Courses

# 892. Social Work Intervention with the Elderly

Winter. 3(3-0) Graduate majors or approval of school.

Social work intervention strategies used with older adults. Preventive, supportive, and rehabilitative measures for independent and dependent elderly populations.

### 893. Social Gerontology

Fall. 3(3-0) Approval of school.

Aging and years of later maturity, with respect to social and personal difficulties and opportunities. Aging process, retirement, living arangements, social relationships, community resources, and implications for social welfare.

#### 895. Social Work Supervision

Winter. 3(3-0) Graduate majors or approval of school.

Concepts, practices and issues related to social work supervision, including the range of practice areas and organizational settings. Dimensions of the supervisor-supervisee relationship.

### 896. The Family as a Social Institution

Fall of even-numbered years. 3(3-0) Approval of school.

Ecosystems and social work perspective. Analysis of the family as a social institution in a post-industrial society. The implications for family and child welfare policy and service delivery.

## 897. Social Work in Mental Health

Fall of odd-numbered years. 3(3-0) Approval of school.

Role of social work in mental health; conceptions of health, illness and intervention; political processes; special populations; legal and ethical issues; future social work roles in mental health.

# 898. Public Welfare and Social Work

Spring of even-numbered years. 3(3-0) Approval of school.

Role of social work in public welfare as a social institution. Social welfare policies, services and programs which influence the welfare of individuals and families.

# 990. Independent Study in Social Work

Fall, Winter, Spring, Summer. 1 to 6 credits. May reenroll for a maximum of 12 credits. Approval of school

Individual study of a theoretical or applied problem in social work.

# **SOCIOLOGY**

SOC

# College of Human Medicine College of Social Science

# 150. The Individual in Modern Society

Fall, Winter, Spring. 4(4-0)

Recognition and description of social conditions which lead to individual human development. Exploration of ways in which society facilitates and fails to facilitate individual human development.

# 160. Structural Problems of American Society (S)

Fall, Winter, Spring. 4(4-0)

Analysis of beliefs and values which underlie the definition of social problems and proposed solutions. Structural basis of problems such as those of workplace, life cycle, energy, and environment.

# 170. International Problems of Change and Development (S)

Fall, Winter, Spring. 4(4-0)

Global issues and problems of social change and development within societies, including population growth, food shortages, energy, conflict, inequality; strategies, impacts, ethics of planned change; perspectives on change; tuture trends.

### 212. Methods of Social Research I

Fall, Winter. 4(3-2) SOC 241 or approval of department. Students may not earn credit in SOC 312 if they have credit in either SOC 212 or SOC 213.

Design and execution of research on social behavior and institutions. Data collection, data structure and quality, descriptive analysis, presentation of conclusions.

# 213. Methods of Social Research II

Winter, Spring. 4(3-2) SOC 212 or approval of department. Students may not earn credit in SOC 312 if they have credit in either SOC 212 or SOC 213.

Survey methods, experiments, archival methods, content analysis, techniques of data analysis

## 241. Introduction to Sociology

Fall, Winter, Spring, Summer. 4(4-0) Sophomores.

Introduction to nature of sociological inquiry and to concepts and principles of sociology. Analysis focuses on institutional features of modern society and of structure and dynamics of social organization.

## 251. Introduction to Social Psychology

Fall, Winter, Spring, Summer. 4(4-0) SOC 241. Students may not receive credit in both SOC 251 and PSY 335.

Social psychology from a sociological perspective. Relation of individuals to their social environment with special reference to group process and interaction, social structure and personality, mass phenomena, and social attitudes.

# 310. Social Stratification

Fall, Winter, Summer. 4(4-0) SOC 241.

Survey of literature on the formation and changes in social class systems in modern and traditional societies. Social mobility in class, status and political orders.

# 311. Development of Sociological Theory

Winter, Spring. 4(4-0) SOC 310.

Significant theoretical contributions to the development of sociological theory, both European and American.

### 312. Research Methods in Sociology

Fall, Spring. 5(4-2) STT 201 or PSY

Elements of scientific logic; procedures and problem formation; development of concepts, hypotheses, theory; research design; sampling, measurement, data gathering; analysis, interpretation, and reporting research findings.

