### 803. Employment and Unemployment Fall. 4(4-0) Approval of school.

Analysis of trends in employment and unemployment during the twentieth century in the U.S. Theoretical framework for explaining employment fluctuations. Policies for reducing unemployment. Inflation and unemployment.

#### 809. Labor Markets

 $Fall,\ Winter,\ Spring.\ 4 (4-0)\ Approval$  of school.

Review of labor market structures and processes, forces affecting work and wages; and public policy on human resource development and utilization and on income maintenance.

## 811. Employment and Training Programs

Fall. 4(4-0) Approval of school.

Role and effectiveness of the public employment service, vocational and apprenticeship programs, retraining and vocational rehabilitation activities, etc., as instruments of an active human resource policy.

#### 813. Income Maintenance Programs

Winter, 4(4-0) Approval of school.

Causes and social consequences of poverty. Nature and effectiveness of income transfer programs against poverty and insecurity. Integration with employment and training programs. Relation between public and private programs.

### 817. Methods of Program Evaluation

Spring. 4(4-0) Approval of school.

Principles of benefit-cost analysis, cost-effectiveness analysis, and other methods of evaluation applicable to human resource programs.

# 823. Organizational Behavior in Labor and Industrial Relations

Fall, Winter, Summer. 4(4-0) Approval of school. Interdepartmental with the Department of Sociology.

Analysis of why organizations, individuals and groups in unions, management and government act as they do in industrial relations situations with emphasis on sociological, psychological and cultural factors.

### 824. Human Resource Strategies and Decisions

Fall, Winter, Spring, 4(4-0) Approval of school.

Analysis of human resource strategies and decisions in private and public organizations.

### 825. Employee Compensation and Incentives

Spring, Summer. 4(4-0) Approval of school.

Theory and practice of payment systems in private and public employment. Compensation and motivation. Job evaluation and performance review. Incentive plans, executive compensation, and fringe benefits.

#### 826. Organizational Development

Fa $\overline{l}l$ , Summer. 4(4-0) LIR 823 or approval of school.

Application of general systems and organizational behavior theories to the problems of organizational change and development in labor and industrial relations, with particular emphasis on the roles of leadership and change agents.

#### 827. Quality of Work Life

Winter. 4(4-0) LIR 823 or approval of school.

Quality of work life approaches to organizational and job design from the perspectives of human resource development, socio-technical systems, and labor-management relations in European, Japanese, and American contexts.

### 828. Human Resource Information Systems

Spring. 4(4-0) LIR 824.

Human resource and labor relations information systems; information requirements for human resource decisions, methods of appraising available software, role of personnel specialists in database development and operation.

#### 832. Data Sources in Labor and Industrial Relations

Fall, Winter, Summer. 3(3-0) One undergraduate statistics course and approval of school.

Review evaluation and utilization of published data on labor and industrial relations. Methods of presentation, report writing. Index numbers, time series decomposition.

### 834. Survey Methods in Labor and Industrial Relations

Fall, Summer. 3(3-0) One undergraduate statistics course and approval of school.

Design and conduct of data collection operations applied to labor and industrial relations. Sample design and sampling procedures. Design of questionnaires and interview schedules. Field operations. Data editing and coding.

#### 841. Collective Bargaining in Public Employment

Spring, Summer. 4(4-0) LIR 858, LIR 863, or approval of school.

History and current status of collective bargaining practices and governmental policies in the public sector.

## 854. Comparative Industrial Relations Systems

Spring, 4(4-0) LIR 801, LIR 858, LIR 863, or approval of school.

Comparative analysis of industrial relations systems of countries in various stages of economic development.

#### 857A. Wage Theory I

Fall. 3(3-0) EC 324, EC 326 or approval of school. Interdepartmental with and administered by the Department of Economics.

Advanced analysis of: theories of wage determination; labor market research; economic effects of collective bargaining upon the national wage structure, output, employment, distribution of national income, the price level; nature and effects of government wage policies.

#### 858. Collective Bargaining

Fall, Winter, Spring. 3(3-0) EC 305, or approval of department. Open to graduate students in economics and related fields such as labor and industrial relations, psychology, sociology, anthropology, political science, business, and history. Interdepartmental with the Department of Economics.

Problems and issues in the administration and negotiation of collective bargaining agreements; includes both economic and noneconomic aspects of industrial relations policies and practices.

#### 863. Law of Labor-Management Relations

Fall, Winter, Spring. 4(4-0) Approval of school.

The National Labor Relations Act as amended; rights to organize and undertake concerted activity; legal framework of contract negotiations; representation of bargaining unit members; union member rights; proposed statutory changes.

### 865. Grievance Administration and Arbitration

Winter, Spring. 4(4-0) LIR 858, LIR 863 or approval of school.

Grievance procedure and arbitration as the terminal step in the grievance process. Analysis of industrial common law.

#### 868. Equal Employment Opportunity and Occupational Safety and Health Policy

Spring, Summer. 4(4-0)

Major emphasis on government policies to promote equal employment opportunity, their scope and impact on collective bargaining. Attention also given to governmental policies to protect workers from substandard working conditions

#### 881. Special Topics in Labor and Industrial Relations

Winter. 2(2-0) to 4(4-0) May reenroll for a maximum of 8 credits. Twelve graduate credits or approval of school.

Intensive analysis of special topics in collective bargaining, employment relations, or human resources.

#### 895. Readings in Labor and Industrial Relations

Fall, Winter, Spring, Summer. 2 or 3 credits. May reenroll for a maximum of 6 credits. Twenty credits in labor and industrial relations.

#### 899. Master's Thesis Research

Fall, Winter, Spring, Summer. Variable credit. May reenroll for a maximum of 9 credits. Approval of school.

#### 923. Seminar in Organizational Behavior

Winter. 4(4-0) May reenroll for a maximum of 8 credits if a different area is taken. Approval of school.

Research and policy on selected problems of organizational behavior in labor and industrial relations.

### 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

#### College of Veterinary Medicine

#### 412. Livestock Hygiene and Disease Control

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.

#### Courses

#### 621. Integrative Clinical Problems

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

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

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 case.

#### 654. Advanced Equine Medicine and Surgery

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

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

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 onfarm environment. Skills in theriogenology. Introduction to principles of herd health management and clinical epidemiology.

#### 662. Introduction to Herd Health Clerkship

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

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

Winter, Spring, Summer. 3 credits. Completion of 9 terms of professional program, 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

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

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

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

 $Fall,\ Winter,\ Spring,\ Summer.\ 1$  credit.

### 825. Fundamental Biomedical Experimental Techniques

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.

### 828. Tropical Animal Health and Production

Spring of even-numbered years. 3(2-2) ANS 488 or completion of 7 terms of the professional program.

Impact of animal health on livestock production, livestock production systems, human welfare, and socioeconomic development of developing countries, especially in Africa. Epidemiology and control of major diseases such as rinderpest, trypanosomiasis, and other viral epidemics.

#### 899. Master's Thesis Research

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.

#### 901. Investigating the Lung

Fall of even-numbered years. 3(3-0) Approval of department. Interdepartmental with the departments of Pathology and Physiology.

Classic and current concepts of respiratory structure and function in health and disease and mechanisms of lung injury.

#### 921. Pathology of Nutritional and Metabolic Diseases

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.

#### Linguistics and Oriental and African Language Courses LOA

#### 299. Special Projects

Fall, Winter, Spring, Summer. I to 6 credits. May reenroll for a maximum of 12 credits. Approval of department.

Work in areas outside regular course offerings.