

# Psychology

**Industrial-Organizational** This focus area is designed for students interested in human resource management, performance assessment, personnel training, organizational behavior, and related fields. This area would be suitable for psychology majors pursuing either a double major or a minor in business administration. In addition to the core curriculum, students are advised to take at least five of the following psychology courses with at least two at the 300 level.

**160, Social Psychology**  
**222, Group Processes in Organizations**  
**318, Industrial and Organizational Psychology**  
**320, Personnel Assessment**  
**360, Attitude Structure and Change**  
**365, Psychological Tests and Measurement**  
**370, Human Factors in Industry**

Students interested in this area might also wish to consider one or two of the following courses which are offered outside the psychology department:

**BA 210, Management as a Behavioral Science I**  
**BA 311, Management as a Behavioral Science II**  
**BA 312, Industrial and Labor Relations**  
**BA 319, Employee Training and Development**  
**Sociology 304, Survey Research Practicum**

### Requirements for the Minor

Candidates must take a minimum of 15 hours in courses taught by or cross-listed with the psychology department, including at least six hours at the 300 level.

Candidates must have a cumulative grade point average of 2.0 or better in the minor. Psychology courses taken on a satisfactory/unsatisfactory basis may not be applied to the minor.

## Graduate Studies

### Admission Requirements

In addition to meeting the general admission requirements of the Graduate School, applicants should have completed undergraduate courses in general psychology, psychological statistics, and research methods. Each doctoral program has additional admission requirements specific to the emphasis area.

**Teaching Assistantships** Stipends for teaching assistantships are available for the doctoral program only. Out-of-state tuition fees are waived for teaching assistants.

**Applications** Each emphasis area has its own deadline for completed applications. They are as follows:

**Ph.D. in Psychology:**  
 Clinical Psychology—January 15  
 Industrial/Organizational Psychology—February 1  
 Experimental Psychology—February 1  
**M.A. in General Psychology—February 1**

## Master of Arts in Psychology

The University of Missouri-St. Louis offers a flexible program of studies leading to the Master of Arts degree in general psychology. Course work is possible, depending upon student demand, in several areas of experimental and applied psychology (e.g., psychobiology and animal behavior; human learning, memory, and cognition; personnel and industrial and organizational psychology, and social psychology). The M.A. degree does not constitute a license to practice in Missouri or elsewhere as a professional psychologist. The M.A. program does not offer course work in either counseling or clinical psychology.

There is no thesis or language requirement. Part-time or full-time enrollment is permissible. The M.A. degree is a terminal degree and is separate from the Ph.D. program in psychology.

The M.A. in psychology requires a total of 32 semester hours of course work. Students must take **either** of the following sets of quantitative courses:

### Set I

**Psych 427, Quantitative Measurement and Evaluation of Psychology I**  
**Psych 428, Quantitative Measurement and Evaluation of Psychology II**

or

### Set II

**Psych 421, Quantitative Methods I, and**  
**Psych 422, Quantitative Methods II**

Two courses in General Psychology are required and may be fulfilled by two courses from either of the following sets:

### Set I

**Psych 408, Proseminar in Experimental Psychology I, and**  
**Psych 409, Proseminar in Experimental Psychology II**

### Set II

(Any two courses from the following:)

**Psych 405, Personality**  
**Psych 411, Learning and Cognitive Processes**  
**Psych 412, Social Psychology**  
**Psych 417, Human Factors**  
**Psych 461, Learning**  
**Psych 467, Conceptual Systems**  
**Psych 468, Cognitive Processes**

Elective courses will constitute the remaining hours needed for the degree. All programs of study for M.A. students require the approval of a member of the departmental M.A. advisory committee.

# Psychology

## Ph.D. in Psychology

The doctoral program is organized around courses and directed research experience that emphasize the scientific approach to the study of psychology. Courses in the areas of quantitative methods, design and methodology, personality, motivation, social psychology, learning, and cognition are focal in the program.

### Emphasis Areas

There are three distinct emphasis areas within the Ph.D. program. Each emphasis area has its own specific course and research requirements. Handouts describing these requirements are available from the department on request. The following briefly describes each emphasis area.

