

**512. Small Animal Surgery and Medicine II**  
(VSM 512.) Winter, Summer. 7(6-3)

**511.**  
Diseases of musculoskeletal, digestive and respiratory systems. Includes radiology and surgical laboratory with demonstrations.

**513. Small Animal Surgery and Medicine III**  
(VSM 513.) Fall Spring. 7(7-0) 512.

Diseases of urogenital, endocrine, cardiovascular, hematopoietic and integumentary systems and specific infectious diseases. Includes radiographic and surgical techniques.

**604. Small Animal Clinic II**  
(VSM 604.) Fall, Winter, Spring, Summer. 12(0-36) 504.

Concepts and practices of clinical veterinary medicine. Rotation through hospital services. Diagnosis, prognosis, treatment, and prevention of disease through handling of clinic patients under direct supervision of staff veterinarians.

**614. Small Animal Surgery and Medicine IV**  
(VSM 614.) Winter, Summer. 3(3-0)  
Sixth-term Veterinary Medicine students.

Occurrence, etiology, symptomatology, diagnosis, treatment and prevention of diseases of nervous system, organs of special sense, physical and chemical agents and neoplasia.

**651. Clinico-Pathologic Conference**  
(VSM 651.) Fall, Winter, Spring, Summer. 0 or 1(1-0) May re-enroll for a maximum of 2 credits. Professional Veterinary Medicine students.

Clinico-pathologic conference on selected clinical cases. Students will be required to enroll each term (first nine terms) without credit and in terms ten and eleven for 1 credit each term.

**808. Problems in Small Animal Surgery**  
(VSM 808.) Fall, Winter, Spring, Summer. Variable credit.

**810. Problems in Small Animal Medicine**  
(VSM 810.) Fall, Winter, Spring, Summer. Variable credit.

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

**822. Bone and Joint Surgery**  
(VSM 822.) Winter. 3(2-4) Approval of department.  
Fundamentals, theory and practice covering the various conditions and surgery of bones and joints.

**823. Special Surgery**  
(VSM 823.) Spring. 3(1-6) May re-enroll for a maximum of 6 credits. Approval of department.  
Surgical technique and tissue reactions following surgery in small animals.

**825. Advanced Anesthesiology**  
(VSM 825.) Winter. 4(2-3) Approval of department.  
Principles of drug action pertaining to anesthetics will be discussed including respiratory and cardiovascular effects of inhalation and intravenous agents. Anesthetic techniques for various animal species will be presented.

**826. Cardiology**  
(VSM 826.) Fall. 3(2-4) Approval of department.

Study recent advances in veterinary cardiology. Includes electrocardiology, congenital and acquired diseases, cardiac catheterization and surgery.

**899. Research**  
(VSM 899.) Fall, Winter, Spring Summer. Variable credit. May re-enroll for a maximum of 18 credits. Approval of department.  
Research on thesis problems.

**SOCIAL SCIENCE S S**

**University College**

Students may earn credit in only one of the courses in each of the following three groups:  
1. 201, 211, 221, 241  
2. 202, 212, 222, 242  
3. 203, 213, 223, 243

**201. Americans and Their Values**  
(231A.) Fall, Winter, Spring, Summer. 4(4-0)

Processes by which individuals are socialized to the prevailing patterns of behavior by such agencies as family, school, peer groups, mass media and church. Part played by each in the development of personality.

**202. Power in America**  
(232A.) Fall, Winter, Spring, Summer. 4(4-0) 201 preferred; or 211, 221, or 241.

Problems of regulating and controlling human behavior. Emphasis placed on major economic and political institutions involved in social control. This includes problems of human wants and needs.

**203. A Peaceful World?**  
(233A.) Fall, Winter, Spring, Summer. 4(4-0) 202 preferred; or 212 or 222, or 242.

The international scene with the focus on problems of economic development, conflict among the nation-states and attempts at conflict control.

**211. The Emergence of Man**  
(231B.) Fall, Winter, Spring, Summer. 4(4-0)

The bio-social evolution of man. The theories and empirical findings of the behavioral sciences are brought to bear upon the nature of man.

**212. Coping with Changing Institutions in Modern Society**  
(232B.) Fall, Winter, Spring Summer. 4(4-0) 211 preferred; or 201, 221, or 241.

Individuals and the changing institutional framework of modern society. Emphasis on socialization enabling personality systems in different cultural settings to cope with life in the future.

**213. Casualties of Contemporary Society**  
(233B.) Fall, Winter, Spring, Summer. 4(4-0) 212 preferred; or 202; 222, or 241.

The meaning of deviant behavior and personal disorganization and their impact on society. Selected problems examined in depth.

