

**958. Seminar in Collective Bargaining and Trade Union Behavior**  
Spring. 4(4-0) May reenroll for a maximum of 8 credits if a different area is taken. LIR 858.  
Critical study of selected contemporary areas and issues in collective bargaining.

## LANDSCAPE ARCHITECTURE

See Geography.

## LARGE ANIMAL CLINICAL SCIENCES LCS

(Name changed effective July 1, 1982. Formerly the Department of Large Animal Surgery and Medicine.)

### College of Veterinary Medicine

- 412. Livestock Hygiene and Disease Control**  
(LSM 412.) Spring. 3(3-0) Juniors; Agriculture majors.  
Fundamentals of health and disease in animals, relation of infectious and parasitic diseases of animals to human health, disease prevention and role of veterinarian in preventive medicine.
- 621. Integrative Clinical Problems**  
(LSM 621.) Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program or approval of department.  
Comprehensive problem-solving explorations of selected clinical diseases, either systems or species oriented, in large animals.
- 642. Special Problems-Research**  
(LSM 642.) Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 8 credits. Completion of 9 terms of professional program, approval of department.  
Research related to a large animal specialty.

**644. Theriogenology Clerkship**  
Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program, approval of department.  
Provide hands-on clinical experience with diagnostic methods utilized in large animal reproduction.

**650. Equine Medicine and Surgery Clerkship**  
(LSM 650.) Fall, Winter, Spring, Summer. 6 credits. Completion of 9 terms of professional program, approval of department.  
Concepts and supervised practice in equine medicine and surgery. Emphasis on diagnosis, prognosis, treatment and disease prevention.

**651. Equine Musculoskeletal Diseases**  
Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program or approval of department.  
Techniques and procedures used for the diagnosis and management of a variety of equine musculoskeletal diseases utilizing hospitalized and field cases.

**654. Advanced Equine Medicine and Surgery**  
(LSM 654.) Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program, LCS 650 or approval of department.  
In-depth, supervised equine medicine and surgery.

**656. Large Animal Anesthesiology Clerkship**  
(LSM 656.) Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program, approval of department.  
Concepts and supervised practice in large animal anesthesiology.

**660. Field Service/Food Animal Clerkship**  
(LSM 660.) Fall, Winter, Spring, Summer. 9 credits. Completion of 9 terms of professional program, approval of department.  
Management of both individual and herd animal disease problems in both a hospital and on-farm environment. Skills in theriogenology. Introduction to principles of herd health management and clinical epidemiology.

**662. Introduction to Herd Health Clerkship**  
(LSM 662.) Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program or approval of department.  
Concepts and supervised practice in herd health programs. Emphasis on developing programs for food animal species and equine species.

**664. Dairy Herd Health Clerkship**  
(LSM 664.) Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program, LCS 660, approval of department.  
Dairy farm and herd health management. Record keeping, general management, housing, nutrition, and mastitis control will be emphasized.

**666. Equine Herd Health Clerkship**  
(LSM 666.) Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program, LCS 660, approval of department.  
Establishing and maintaining herd health programs for equine operations. Reproduction, parasite control, immunization, and diagnostic medicine and surgery in the field.

**668. Swine Herd Health Clerkship**  
Fall, Winter, Spring, Summer. 3 credits. LCS 660, completion of 9 terms of professional program, approval of department.  
Swine diseases and related production problems encountered in swine herd health programs.

**672. Advanced Food Animal Clerkship**  
(LSM 672.) Fall, Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program, LCS 660, approval of department.  
Advanced, supervised food animal surgery and medicine.

**674. Preceptorial Clerkship**  
(LSM 674.) Fall, Winter, Spring, Summer. 6 credits. Completion of 9 terms of professional program, approval of department. Students may not receive credit in both V M 610 and LCS 674.  
Applied large animal clinical science. Students participate in all activities in assigned private practices tutored by practitioners with adjunct faculty appointments.

**809. Problems in Large Animal Surgery**  
(LSM 809.) Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.  
Elective work in selected surgical research problems compatible with student's interest and ability.

**811. Problems in Large Animal Medicine**  
(LSM 811.) Fall, Winter, Spring, Summer. 2 to 4 credits. May reenroll for a maximum of 12 credits. Approval of department.  
Elective work in selected medicine-related research problems compatible with student's interest and ability.

**813. Seminar**  
(LSM 813.) Fall, Winter, Spring, Summer. 1 credit.

**825. Fundamental Biomedical Experimental Techniques**  
(LSM 825.) Fall. 3(2-3) Students enrolled in a graduate degree program, approval of department.  
Fundamentals of humane treatment of animals, anesthesia, aseptic techniques, instrumentation, suture materials and patterns, tissue handling and woundhealing for experimental animal research.

**827. Comparative Theriogenology**  
Winter. 3(3-0) V M 580 or approval of department.  
Comparative pathophysiology of the reproductive system of domestic animals with emphasis on clinical theriogenology.

**899. Master's Thesis Research**  
(LSM 899.) Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 18 credits. Students enrolled in a graduate degree program, approval of department.  
Research on thesis problems.

**921. Pathology of Nutritional and Metabolic Diseases**  
(HNF 921., LSM 921.) Spring of odd-numbered years. 4(3-2) ANT 420, ANS 525, BCH 452, HNF 462 recommended. Interdepartmental with Human Nutrition and Foods.  
Development, physiopathology and morphologic pathology of nutritional and metabolic diseases including carbohydrate, protein, fatty acid, vitamin and mineral deficiencies, their experimental induction and their medical or economic significance.

**999. Doctoral Dissertation Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

## LATIN

See Romance and Classical Languages.

## LINGUISTICS AND GERMANIC, SLAVIC, ASIAN AND AFRICAN LANGUAGES

### College of Arts and Letters

Courses in Chinese and Japanese on the 300 level or higher are normally conducted in the language.