**Clinical Psychology** The clinical psychology emphasis area is accredited by the American Psychological Association and is patterned upon the scientist-practitioner model of clinical training. The clinical psychology program requires five years of full-time participation. Part-time students are not considered for admission. Through the medium of courses, practicum, and research experiences, this emphasis area prepares clinical psychologists for careers in research, teaching, and clinical practice.

Students in the clinical psychology program participate in the first three years in the psychology department's Community Psychological Service. This facility provides psychological services to the public and consultation to outside agencies. Students also receive clinical experience in practicum settings in the community and during a full-time year-long internship. Research requirements include an initial independent research project, a major critical review of research in a specialty area, and a dissertation.

**General Experimental Psychology** The general experimental emphasis area provides opportunities for study and research in the areas of social psychology and behavioral neuroscience. Part-time or full-time enrollment is possible.

**Industrial-Organizational Psychology** The industrial-organizational psychology emphasis area is offered in cooperation with selected faculty from the School of Business to prepare students for careers in industry or academia. This emphasis provides training in personnel selection, training, test development/validation, and organizational psychology. Research and other training experiences in various settings are also incorporated. Both part-time and full-time enrollment is possible.

### Clinical Psychology Respecialization—Advanced Graduate Certificate Program

This program is designed for graduates of accredited doctoral programs in psychology who wish to receive training in the specialty field of clinical psychology. Respecialization students are trained within the context of the UM-St. Louis Clinical Psychology Doctoral Program, which is accredited by the American Psychological Association. The program provides an integrated sequence of training experiences, including didactic course work and practicum placements. Core graduate-

level psychology educational requirements not completed elsewhere also are included in the respecialization student's course of study.

## Career Outlook

The undergraduate major in psychology can lead to further training at the graduate level, function as a major within a general liberal arts degree, or offer some degree of specialization in such areas as child care and development and community mental health. Job opportunities with a bachelor's degree include working in business, social welfare, and probation and parole. For more career information see an adviser in the Undergraduate Psychology Office (Room 108 Stadler). To function specifically as a psychologist, a graduate degree is required, and students with such an interest should plan for this additional training.

# Psychology

## Course Descriptions

The following courses fulfill the Social Sciences [SS] breadth of study requirements: 3, 1140, 50, 160, 161, 162, 200, 201, 211, 212, 213, 215, 216, 219, 220, 222, 225, 230, 232, 235, 240, 245, 256, 268, 269, 270, 271, 272, 280, 295, 300, 301, 305, 306, 310, 311, 312, 314, 320, 340, 346, 349, 354, 355, 356, 357, 361, 365, 370, 373, 374, 390.

The following course fulfills the Natural Science and Mathematics [SM] breadth of study requirements: 140.

### 09 Seminar in Career Choice and Life Planning (1)

This course covers the major theories regarding career selection and provides information and skill training necessary for making career decisions. NO CREDIT TOWARD ANY DEGREE.

### 3 General Psychology (3)

A broad introductory survey of the general principles of human behavior.

### 140 Female Sexuality (3)

(Same as Biology 140.) Prerequisites: Psych 3, or Biology 1, or its equivalent. This course will present a biological-psychological orientation toward the study of female sexuality. Topics include: sexual anatomy, hormonal influences on sexual behavior, psychosexual development, sexual attraction and relationships, sexual response and dysfunction, menstruation, pregnancy, menopause, reproductive health issues, and social issues in sexuality.

### 150 The Psychology of Individual Differences (3)

Prerequisite: Psych 3. Analysis of major dimensions of individual differences in behavior and the roles of genetic, constitutional, and experiential factors in the development of psychological differences. While emphasis is placed on human behavior, relevant information from infrahuman species will be considered.

### 160 Social Psychology (3)

(Same as Sociology 160.) Prerequisite: Psych 3 or Sociology 10. Study of interaction between individuals and their social environment. Examination of basic principles, concepts, and methods.

### 161 Helping Relationships (3)

Prerequisites: Psych 3 and consent of instructor. Exploration of the basic elements contributing to effective helping skills. Course assignments include keeping a journal, writing papers, and a final exam. Readings, discussion, and guided experiences will be used to instill active listening and communication skills. Ethics of helping relationships will be emphasized.