### 320. Criminology

Fall, Winter, Spring, Summer. 4(4-0) SOC 241 or C J 110 or approval of department. Interdepartmental with the School of Criminal Justice

Crime analyzed from sociological perspective: meaning of "crime", crime statistics, and measurement, theories of crime causation, crime typologies, e.g., professional organized, violent, sex, white-collar crimes, juvenile deliquency.

# 321. Industrial Sociology

Fall, Spring. 4(4-0) SOC 241.

Industrialization in Western and non-Western societies; social organization of work; internal dynamics of work plant as a social system; and labor-management relations in various cultural settings.

## 322. Political Sociology

Fall, Winter. 4(4-0) SOC 241.

Political action in the United States in relation to theory and practice of democracy. Nature of social pressures, political group, politician and effect of local community situation on political activity will be considered.

# 323. Sociology of the Family

Winter, Summer. 4(4-0) SOC 241.

Sociological analysis of the family, its development as a social institution, its relationship to society, and its contribution to personality.

### 329. Urban Sociology

Fall, Winter, Spring. 4(4-0) SOC 241.

Urban theory and research techniques emphasizing the demography, ecology and social organization of American cities and sociological aspects of urban planning and redevelopment.

### 332. Behavior of Youth

Winter, Spring, Summer. 4(4-0) SOC

241.

Sociological analysis of normal and deviant behavior of youth. Issues related to the existence of youth subcultures. Relation of social change to behavior of youth.

## 333. Racial and Ethnic Inequality

Winter, Spring, Summer. 4(4-0) SOC 241.

Sociology of racial and ethnic problems in contemporary society with an emphasis on American society. Attention to specific ethnic and racial groups in terms of prejudice and discrimination with particular concern for the resolution of inequality.

# 353. Sociology of Sex and Gender

Fall, Summer. 4(4-0) SOC 241.

Analysis of the organization of gender - divisions between women and men and sexual inequality - in production, reproduction, sexuality, and the socialization of children. Includes both institutional and social psychological perspectives.

### 400H. Honors Work

Spring. 1 to 4 credits. May reenroll for a maximum of 20 credits. Approval of department.

Study on an individual or class basis on various sociological topics.

## 401. Sociology of Education

Winter. 4(4-0) SOC 241. Interdepartmental with the Department of Teacher Education.

School as a social institution, school-community relations, social control of education, and structure of school society.

#### Critical Issues in Contemporary 418. Africa (MTC)

Fall, Spring. 3(3-0) May reenroll for a maximum of 9 credits if different topics are taken. One course on African subject and approval of instructor. Interdepartmental with African Languages and the departments of Anthropology, Geography, History, and Political Science. Administered by the Department of History.

Four separate multidisciplinary topics will be offered at different times: The Horn of Africa, Southern Africa, Africa and the Americas, Social Impact Studies.

#### 420. Dynamics of Population

Fall, Winter. 4(4-0) One 300 level sociology course.

General demographic theories, especially those concerning population growth. Population distribution and density, age, sex, and ethnic composition. Emphasis on fertility, mortality, and migration and their influences on population change.

#### Sociology of the Health Care 423. System

Winter. 4(4-0) One 300 level sociology or health related course.

Social organizations, occupations, and institutions of the health care system including socio-economic factors influencing access and utilization, provider-patient interactions, and social epidemiology.

#### 424. Sociology of Mental Health

Spring. 4(4-0) SOC 251 or PSY 335.

Sociological theories of etiology of mental disorder; research on social epidemiology and ecology; impact of social structure; popular conceptions of mental health and deviancy; emerging ideologies of mental health disciplines.

# Social Movements and Ideologies

Winter, Spring. 4(4-0) One 300 level sociology course.

The analysis of the collective response to situations of social tension and change that take the form of social movements and their accompany-ing ideologies. Both historical and contemporary cases will be examined.

#### 428. **Contemporary Communities**

Fall, Spring. 4(4-0) One 300 level sociology course.

An examination of the contemporary community. Emphasis will be placed on associational and institutional organization in communities of varying complexity. Particular attention will be paid to social organizational theory as it applies to the problems of American community life.

#### Sociology of Work 430.

Winter, Summer. 4(4-0) One 300 level sociology course.

Social significance of work. Forces changing contemporary occupational structure. Factors associated with typical career patterns of occu-pations and professions. Social organization of occupational groups with emphasis on their ideology and politics.

