Prerequisite: MCB 350 or equivalent and a course in nutrition.

CRN	Type	Section	Time	Days	Location	Instructor
29990	lecture	A	11:00 AM - 11:50 AM	MWF	room 107 Animal Sciences Laboratory	Fahey, G; Novakofski, J; Drackley, J; Garlick, P

521 Regulation of Metabolism Credit: 4 hours.
Same as FSHN 511, and NUTR 511. See NUTR 511.

CRN	Type	Section	Time	Days	Location	Instructor
35388	discussion-recitation	AD1	10:00 AM - 10:50 AM	F	room 292 Animal Sciences Laboratory	Layman, D; Nakamura, M
35391	lecture	AL1	10:00 AM - 10:50 AM	MTWR	room 292 Animal Sciences Laboratory	Layman, D; Nakamura, M

530 Advanced Endocrinology Credit: 2 hours.
Same as MCB 512, and VB 512. See MCB 512.

CRN	Type	Section	Time	Days	Location	Instructor
37733	discussion-recitation	1	05:00 PM - 06:20 PM	T	room 501 Burrill Hall	Nardulli, A

531 Adv Reproductive Endocrinology Credit: 3 hours.
The reproductive endocrinology of domestic and laboratory animals. Topics include neuroendocrinology; chemistry, metabolism, and action of hormones, regulation of gonadal function, endocrine changes during puberty, aging, pregnancy, and parturition, external factors affecting reproduction, infertility, and hormones and behavior. Same as MCB 531, and VB 531. Prerequisite: ANSC 431, MCB 413, MCB 350, or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
29991	lecture	A	11:00 AM - 11:50 AM	MWF	room 108 David Kinley Hall	Bahr, J

533 Repro Physiology Lab Methods Credit: 1 to 3 hours.
Laboratory methods used in reproductive physiology studies, such as blood sampling, large animal surgery, collection of tissues and gametes, embryo recovery, in vitro fertilization, tissue culture, hormone measurements, and directed individual research problems. Same as MCB 533, and VB 533. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
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45294	laboratory-discussion	CNG	ARRANGED			Graves, C; Nowak, R
45294: 2 hours Mouse Embryo Development/IVF. Credit for 2 hours only. Instructor Approval.						

542 *Applied Bioinformatics* Credit: 4 hours.

Introduction to theoretical and applied aspects of bioinformatics. Topics include genomic and proteomic databases, sequence alignment and search algorithms (e.g., BLAST, FASTA, CLUSTAL W), predictive methods in DNA sequence, machine-learning techniques (e.g., Hidden Markov Models) and data mining, biomolecular structure and its prediction, molecular evolution and phylogenetic reconstruction, structural genomics and phylogenomics. Concepts are complemented with hands-on experience with computational biology databases and bioinformatic tools. Same as CPSC 569. Approved for both S/U and letter grading. Prerequisite: Graduate level status or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
30013	lecture-discussion	A	10:00 AM - 11:20 AM	TR	room N120 Turner Hall	Rodriguez-Zas, S; Caetano-Anolles, G

590 *Animal Sciences Seminar* Credit: 0 to 2 hours.

Discussions of current research and literature. Registration for 0 to 2 hours each term is expected for animal sciences graduate students. Approved for both letter and S/U grading. May be repeated to a maximum of 2 hours for Masters students and 4 hours for Ph.D. students.

Students enrolled for 0 credit will received S/U grades; those enrolled for 1 hour will received letter grades.

CRN	Type	Section	Time	Days	Location	Instructor
30000	lecture-discussion	A	03:00 PM - 03:50 PM	T	room 396 Animal Sciences Laboratory	Shanks, R
30000: Section A Topic: Animal Breeding and Genetics. Zero credit only with S/U grading.						
41751	lecture-discussion	A1	03:00 PM - 03:50 PM	T	room 396 Animal Sciences Laboratory	Shanks, R
41751: 1 hours Section A1 Topic: Animal Breeding and Genetics. One hour credit. Letter grade.						
44582	lecture-discussion	A2	03:00 PM - 03:50 PM	T	room 396 Animal Sciences Laboratory	Shanks, R
44582: 2 hours						
30001	lecture-discussion	B	ARRANGED			Koelkebeck, K
30001: Section B Topic: Behavior. Zero credit only. S/U grading.						
41752	lecture-discussion	B1	ARRANGED			Koelkebeck, K
41752: 1 hours Section B1 Topic: Behavior. One credit hour. Letter grade.						