### 162 Applied Skills (3)

Prerequisites: Psych 161 and consent of instructor. Builds upon Psych 161. Provides advanced readings and supervised experiences in helping relationships. Course assignments include readings, discussion, preparation of tapes for supervision, and a term paper. Designed for students interested in learning more about the psychological

functioning of themselves and others. The course is also focused on increasing awareness of the dynamics of helping relationships.

### 200 Drugs and Behavior (3)

Prerequisites: Psych 3 and three other hours in psychology or biology. The course is designed to provide an introduction to the relationship between drugs and behavior. The emphasis will be on psychoactive drugs, alcohol, nicotine, as well as drug-like substances produced naturally in the body.

### 201 Psychological Statistics (4)

Prerequisites: Psych 3 and Math 30, or equivalents. (With laboratory.) Statistical methods in psychological measurement and analysis of psychological data. Frequency distribution analysis, sampling, test of significance, and correlation methods.

### 211 Physiological Psychology (3)

Prerequisites: Psych 3 or equivalent and Biology 1. A survey of the major areas of physiological psychology with an emphasis on their historical development.

### 212 Principles of Learning (3)

Prerequisite: Psych 3. A consideration of critical findings in learning.

### 213 Principles of Perception (3)

Prerequisite: Psych 3. Sensory and perceptual processes in human experience and behavior.

### 215 The Social Behavior of Animals (3)

Prerequisites: Two semesters of psychology and/or biology. An introduction to the social organization of a variety of different animal forms. The emphasis will be on nonhuman primates and other mammals through the social behavior of species of insects, fish, and birds. Aggression, sexual behavior, affiliation, maternal reactions, and the ontogeny of behavior are the primary areas to be studied. The orientation will be from both an ethologist's and animal psychologist's perspective.

### 216 Personality Theory (3)

Prerequisite: Nine hours of psychology. Structural and dynamic aspects of the human personality considered in the context of selected theoretical systems.

### 219 Research Methods (3)

(With laboratory.) Prerequisite: Psych 201. Research methods and analysis techniques used in psychological inquiry. Special emphasis placed on the logic of research design. Includes laboratory study of, and analysis of, selected methods.

### 220 Psychology of Male-Female Relationships (3)

Prerequisites: Junior standing and Psych 3. The course is an introduction to the biological and social influences on the interactions of males and females. The findings of biopsychologists and social psychologists from both laboratory and field settings will be reviewed. Topics will include the emotions of love and jealousy, separation, physical attraction, sex roles, and hormonal animal social groups.

## Psychology

### 222 Group Processes in Organizations (3)

Prerequisite: Psych 3 or BA 210. Topics include theory, research, and practice in coordination, conflict, and decision making in groups and organizations, as well as the role of influence, power, and leadership effectiveness in understanding interpersonal and group relations.

### 225 Behavior Modification (3)

Prerequisite: Nine hours of psychology or consent of instructor. Methods, applications, and ethics of the use of behavior theory (primarily Skinner's operant conditioning) to the control of human behavior in a variety of settings including mental institutions, grade schools, universities, individual treatment, and communal living.

### 230 Psychology of Women (3)

Prerequisite: Psych 3. Evaluation of psychological theories and research regarding physiological, cognitive, and personality sex differences, female problems in adjustment, and clinical interventions for women.

### 232 Psychology of Victims (3)

Prerequisite: Psych 3. A review of the effects of crime, violence, natural disasters, and other traumas on psychological functioning. Prevention and therapy techniques will also be discussed.

### 235 Community Psychology (3)

Prerequisite: Psych 3. The analysis of psychological problems in terms of the social and situational forces that produce them. Community psychology analyzes the situational problems in living. Epidemiology of mental illness; group, family, and crisis intervention; mental health-care delivery; program evaluation and demonstration project research; role of psychologist as consultant and change agent; and utilization of nonprofessional manpower.

### 240 Play: Psychological and Anthropological Perspectives (3)

(Same as Anthro 240.) Prerequisite: Psych 3 or Anthro 11, or consent of instructor. This course will examine play from psychological and anthropological perspectives in an effort to provide an understanding of the importance of play for humans. The questions which will be the focus of the course include: why people play; the adaptive benefits derived from play; the cultural functions of play; and how play is expressed in different cultures.