#### Social Deviance and Control 434. Spring. 4(4-0) SOC 320.

The relationship between social structure, social control and social deviance; a survey and criti-cism of present social science theories in light of empirical research and application of theories to selected problem areas.

#### 437. Rural Sociology

Fall, Spring. 4(4-0) One 300 level sociology course.

Structure, function and change in rural areas of the United States. The major social systems, social class, demographic characteristics, commodity organizations and value orientations of rural people.

#### Sociology of Developing Societies 438.

Spring. 4(4-0) One 300 level sociology course.

Sociological elements of modernization. Process of technological change and type of programs to induce change. Emergence and accomodation of institutions to change. The changing popula-tion, family, community and ideological struc-

#### 443. Personality and Social Structure

Spring. 4(4-0) SOC 251 or PSY 335; one 300 level sociology course.

Effects of social structural variables upon personality development, adult socialization, role behavior, self image, and self evaluation.

## Small Group Interaction

Winter. 4(4-0) SOC 251 or PSY 335; one 300 level sociology course.

Properties of social interaction in small groups Relationship between group structure and social interaction.

#### **Modern American Society** 471.

Winter, Spring. 4(4-0) One 300 level sociology course.

Cultural patterns and social structures of contemporary American life. Relationship of these patterns and structures to individual and group adjustment.

#### 473. Culture and Personality

Fall, Spring. 4(4-0) One 300 level anthropology or sociology course. Interdepartmental with and administered by the Department of Anthropology.

Human nature in evolutionary and cross-cultural perspective. Special attention to relating theories of anthropology and psychology to methods of studying personality in non-Western societies.

#### 475. Individual Research Projects

Fall, Winter, Spring, Summer. 1 to 4 credits. May reenroll for a maximum of 12 credits. Nine credits in sociology and approval of department.

#### Complex Organizations 477.

Spring, Summer. 4(4-0) One 300 level sociology course.

Bureaucracies and complex formal organiza-tions in various institutional settings and the relationship among organizations in the community. Informal structures, internal conflict, integrative mechanisms, and the dilemmas of professional and administrative demands will be emphasized.

#### 485. Wealth and Poverty

Winter, 4(4-0) SOC 310.

Distribution of income and wealth in contemporary industrial societies; relevance of wealth to prestige and political orders of societies; social consequences of public and private programs.

## Special Topics

Fall, Winter, Spring, Summer. 4(4-0) May reenroll for a maximum of 12 credits if dif-ferent topic is offered. SOC 241 or approval of department.

Experimental courses and courses taught by visiting scholars.

#### 499. Senior Seminar

Spring. 3 to 5 credits. Senior majors or approval of department.

Selected issues in sociological research and the-

### Comparative Foundations of Education: Education in 803B. Industrialized Societies

(ED 804E., EAC 803B.) Fall. 3(3-0) Approval of department. Interdepartmental with and administered by the Department of Teacher Education.

Comparative study of the policies, practices and social context of educational systems in major industrialized countries, such as Canada, England, France, Germany, Japan, Soviet Union, Sweden.

#### 805. Proseminar in Applied Sociology Winter. 4(4-0)

Survey of applied sociology, including applied roles for sociologists, types of applied research, social change intervention, and use of soical science in policy formation.

# Social Organization

Fall, 4 credits.

Basic concepts and theories of the processes and forms of social organization.

#### 815. Classical Sociological Theory

(SOC 845.) Fall. 5(5-0) Approval of department.

Nineteenth and early twentieth century sociological theory from Marx to Pareto in socio-his-torical context. The development of contemporary sociology theory and research from the classics.

#### Theories of Sociological Inquiry 816.

(SOC 812.) Winter of odd-numbered years.  $4(\hat{4}-0)$  Majors or approval of department. Critical review of some of the theories and procedures used by sociologists and social psychologists in their attempts to achieve reliable knowledge.

#### 817. Sociology of Knowledge

(SOC 846.) Winter of even-numbered years. 3(3-0) Approval of department.

A selective review of the classical issues posed by the sociology of knowledge, with emphasis upon the implications these have for sociological the-

# 820N. Survey of Occupations and Organizations Fall. 4(4-0)

Classical and contemporary theories of organizations and occupations. Empirical research methodologies and sociological perspectives for interpreting findings.