**221. The Changing American Metropolis: Ecology of the Urban Community**  
(231C.) Fall, Winter, Spring, Summer. 4(4-0)

Factors and directions in urban change. Impacts on life styles and life strategies of urban groups.

Challenges to traditional family, educational, and community patterns.

**222. Work and Politics in Urban America**  
(232C.) Fall, Winter, Spring, Summer. 4(4-0) 221 preferred; or 201, 211, 241.

Changing patterns of economic and political participation. Issues of employment security and job satisfaction. Distribution of economic rewards, political power, and civil rights. Inter-meshing of economic and political activities.

**223. The World's Cities: An Urban Culture and Common Problems**  
(233C.) Fall, Winter, Spring, Summer. 4(4-0) 222 preferred; or 202, 212, or 242.

The unity of urban life patterns and the emergence of modern-day urban problems. Cultural variations in approach to issues—comparative political, social, economic, ideological systems.

**241. Modernization: Political and Social**  
(231D.) Fall, Winter, Spring, Summer. 4(4-0)

The nature and sources of social cohesion. Approaches to the modernization of traditional societies. Problems and alternative strategies of nation building.

**242. Modern Ideologies: Justifications of Political and Economic Power**  
(232D.) Fall, Winter, Spring, Summer. 4(4-0) 241 preferred; or 201, 211 or 221.

Ideologies of change in the modern world—sources, appeals, problems. Issues of social justice and individual freedom.

**243. Revolutionary Change and International Conflict**  
(233D.) Fall, Winter, Spring, Summer. 4(4-0) 242 preferred; or 202, 212, or 222.

Social tensions and revolutionary change. The causes of war: international conflict and the great powers. Strategies for peace. Man's conscience versus state policies.

**300. Supervised Individual Study**  
Fall, Winter, Spring. 2 to 4 credits. 8 credits completed in the Social Science Department and approval of department.

Selected students requesting individual study of interdisciplinary problems will work under supervision of University College professors. Variable elective credit will be determined when the student secures instructor, adviser, and department approval.

**344. Modernization: India and Japan**  
For course description, see Interdisciplinary Courses.

**345. Modernization: The Middle East**  
For course description, see Interdisciplinary Courses.

**346. Far East: Contemporary Issues and Problems**  
For course description, see Interdisciplinary Courses.

**SOCIAL SCIENCE SSC (COLLEGE OF)**

**210. Methods of Social Science I**  
Fall, Winter, Spring, Summer. 4(4-0) Sophomores.

Characteristics of social science theory and method. Logical and practical aspects of data collection; standard techniques of investigation in the social sciences.

**211. Methods of Social Science II**  
Fall, Winter, Spring, Summer. 4(4-0)

**210.** Principles of measurement and scaling. Types of variables. Techniques and problems of sampling. Research design. Role of explanation and of value judgments in social science.

**450H. Perspectives in Social Science**  
(390H.) Fall, Winter, Spring. 4(4-0)  
Juniors, approval of Honors College. Preference given to majors in Social Science and professional schools of the College of Social Science. Seminars in selected topics in areas of knowledge represented by the social science disciplines and allied professional fields.

**470. Selected Topics in Social Science**  
Winter, Spring. 4(4-0) May re-enroll for a maximum of 8 credits. 18 credits in Social Science.

An interdisciplinary investigation of major theoretical and applied topics in the social sciences, including computer utilization in social science research, and interdisciplinary approaches to contemporary problems. Topics will vary from term to term.

**480. Contemporary Social Problems in the United States**  
Fall, Winter. 4(4-0) May re-enroll for a maximum of 8 credits. 18 credits in Social Science.

Interdisciplinary investigation of selected major social problems of the United States, such as urban redevelopment, environmental control, welfare reform, crime and society, the future of American society.

**482. Contemporary Social Problems Abroad**  
Spring. 4(4-0) 18 credits in social science.

Seminars dealing with major theoretical topics and social problems concerning foreign areas, such as economic and educational development, population explosions, war crises and peace-keeping. A multi-disciplinary approach involving specialists from the social science disciplines and allied professional fields.

**490. Individual Research Projects**  
Fall, Winter, Spring. 4 credits. May re-enroll for a maximum of 8 credits. Multidisciplinary social science majors and 12 credits in social sciences — agricultural economics, anthropology, economics, geography, political science, psychology and sociology.  
Individually supervised study and research on a topic using a multidisciplinary approach.

**495. Foreign Area Field Study**  
Fall, Winter, Spring, Summer. 3 to 15 credits. May re-enroll for a maximum of 24 credits. Juniors and 12 credits in social science.  
Study in a variety of foreign settings under the guidance of an adviser, such as American University Field Study Centers in Rome and Singapore.