### 245 Abnormal Psychology (3)

Prerequisite: Psych 3. Introduction to major symptom complexes, theories of etiology, and treatment of behavior disorders.

### 256 Environmental Psychology (3)

Prerequisite: Psych 160 or Sociology 160. Analysis of environmental influences on behavior and man's influence, in turn, on the environment. Topics will include a consideration of both individual processes relating to the environment (such as the perception, evaluation, and adaptation to the environment) and social processes relating to the environment (such as privacy, territoriality, and crowding).

### 268 Human Growth and Behavior (3)

Prerequisite: Psych 3. A survey of development over the life span, with an emphasis on the developmental tasks and hazards of each period.

### 269 Infancy (3)

Prerequisite: Psych 3. Principles of infant development. Discussion of bonding; infant capacities and state; perceptual and motor development; environmental and child-rearing factors influencing the rate of development in infants.

### 270 Child Psychology (3)

Prerequisite: Psych 3. Principles of biological, behavioral, and personality development from conception to puberty.

### 271 Adolescent Psychology (3)

Prerequisite: Psychology 3. Principles of biological, behavioral, and personality development from puberty to maturity.

### 272 Adult Development and Aging (3)

(Same as Gerontology 272.) Prerequisite: Psych 3. Personality, social, and physiological development from the onset of early adulthood through maturity and old age.

### 280 The Psychology of Death and Dying (3)

(Same as Gerontology 280.) Prerequisite: Psych 3. This course will address the psychological aspects of death and dying for both adults and children. The psychological reactions of terminally ill patients and their families will also be examined, and therapeutic interventions will be discussed.

### 295 Selected Projects in Field Placement (3)

Prerequisites: Junior standing, fifteen hours of psychology, and departmental approval. Selected options in field placement experiences in various local agencies with training and supervision by faculty. May be repeated once for credit.

### 300 Neuropharmacology and Behavior (3)

Prerequisites: Psych 200 plus 6 additional hours of Psychology. The course is designed for advanced undergraduate students interested in a career in psychopharmacology or related fields in the health sciences. Emphasis will be on (1) underlying neural processes, (2) traditional laboratory methods as they have been adapted to the study of drugs, and (3) the unique contributions made by psychopharmacologists to both areas.

### 301 Advanced Statistics and Experimental Design (3)

Prerequisites: Twelve hours of psychology, including Psych 201. Statistical methods which are particularly useful in psychological research and the design of experiments appropriate to these methods.

### 302 Computers in Psychology (3)

Prerequisites: Nine hours of psychology including Psych 201 and junior or senior standing. The course is organized around computer applications in the behavioral sciences for the Macintosh machine. The goals for the course include familiarization with (1) MAC environment to prepare the student for the explosion of computer applications now and in the future, (2) the hardware and software products

# Psychology

available for the working psychologist, and (3) the software programs of choice in the field through hands-on, individual use of the MAC. Some modest level of computer (MAC, PC, or mainframe) experience is recommended.

## 305 Cognitive Development (3)

Prerequisites: Junior standing and Psych 270, or consent of instructor. Data and theory concerned with development of perceptual, language, and symbolic abilities in infants and young children, including discussion of deprivation and enrichment of cognitive development.

## 306 Social Development (3)

Prerequisites: Junior standing and Psych 270, or consent of instructor. Data and theory concerned with development of social behavior in infants and young children. Discussion will include the formation and interruption of attachment, the effects of social isolation, sex-role development, identification, and development of moral judgments in children.

## 310 Motivation Theory (3)

Prerequisites: Junior standing and twelve hours of psychology, or consent of instructor. Survey of current theoretical material in the area of motivation.

## 311 Psychology of Nonverbal Behavior (3)

Prerequisite: Psych 160 or Sociology 160. Psychological perspective on the role of nonverbal behavior in social settings. Primary concerns of the course will include an analysis of (a) functions of nonverbal behavior (e.g., communication, intimacy exchange, control), (b) factors influencing nonverbal expression (e.g., culture, personality, relationships), and (c) various theoretical views on nonverbal behavior and communication. Applications to various problems and settings in everyday life will also be pursued.