#### **Complex Organizations** 821.

(SOC 877.) Winter, 4(4-0) SOC 321 or SOC 477 or approval of department.

Major theoretical and methodological problems in studying complex organizations. Using a comparative approach, special emphasis will be given to the design and execution of empirical

#### 822. Social Organization and Administration

(SOC 868.) Spring of odd-numbered years. 4(4-0) Approval of department.

General principles of inter- and intra-organizational change in the administrative process.

### Courses

# 823. Organizational Behavior in Labor and Industrial Relations

Fall, Winter, Summer. 4(4-0) Approval of department. Interdepartmental with and administered by the School of Labor and Industrial Relations.

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. Industrialization: Less Developed Societies

(SOC 981.) Winter of even-numbered years. 4(4-0) SOC 852 or approval of instructor. Antecedents and consequences of industrialization in less developed countries: meaning of

industrialization and rationalism; development of technology, work organization, and labor force; urbanization and dual sectors; institutional and attitudinal "modernity."

# 825. Industrialization: More Developed Societies

Winter of odd-numbered years. 4(4-0) SOC 820N or approval of instructor.

Continuing industrialization in U.S., Japan and Europe; postindustrial society; computers and robotics; new organizational forms; environmental and resource problems; coping with the information explosion; managing complexity and rapid change.

## 830. Survey of Conflict and Change

(SOC 842.) Fall. 4(4-0) Approval of department.

Exploration of the substantive and research literature in Conflict and Change and possibilities for student research and involvement in the area

## 831N. Social Stratification

(SOC 884.) Spring, 4(4-0) Approval of department.

Theory and research in societal systems of stratification. The articulation of stratification orders to institutional structures. Research design in stratification studies.

# 832. Dependency, Development and International Inequality

(SOC 885.) Winter of even-numbered years, 4(4-0) Approval of department.

Focus on conceptual formulations concerning uneven development and problems of social and economic change within structures of dependency; uses of research-based knowledge for change and development.

# 833. Sexual Inequality

(SOC 886.) Winter. 3(3-0) Approval of instructor.

Theoretical and empirical perspectives on sexual inequality. The sexual division of labor; gender and family and economic institutions; sex stratification in relation to class and race; socialization; social change.

# 834. Economic and Political Institutions

(SOC 866.) Fall of odd-numbered years. 4(4-0) May reenroll for a maximum of 16 credits.

Review and analysis of the significant literature concerning major problems in the economic and political institutions of modern societies.

## 835. Social Movements and Ideologies

(SOC 827.) Spring of odd-numbered years, 3(3-0) Approval of department.

Organizational structure and supporting belief systems of groups and collectivities which desire major institutional changes in society.

# 836. Race, Politics, and Social Structure

(SOC 971.) Spring of even-numbered years. 3(3-0) Approval of department.

Racism, including the social mechanisms by which it is created, maintained, and lessened, and the variant forms of political action related to racism and social structure.

## 839. African Research

(IDC 838.) Fall, Winter, Spring. 2 to 4 credits. May reenroll for a maximum of 8 credits. Graduate standing or approval of instructor. Interdepartmental with African Languages and the departments of Anthropology, Educational Administration, Geography, History, and Political Science. Administered by the Department of Anthropology.

African-related archival and field research topics and methodologies viewed from perspective of relevant social science and humanistic disciplines associated with the African Studies Center.

# 840. Survey of Social Psychology

(SOC 811.) Winter. 4(4-0) Majors or approval of department.

Central points of view and concepts of contemporary social psychology with emphasis upon symbolic interaction. Collective behavior, small groups, attitudes and behavior, and culture and personality.

## 850. Survey of Population and Ecology Winter. 4(4-0)

Population composition and process (fertility, mortality, or migration) in dynamic interrelationship with natural and human environments, resources and technology.

# 851. Sociology of Human Fertility

Spring of odd-numbered years. 4(4-0) Approval of instructor.

Social control of human reproduction; interrelationships between fertility, mortality and migration; consequences of high and low fertility patterns. Special emphasis on contrasts between LDCs and MDCs.

# 852. Sociology of Migration

(SOC  $8\overline{20}$ .) Spring of even-numbered years. 4(4-0) SOC 420.