44583	lecture-discussion	B2	ARRANGED			Koelkebeck, K
44583: 2 hoursSection B2 Topic: Behavior. Two credit hours. Letter Grade.						
30002	lecture-discussion	C	ARRANGED			Koelkebeck, K
30002: Section C Topic: Environmental Management. Zero Credit. S/U Grading.						
41755	lecture-discussion	C1	ARRANGED			Koelkebeck, K
41755: 1 hoursSection C1 Topic: Environmental Management. One hour credit. Letter grading.						
44585	lecture-discussion	C2	ARRANGED			Koelkebeck, K
44585: 2 hoursSection C2 Topic: Environmental Management. Two credit hours. Letter grading.						
30003	lecture-discussion	D	12:00 PM - 12:50 PM	F	room 208 Meat Science Laboratory	McKeith, F; Killefer, J
30003: Section D1 Topic: Meat Science and Muscle Biology. Zero credit only. S/U grading.						
41783	lecture-discussion	D1	12:00 PM - 12:50 PM	F	room 208 Meat Science Laboratory	McKeith, F; Killefer, J
41783: 1 hoursSection D1 Topic: Meat Science and Muscle Biology. One credit hour. Letter grading.						
44586	lecture-discussion	D2	12:00 PM - 12:50 PM	F	room 208 Meat Science Laboratory	McKeith, F; Killefer, J
44586: 2 hoursSection D2 Topic: Meat Science and Muscle Biology. Two credit hours. Letter grading.						
30004	lecture-discussion	E	ARRANGED			Beverly, J
30004: Section E Topic: Non-Ruminant Nutrition. Zero credit only. S/U grading.						
41784	lecture-discussion	E1	ARRANGED			Beverly, J
41784: 1 hoursSection E1 Topic: Non-Ruminant Nutrition. One hour credit. Letter grading.						
44588	lecture-discussion	E2	ARRANGED			Beverly, J
44588: 2 hoursSection E2 Topic: Non-Ruminant Nutrition. Two credit hours. Letter grading.						
30005	lecture-discussion	F	04:00 PM - 05:20 PM	W		Sherwood, O
30005: Section F Topic: Reproductive Physiology. Zero credit hour. S/U grading.						
41786	lecture-discussion	F1	04:00 PM - 05:20 PM	W		Sherwood, O
41786: 1 hoursSection F1 Topic: Reproductive Physiology. One credit hour. Letter grading.						

44592	lecture-discussion	F2	04:00 PM - 05:20 PM	W		Sherwood, O
44592: 2 hoursSection F2 Topic: Reproductive Physiology. Two credit hours. Letter grading.						
30006	lecture-discussion	G	12:00 PM - 12:50 PM	W	room 107 Animal Sciences Laboratory	Beverly, J
30006: Section G Topic: Ruminant Nutrition. Zero credit hours. S/U grading.						
41787	lecture-discussion	G1	12:00 PM - 12:50 PM	W	room 107 Animal Sciences Laboratory	Beverly, J
41787: 1 hoursSection G1 Topic: Ruminant Nutrition. One credit hour. Letter grading.						
44593	lecture-discussion	G2	12:00 PM - 12:50 PM	W	room 107 Animal Sciences Laboratory	Beverly, J
44593: 2 hoursSection G2 Topic: Ruminant Nutrition. Two credit hours. Letter grading.						
30007	lecture-discussion	H	04:00 PM - 04:50 PM	T	room 404 Animal Sciences Laboratory	White, B
30007: Section H Topic: Microbiology. Zero Credit only. S/U grading.						
41788	lecture-discussion	H1	04:00 PM - 04:50 PM	T	room 404 Animal Sciences Laboratory	White, B
41788: 1 hoursSection H1 Topic: Microbiology. One credit hour. Letter grading.						
44596	lecture-discussion	H2	04:00 PM - 04:50 PM	T	room 404 Animal Sciences Laboratory	White, B
44596: 2 hoursSection H2 Topic: Microbiology. Two credit hours. Letter grading.						
30008	lecture-discussion	I	04:00 PM - 04:50 PM	T		Johnson, R
30008: Section I Topic: Immunobiology. Zero credit only. S/U grading.						
41789	lecture-discussion	I1	04:00 PM - 04:50 PM	T		Johnson, R
41789: 1 hoursSection I1 Topic: Immunobiology. One credit hour. Letter grading.						
44597	lecture-discussion	I2	04:00 PM - 04:50 PM	T		Johnson, R
44597: 2 hours						
30011	lecture-discussion	L	ARRANGED			Gaskins, H; Schook, L
41790	lecture-discussion	L1	ARRANGED			Gaskins, H; Schook, L
41790: 1 hours						

44598	lecture-discussion	L2	ARRANGED			Gaskins, H; Schook, L
44598: 2 hours						
30012	lecture-discussion	M	ARRANGED		Animal Sciences Laboratory	Wheeler, M
30012: Section M Topic: Developmental Biology. Zero credit only. S/U grading.						
41791	lecture-discussion	M1	ARRANGED		Animal Sciences Laboratory	Wheeler, M
41791: 1 hoursSection M1 Topic: Developmental Biology. One credit hour. Letter grading.						
44601	lecture-discussion	M2	ARRANGED		Animal Sciences Laboratory	Wheeler, M
44601: 2 hoursSection M2 Topic: Developmental Biology. Two credit hours. Letter grading.						

592 *Adv Topics in Animal Science* Credit: 1 to 4 hours.

Selected topics associated with teaching, research, and production related to the animal industry. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
44889	online	JJ1	ARRANGED			Johnson, J
44889: 3 hoursMeasuring Behavior and Welfare.						
45091	lecture-discussion	LBS	04:00 PM - 05:50 PM	T	room 138 E R Madigan Laboratory	Schook, L
45091: 3 hoursTopic: Creating Value in the Life Sciences: Defining Roles and Roadmaps for the Entrepreneurial. Enrollment limited to Graduate and Senior Undergraduate Students.						

593 *Res Studies in Animal Sciences* Credit: 1 to 4 hours.

Directed and supervised study of selected research topics in Animal Sciences. Approved for both S/U and letter grading. May be repeated to a maximum of 4 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10258	independent study		ARRANGED			
10258: Instructor Approval Required						
45753	independent study	GGF	ARRANGED			Freund, G

599 *Thesis Research* Credit: 0 to 16 hours.

May be repeated. Approved for S/U grading only.

CRN	Type	Section	Time	Days	Location	Instructor
10264	independent study		ARRANGED			
10264: Instructor Approval Required						