**810. Introduction to Linear System Theory**  
(812.) Fall. 3(3-0) MTH 214. Interdepartmental with the Computer Science Department and Systems Science and administered by Systems Science.

A first course in system theory for students from a range of disciplines. Mathematical representation of system variables, transform and state space method of analysis, introduction to control theory, applications to physical, economic and social systems.

**811. System Methodology and Simulation**  
Winter. 3(3-0) 810, STT 441. Interdepartmental with the Computer Science Department and Systems Science and administered by Systems Science.

Problem definition, design of abstract models for system design and control, simulation of systems described by differential and difference equations, generation of random variables, simulation of discrete object stochastic systems, simulation languages, applications to physical, economic and social systems.

**813. System Project**  
Spring. 3(1-6) 811. Interdepartmental with the Computer Science Department and Systems Science and administered by Systems Science.

Individual or team application of simulation methods to system design and/or management.

**999. Research**  
Fall, Winter, Spring, Summer. Variable credit. Approval of college.

**SOCIAL WORK** **S W**  
**College of Social Science**

**205. Contemporary Social Work**  
Fall, Winter, Spring, Summer. 3(3-0)  
Role of the social worker in relation to social issues and human needs; social service programs, structures and functions of public and voluntary agencies in a changing society.

**228. Marriage**  
Fall, Winter, Spring. 4(4-0) Students may not receive credit in both 228 and FCS 145.  
Examination of marriage and the family, from a social work point of view. Consideration of such areas of adjustment as emotional, physical, social, financial, religious and legal.

**311S. Summer Projects**  
Summer. 1 to 3 credits. Juniors; approval of school. Not open to students in residence.

Constructive work experience in social centers, summer camps, city recreation departments, state welfare institutions, and other approved agencies and organizations. Weekly progress reports and final written evaluation of total experience required.

**322. Child Welfare**  
Winter. 3(3-0) Juniors; SOC 351 or PSY 245.  
Child welfare movement and contemporary children's agencies and their services. Programs for improving home and for substitute care, safeguarding health, employment protection, delinquency prevention, and other needs of children and youth.

**367. Social Services in Selected Settings**  
Fall, Winter, Spring, Summer. 2(1-2) Junior majors, 205.  
Self-instruction laboratory and classroom discussion of social agency programs.

**400H. Honors Work**  
Fall, Winter, Spring, Summer. 1 to 16 credits. Juniors; approval of school.  
Study of a problem, phase or field of social work; seminar for particularly able students.

**420. Current Issues in Social Work**  
Fall, Winter, Spring, Summer. 2(2-0) May re-enroll for a maximum of 6 credits. Seniors; approval of school.  
Designed to integrate knowledge of social issues within a social science framework useful for social work. Includes review of selected issues and exploration of their relevance for social work.

**428. Dynamics of Marriage and Family Relations**  
Fall, Winter, Spring, Summer. 3(3-0) Juniors.  
Analysis of post-marital interpersonal adjustment from standpoint of family social work. Includes current social changes affecting these relationships, and specialized services available to families.

**433. Social Work as a Profession I**  
Fall. 4(3-2) Junior majors; PSY 225; SOC 241.  
Social work in relation to development of the individual and his adaptation to his environment. Related laboratory experience.

**434. Social Work as a Profession II**  
Winter. 4(3-2) 433.  
Continuation of 433. Human reactions under stress; social work intervention through welfare organizations and social action. Related laboratory experience.

**435. Social Work as a Profession III**  
Spring. 4(3-2) 434.  
Continuation of 434. Social welfare programs to meet human needs; social planning for services. Related laboratory experience.

**438. Social and Emotional Development**  
Fall, Winter, Spring, Summer. 4(4-0) Juniors; PSY 225; SOC 241.  
Interplay of emotional, social and physical factors that influence individual's adjustment to change and stress. Illustrative case material from social work agencies and related settings.

**439. Interviewing in Social Welfare**  
Fall, Winter, Spring, Summer. 3(2-2) Junior majors; 433 or PSY 225.  
Principles of interviewing as applied to social welfare. Related laboratory experience.

**440. Social Work Intervention**  
Fall, Winter, Spring, Summer. 3(3-0) 439.  
Intervention related to individuals and families based on application of social work and social science knowledge and utilization of interviewing techniques.

**444. Social Work in Corrections**  
Spring. 3(3-0) 205 or 433 or approval of school.  
Introduction to juvenile and adult probation and parole, clinical services in juvenile institutions, and classification in prisons. Intended for students planning to enter corrections field.

**450. International Studies in Social Welfare**  
Fall, Winter, Spring, Summer. 3 to 12 credits. May re-enroll for a maximum of 24 credits. Approval of school.  
Independent study or participation in formal programs outside the United States.