## 312 Social Cognition (3)

Prerequisites: Psych 160 or Sociology 160. Research and theory on the role of cognitive processes in social behavior. Topics include attitudes and attitude change, social inference, schemas, and cognitive links to behavior and affect.

## 314 Physiological Psychology (3)

(With laboratory.) Prerequisites: Psych 219, Biology 1, and Biology 3, or consent of instructor. The biological and physiological correlates of behavior. Special emphasis placed on the neural and endocrine systems.

## 318 Industrial and Organizational Psychology (3)

(Same as BA 318.) Prerequisites: Bus 210 and Math 105 or Psych 201. This course introduces the student to psychological research and theories pertaining to human behavior in the work setting. Topics covered include: selection, performance appraisal, training, leadership, motivation, job satisfaction, and organizational design.

## 320 Personnel Assessment (3)

Prerequisite: Psych 318 or BA 309. This course will provide an in-depth study of several topics in the area of personnel psychology. Consideration will be given to issues such as

assessment centers, employment interviewing, personnel appraisal, employment test validity, and legal issues relevant to personnel assessment.

## 340 Clinical Problems of Childhood (3)

Prerequisites: A total of twelve hours of psychology including Psych 3 and Psych 270. This course will address the clinical disorders and difficulties of children and the treatment of these disorders. Topics that will be addressed include autism, childhood schizophrenia, behavior disorders, drug abuse, enuresis, encopresis, and childhood co-compulsive and phobic reactions. Treatments designed for specific use with children, including behavioral, drug, and community mental health approaches will be addressed.

## 346 Introduction to Clinical Psychology (3)

Prerequisites: Nine hours of psychology, including Psych 216 or Psych 245. A conceptual framework for research, description, and understanding of clinical phenomena. Assessment, interviewing, the clinical use of tests, and psychological approaches to treatment.

## 349 Human Learning and Memory (3)

Prerequisites: Nine hours of psychology or consent of instructor. A survey of contemporary research, theory, and facts pertaining to the acquisition, retention, and forgetting of information.

## 354 Experimental Personality and Social Psychology (3)

(With laboratory.) Prerequisite: Psych 219. Social psychological processes, both inside and outside of the laboratory, including an emphasis on experimental methods in research.

## 355 Psychology of Perception (3)

(With laboratory.) Prerequisite: Psych 219. Analysis of major sensory and perceptual processes.

## 356 Thinking and Cognition (3)

Prerequisites: Nine hours of psychology or consent of instructor. An introduction to modern analytical approaches to the psychology of thinking: problem solving, reasoning, categorizing, judgment, attention, and consciousness. Particular attention is paid to the mental structures and operations involved in the encoding, abstraction, representation, transformation, and retrieval of knowledge.

## 357 Psychology of Learning (3)

(With laboratory.) Prerequisite: Psych 219. Major theoretical positions and experimental conditions of learning. Includes laboratory study of selected problems.

## 361 History and Systems of Psychology (3)

Prerequisites: At least fifteen hours of psychology. The course should be taken no sooner than the winter term of the junior year. Historical antecedents of contemporary psychology, including a survey of systems and schools of psychology.

## 365 Psychological Tests and Measurements (3)

(With laboratory.) Prerequisites: Psych 201 and Psych 219, or consent of instructor. Survey of psychological testing and principles of test construction and evaluation. Laboratory

## Psychology

experience in construction, administration, and interpretation of selected tests.

### 370 Human Factors in Industry (3)

Prerequisites: Nine hours of psychology. This course illustrates how experimental psychology can be applied to the work place. Topics include display-control designs, human perceptual limitations, human information processing, environmental stress, and design of the work place. The person-machine interface is the focus of this course.

### 373 Psychology of Aging (3)

(Same as Gerontology 373.) Prerequisite: Nine hours of psychology or consent of instructor. This course focuses on the developmental changes associated with aging including sensation, memory, emotions, and attitudes.

### 374 Introduction to Clinical Neuropsychology (3)

Prerequisite: Nine hours of psychology. A survey of neuropsychological findings concerning relationships between brain and behavior. Topics will include brain function, neuroanatomy, neurological syndromes, and methods of neuropsychological assessment.