Theory and research in studying the causes, patterns, and consequences of human migration. Emphasis on sociological, social psychological and demographic perspectives.

# 854. Social Ecology

(SOC 941.) Fall of odd-numbered years. 4(4-0) SOC 850 or approval of instructor. Sociological human ecology, analyzing the relationship between society and its physical environment, including the interdependencies between population, organization, environment and technology.

### 855. Environmental Sociology

Fall of even-numbered years. 4(4-0) Approval of instructor.

Major conceptual/theoretical perspectives, research foci, methods, and findings of studies of the social dimensions of environmental issues.

#### 860N. Survey of Rural and Community Studies

Spring. 4(4-0)

Exploration of theories and research in rural and community studies. Selected issues are emphasized, such as rural community structure, regional analysis, diffusion of innovations, and the dynamics of change.

# 861. Sociology of Agriculture

Fall of even-numbered years. 4(4-0)

Sociological dimensions of agricultural structure and change. Concepts, principles, research approaches, and policy issues are considered. Topics include work patterns, role of women, part-time farming, alternative systems, corporate agriculture.

# 862. Farming Systems and Rural Development

Fall of odd-numbered years. 4(4-0) SOC 860N or approval of instructor.

Evolution of farming systems research and its place in rural development strategies. Sociological analysis of small scale family farming systems. National and international rural development and food security policy.

## 863. Community Theory

Winter of odd-numbered years. 4(4-0) Sociological theories of the spatial and social dimensions of community process and organization. Classical foundations and contemporary theoretical perspectives as the bases for community research.

### 869. Social Impact Analysis and International Development

Spring of odd-numbered years. 4(4-0) Approval of department. Interdepartmental with and administered by the Department of Anthropology.

Evaluation of development programs and assessment of their sociocultural impacts on Third World rural populations. Methods of impact analysis. Anthropological theories of change and development.

## 871. Social Psychology of Health Care

Winter of even-numbered years. 4(4-0) Social psychological aspects of help seeking behavior, provider-patient-family interactions and role relationships, holistic and social support care programs, medical deviance and compli-

# 873. Social Organization of Health and Medicine

Winter of odd-numbered years. 4(4-0) Sociological analysis of health care organizations and delivery, the education, professional associations and working arrangements of health care providers, and international comparisons of health and medical systems.

### 876. Urban Theory

ance, mental health and stress.

 $(SOC\ 942.)\ Winter.\ 4(4-0)\ Approval\ of\ department.$ 

Examination and critique of competing theories of urban structure and process: theories of evolution of human settlement, classic location theories, human ecology, communication and system theories.

## 880N. Proseminar in Social Research Methods

(SOC 813.) Spring. 5(5-0) STT 421 or SOC 881 or approval of department.

Examination and comparison of documentary, field, experimental, and survey research methods in social science. Emphasis on techniques of data gathering and analysis, and problems of reliability, validity, sampling and measurement.

# 881. Analysis of Sociological Data I

(SOC 858,) Winter. 5(4-2) Course in algebra or approval of department.

Analysis of sociological research using categorical variables: interpretation, strengths, weaknesses of commonly used practices. Applications of SPSS.

# 882. Analysis of Sociological Data II (SOC 859.) Spring. 5(4-2) SOC 881.

Analysis of sociological research using interval and ratio level variables: interpretation, strengths, weaknesses of commonly used practices. Applications of SPSS.

# 883. Multivariate Analysis of Social Data

(SOC 860.) Fall. 5(4-2) STT 422 or SOC 882.

Selected topics in the areas of path analysis, factor analysis and other multivariate techniques, Applications of SPSS.

### 890. Individual Readings

(SOC 880.) Fall, Winter, Spring, Summer. 1 to 12 credits. May reenroll for a maximum of 24 credits. Approval of department.

# 891. Individual Research Projects

(SOC 875.) Fall, Winter, Spring, Summer. 1 to 8 credits. May reenroll for a maximum of 24 credits. Approval of department.

# 899. Master's Thesis Research

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

### 901. Educational Sociology: Seminar

Winter. 3(3-0) Approval of department. Interdepartmental with the Department of Teacher Education.

Theories and research on interrelationships between sociocultural conditions in society and the organization and operation of educational systems.