### 375 The Social Psychology of Disabilities (3)

Prerequisite: Sociology 160 or Psych 160 or consent of instructor. (Same as Sociology 375). A social psychological and micro-sociological examination of attitudes and behaviors affecting persons with disabilities. Topics include stigma and empowerment, adaptive behaviors, stereotypes and prejudices, and images of disabilities in popular culture and mythology. The course will address the experience of disability and its social consequences for the lives of persons with disabilities.

### 376 Mental Health and Aging (3)

(Same as Gerontology 376.) Prerequisites: Consent of instructor plus one of the following: Psych 272, Psych 373, or graduate standing. A survey of recent theory and research in mental health issues for older populations. The primary focus is on major psychological disorders prevalent among the elderly and on treatment approaches for elders.

### 390 Directed Studies (1-5)

Prerequisite: Consent of instructor. Directed reading and research. May be repeated for a maximum total of ten hours.

### 392 Selected Topics in Psychology (1-3)

Prerequisites: Twelve hours of psychology and consent of instructor. A seminar of selected issues and methods in psychology. May be repeated once for credit.

### 403 Psychopathology (3)

Prerequisite: Admission to clinical psychology program or permission of instructor. A critical examination of the clinical-experimental literature on psychopathology. Etiologies of cognitive/affective functions and dysfunctions are explored, and implications for therapeutic intervention are considered.

### 404 Introduction to Clinical Assessment I (3)

Prerequisite: Admission to clinical psychology program.

Fundamentals of clinical assessment with emphasis on interviewing and the measurement of cognitive functioning.

### 405 Personality (3)

Prerequisite: Admission to clinical psychology program or permission of instructor. Current theories and research in personality. Major psychodynamic, trait, phenomenological, cognitive, and social learning approaches are covered, with a focus on personality structure and individual differences, personality processes and dynamics, development, psychopathology, and change.

### 406 Introduction to Clinical Assessment II (3)

Prerequisite: Psych 404. Theory and techniques of personality assessment with emphasis on projective personality tests.

### 407 Psychopharmacology (3)

Prerequisite: Consent of instructor. An examination of the effects of drugs on the brain and on behavior. Primary emphasis is on those drugs used in the treatment of affective disorders, schizophrenia, and anxiety.

### 408 Proseminar in Experimental Psychology I (3)

An historical outline of experimental psychology and a survey of contemporary research on human learning, transfer, skill, and memory.

### 409 Proseminar in Experimental Psychology II (3)

Prerequisite: Psych 408. Survey of contemporary research in cognition, judgment, and information processing.

### 410 Women and Mental Health (3)

This course will focus on contemporary research on the psychology of women pertaining to mental health issues. Etiology and treatment of disorders disproportionately affecting women will be emphasized.

### 411 Seminar: Learning and Cognitive Processes (3)

Evolution of contemporary approaches to learning, both animal and human, and the higher cognitive processes.

### 412 Social Psychology (3)

Prerequisite: Consent of instructor. A review of key areas in contemporary theory and research in social psychology.

### 413 Seminar: Developmental Psychology (3)

Analysis of theories and empirical findings of human and infrahuman studies as related to development.

### 414 Seminar: Perception (3)

Sensory processes, psychophysics, and theories of perception.

### 415 Seminar: Physiological and Comparative Psychology (3)

Analysis and review of specific physiological and behavioral processes common to a wide variety of animals.

### 416 Seminar: Animal Behavior and Genetics (3)

Analysis of the major theoretical positions and empirical findings concerning vertebrate and invertebrate forms.

# Psychology

## 417 Proseminar in Human Factors (3)

Prerequisite: A research methods course, e.g., Psych 219, or permission of instructor. First portion of course reviews human capabilities and limitations relevant to human-machine systems. Balance of course examines in depth several applications of experimental psychology to the work place; e.g., environmental stressors, control-display compatibility, information overloading, and display codes.

## 418 Seminar in Human Sexuality (3)

Review of theory and research in human sexuality from physiological, psychological, and social perspectives. Implications for the assessment and treatment of sexual dysfunction are considered.

## 419 Existential Issues in Clinical Psychology (3)

This course will review existential thought in psychology and its application to understanding clinical problems and treatment. Particular attention will be given to how psychotherapy can be understood within an existential framework that focuses on the issues of death, freedom, responsibility, and isolation.