## 904. Special Topics in Sociology

(SOC 872.) Fall, Winter, Spring. 2 to 4 credits. May reenroll for a maximum of 8 credits. Approval of department.

Special fields of study will include any area of sociology and social psychology selected.

# 909. Seminar in Social Policy Analysis

Spring. 2 to 4 credits. May reenroll for a maximum of 16 credits. SOC 805 or approval of instructor.

Analysis of various topical social policy issues or problems, with emphasis on the utilization of sociological knowledge in formulating policies, designing programs, and assessing their consequences.

## 910. Seminar in Teaching Sociology

(SOC 870.) Spring of even-numbered years. 4(4-0) Approval of department.

Theory and Practice in College Teaching of Sociology. Role related pressures on sociology teachers and methods of facilitating significant learning. Course organization, alternative instructional procedures, and evaluation techniques.

# 915. Introduction to Formal Theory in Sociology

(SOC 967.) Spring of odd-numbered years. 4(4-0) SOC 882 and a course in research methods

Analysis of the structure of formal theory in sociology and of the problems of interpretation and verification of deterministic and probalistic theories. Examination of specific practices of theory construction.

# 916. Theoretical Perspectives in Sociology

(SOC 976.) Spring of even-numbered years. 4 credits. SOC 815.

Comparisons and analyses of concepts, conceptual schemes and theories of outstanding social theorists in relation to modern research.

# 919. Seminar in Selected Theoretical Issues

(SOC 977.) Winter. 2 to 4 credits. May reenroll for a maximum of 8 credits. SOC 815. Issue approach to social theory. Selected themes relate to substantive problems in theory, theory construction or the work of a historical or contemporary thinker.

# 920. Sociological Analysis of Work

(SOC 930.) Spring of odd-numbered years. 4(4-0) SOC 310, SOC 430, SOC 831N or approval of instructor.

Theory and research problems in occupational structure, work settings, functions and meanings of work, occupational mobility and career patterns.

# 921. Sociological Analysis of Organizations

Fall of odd-numbered years. 4(4-0) SOC 820N or approval of instructor.

Contemporary research in complex organizations, internal labor markets, organizational networks, ecological approach to organizational analysis, organizations and public policy.

# 922. Seminar in Occupations and Organizations

(SOC 991.) Winter. 2 to 4 credits. May reenroll for a maximum of 16 credits. Thirty graduate credits and approval of instructor. Selected topics in the sociology of work, occupations, and complex organizations.

### 931. Crises and Alternatives in Post-Modern Societies

(SOC 973.) Fall of odd-numbered years. 3(3-0) Approval of department.

Ecological, political-economic, and social crises besetting contemporary highly industrialized societies. Alternative solutions to those conditions possible through intentional social change.

# 932. Theories of Conflict and Change

(SOC 970.) Fall of even-numbered years. 3(3-0) Approval of department.

Major theoretical European and American contributions to the study of conflict and change.

### 933. Seminar in Conflict and Change

Winter, 2 to 4 credits. May reenroll for a maximum of 16 credits. Approval of department.

Analysis of selected theoretical and substantive sociological topics from the perspective of critical sociology, with emphasis on inequality, political economy, and social change.

### 943. Social Attitudes

(SOC 853.) Fall of even-numbered years. 4(4-0) SOC 840, SOC 882, thirty graduate credits or approval of department.

Measurement of attitudes; theories of attitude structure and change; relationship to behavior; formalization.

### 944. Small Group Research

(SOC 964.) Fall of odd-numbered years. 4(4-0) Thirty graduate credits including SOC 840 or approval of department.

The experimental and theoretical investigation of organizational processes in small groups.

# 945. Social Structure and the Individual

(SOC 966.) Winter of odd-numbered years. 4(4-0) Thirty graduate credits including SOC 840 or approval of department.

Contemporary theory and research on the influence of social structure on the individual and the interaction of the individual and social structure as determinants of behavior.

## 946. Symbolic Interactionism

(SOC 968.) Spring of even-numbered years. 4(4-0) Thirty graduate credits including SOC 840 or approval of department.

Theoretical and research problems within the framework of symbolic interaction. The socialization process and the development, maintenance, and enhancement of the self. Critique of the literature and proposals for new research directions.

# 947. Comparative Social Psychology

(SOC 982.) Winter of even-numbered years. 4(4-0) Thirty graduate credits including SOC 840 or approval of department.

Social psychological research problems using comparative methodology in cross-national and cross-cultural contexts. Topics may include socialization; achievement motivation; status attainment and transitions; intergenerational relations; intercultural interaction; values and social change.

### 948. Seminar in Social Psychology

Spring. 2 to 4 credits. May reenroll for a maximum of 16 credits. Approval of department.

Specialized topics in sociological social psychology, such as bargaining and power, friendship relationships, life-course dynamics, migration decision-making, comparative socialization.

# 950. Seminar in Population and Social Ecology

(SOC 864.) Winter. 2 to 4 credits. May reenroll for a maximum of 16 credits. Approval of department.

Special topics in population and social ecology such as mortality, population problems and policies, social dimensions of toxics, energy and society, and technology and society.

# 960. Contemporary Problems in Rural and Community Studies

(SOC 978.) Spring of odd-numbered years. 4 credits. SOC 860N or approval of instructor

Recent developments in rural and community studies. Applications of concepts and theories to different field situation. Integration of previous courses.

#### 961. Seminar in Rural and Community Studies

(SOC 837.) Spring. 4(4-0) May reenroll for a maximum of 16 credits. Approval of instructor.

Special topics in rural and community studies such as farmers' organizations, adoption of innovations, fisheries sociology, comparative extension programs, comparative rural social organization, community structure and stratification, and community dynamics.

# 975. Urbanization in Comparative Perspective

(SOC 903.) Fall of odd-numbered years, 3(3-0)

Comparative research and theory on urbanization in the world system. Relationship of urbanization to development.

### Courses

# 980. Documentary and Bibliographic Research Methods.

(SOC 831.) Spring. 4(4-0) Approval of department.

Systematic and detailed exploration of source materials relevant to documentary and bibliographic social science research. Emphasis on research strategy and techniques.

## 984. Techniques of Population Analysis

(SOC 952.) Spring. 4(4-0) SOC 420; STT 422 or SOC 882 or approval of department. Techniques for the analysis of population size and composition, mortality, fertility, migration, population estimates and forecasts, population and labor force distribution, and selected techniques of ecological analysis.

## 985. Field Research Methods

(SOC 955.) Fall. 4 credits. Approval of department.

An overview of the design and execution of social research.

## 986. Survey Research Principles

(SOC 954.) Winter. 4(4-0) SOC 882, STT 422.

The design and analysis of theoretically oriented survey research. Sampling, questionnaire construction, interviewing, and data processing.

## 987. Survey Research Practices

Spring. 4(1-6) SOC 882, SOC 986.

Practicum in use of survey skills in study design, sampling, data collection, processing, and analysis.

### 988. Comparative Research Methods

(SOC 983.) Spring of odd-numbered years. 4(4-0) Thirty graduate credits or approval of department.

Sampling problems, data collection strategies, problems of translation and concept equivalence. Management, analysis and interpretation of cross-cultural data.

## 999. Doctoral Dissertation Research

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

# **SPANISH**

See Romance and Classical Languages.

# STATISTICS AND PROBABILITY STT

## College of Natural Science

Introductory courses are further classified as follows:

315—for undergraduate students of Business Administration.

201—survey course.

421, 422, 423—minimal sequence for students planning to use statistical methods in their research.

441, 442, 443—minimal sequence in theory of statistics. Qualified students should take the 861, 862, 863 sequence instead.

861, 862, 863—sequence for students preparing to do advanced work in statistics.

### 201. Statistical Methods

Fall, Winter, Spring, Summer. 4(4-0) MTH 108 or MTH 111. Primarily for students in psychology, sociology, anthropology, political science, economics, agriculture, and forestry. Credit may not be earned in more than one of the following: STT 201, STT 315, STT 421.

Descriptive statistics, elementary probability and combinatories. The binomial distribution. Random variables, their expectations and variances. Central Limit Theorem, estimation and inference. Simple tests based on the binomial, normal, t, chi-square and F distributions.

# 315. Introduction to Probability and Statistics for Business

Fall, Winter, Spring, Summer. 4(5-0) MTH 111. Credit may not be earned in more than one of the following: STT 201, STT 315, STT 421.

Descriptive statistics, elementary probability, random variables, probability models, sampling distributions, the Central Limit Theorem, confidence intervals and one-sample tests based on normal, t and chi-square with applications to business problems.

### 317. Quantitative Business Research Methods

Fall, Winter, Spring, Summer. 4(5-0) STT 315. Interdepartmental with and administered by the Department of Marketing and Transportation Administration.

Application of statistical techniques to business decision making. Topics covered include applications of linear regression and correlation, analysis of variance, selected nonparametric tests, time series, and index numbers.

# 351. Probability and Statistics for Engineers

Fall, Winter, Spring. 4(4-0) MTH 215. Discrete and continuous probability models, conditional probability, independence, random variables. Estimation and testing, including one- and two-sample tests and confidence intervals. Applications to engineering problems.

### 421. Statistics I

Fall, Winter, Spring, Summer. 4(4-0) MTH 108. Credit may not be earned in more than one of the following: STT 201, STT 315, STT 421. This course and STT 422, STT 423 form a one year sequence in statistics for those without a calculus background; STT 421 provides an introduction to a few of the main ideas of probability and statistics. The course sequences STT 441-2-3 and STT 861-2-3 form one year sequences in statistics for those with a calculus background. Those expecting to use statistics in their graduate research should complete one of the full year sequences.

Descriptive statistics, elementary probability, combinatorics. Binomial distribution. Random variables, expectations and variances. Central Limit Theorem, point estimation. One sample confidence intervals, tests based on the binomial, normal, t, chi-square distributions.

### 422. Statistics II

Fall, Winter, Spring, Summer. 3(3-0) STT 421.

Two sample confidence intervals and tests based on the normal and t-distributions. Nonparametric models, contingency table analysis, simple linear regression, one-way analysis of variance.

# 423. Statistics III

Fall, Winter, Spring. 3(3-0) STT 422.

Multiple regression. Analysis of variance for various experimental designs such as randomized block, factorial, nested and Latin square designs.

# 441. Probability and Statistics I: Probability

Fall, Winter, Spring, Summer. 4(4-0)

Mathematical probability as a basis for the theory of statistics. Discrete and continuous probability models, conditional probability and independence, random variables, central limit theorem, sampling distributions.

# 442. Probability and Statistics II: Inference

Winter, Spring. 4(4-0) STT 441; MTH 334 or concurrently.

Estimation, confidence intervals, tests of hypotheses, linear models.

# 443. Probability and Statistics III: Inference

Spring. 4(4-0) STT 442.

Multiple linear regression, analysis of variance, goodness of fit tests, certain non-parametric tests.

# 461. Computations in Statistics and Probability

Spring. 4(4-0) STT 441, MTH 334, one course in computer science or approval of department.

Computer algorithms for evaluation, simulation and visualization: sampling from prescribed distributions; robustness and error analysis of procedures used by statistical packages; graphics for data display; computation of probabilities and percentiles.

# 471. Statistics for Quality and Productivity

Spring. 4(4-0) STT 351 or STT 422 or

STT 442.

Scientific context of quality: Box, Deming, Taguchi; graphical techniques; control charts; design of experiments: factorials and fractional factorials, confounding and aliasing; engineering parameter design through experimentation.

### 490. Statistical Problems

 $Fall,\ Winter,\ Spring.\ 1\ to\ 6\ credits.$  Approval of department.

Individualized study adapted to the preparation and interests of the student.

# 825. Sample Surveys

Fall. 3(3-0) STT 423 or STT 442 or STT

862.

Application of statistical sampling theory to survey designs involving simple random, stratified, and systematic samples; sub-sampling, double sampling; ratio and regression estimates; other topics.

# 826. Nonparametric Statistics

 $Spring.\ 4(4\text{--}0)\ STT\ 442\ or\ STT\ 862.$ 

Current tests of hypotheses which may be made without specification of the underlying distribution. Rank tests and tests based on permutation of observations. Tolerance and confidence sets. Large-sample distributions. Applications to research in the social and natural sciences.

# 841. Linear Statistical Models

Fall. 4(4-0) STT 443 or STT 863.

Use of linear statistical models. Curve fitting, simple and multiple regression analysis, multiple and partial correlation coefficients, the analysis of variance, simultaneous confidence intervals, more complex experimental designs.