## 420 Current Issues in Industrial Psychology (3)

Prerequisites: Psych 427, 428, 408, or equivalent. A consideration of special issues and methods in industrial psychology. This course is intended for students concentrating in Industrial/Organizational Psychology within the Master's Program.

## 421 Quantitative Methods I (4)

(With laboratory.) A comprehensive study of the use of analysis of variance procedures in analyzing data. Topics include completely randomized designs, randomized blocks, factorial designs, and the analysis of covariance.

## 422 Quantitative Methods II (4)

(With laboratory.) A comprehensive study of the use of multivariate statistics in data analysis. Topics include multiple regression, canonical correlation, factor analysis, discriminant analysis, and the multivariate analysis of variance.

## 423 Psychological Scaling (3)

Theory of measurement and the principal methods of psychological scaling.

## 424 Factor Analysis (3)

Principal factor analytic methods and multivariate procedures.

## 425 Mathematical Models (3)

Decision theory and mathematical models used in the behavioral sciences.

## 426 Computer Programming (3)

Fundamentals of digital computer programming and computer applications in the behavioral sciences.

## 427 Quantitative Measurement and Evaluation of Psychology I (3)

Use of quantitative methods in psychology.

## 428 Quantitative Measurement and Evaluation of Psychology II (3)

A continuation of Psychology 427.

## 429 Psychometric Theory (3)

Prerequisite: Consent of instructor. A consideration of test reliability, validity, and construction from the standpoint of modern psychometric theory and a survey of unidimensional and multidimensional scaling procedures.

## 431 First Year Clinical Supervision (3)

Prerequisite: Admission to Clinical Psychology program. Supervised experience in clinical practice for first year students in clinical psychology program.

## 432 Clinical Practice I (3)

Prerequisites: Admittance to doctoral program in clinical psychology and consent of instructor. Placement in an affiliated institution, agency, or organization under supervision of staff.

## 433 Clinical Practice II (3)

Prerequisites: Psych 432 and consent of adviser. Placement in an affiliated institution, agency, or organization under supervision of staff.

## 434 Seminar: Introduction to Psychotherapy (3)

Prerequisite: Admittance to clinical psychology program, Psych 404 and 406 or equivalent. This course considers theories of personal change and their practical application in psychotherapy. Topics include the development of the therapist-client relationship, case management, process and outcome research, and ethical principles for the psychotherapist.

## 436 Practicum: Introduction to Psychotherapy I (3)

Prerequisites: Psych 431 or the equivalent. Supervised experience in clinical practice.

## 437 Practicum: Introduction to Psychotherapy II (3)

Prerequisite: Psych 436. Continuation of Psych 436.

## 438 Third Year Clinical Supervision (1-3)

Prerequisite: Psych 437. Advanced training in psychological assessment and intervention for third-year students in clinical psychology program.

## 439 Summer Supervision (1)

Prerequisites: Psych 430 and 431. Supervised experience in clinical practice at all graduate year levels during the summer months. Can be repeated for credit.

## 440 Principles of Family Therapy (3)

Prerequisite: Psych 434. Survey of research and theory underlying models of family interaction. Practical application of specific techniques to the family system is emphasized.

## 441 Seminar: Cognitive and Behavior Theories (3)

Prerequisite: Admission to clinical psychology program or permission of instructor. A course on cognitive and behavioral theories and their applications to clinical populations. Emphasis is on a critical review of research on cognitive and behavioral therapy procedures.

## Psychology

### 442 Seminar: Cognitive and Behavior Therapy (3)

Prerequisites: Admittance to doctoral program in clinical psychology and Psych 441. The practice of behavior therapy. Students will learn to implement behavioral assessment and therapy strategies in clinical settings.

### 443 Advanced Clinical Supervision (1-3)

Prerequisite: Psych 438. Advanced training in psychological assessment and intervention for fourth-year students in clinical psychology program.

### 445 Seminar: Community Psychology (2)

Critical examination of principles and application of preventive intervention in social systems and community mental-health programming.

### 446 Principles of Group Psychotherapy (3)

Prerequisite: Psych 432 or 434. Investigation of the models and principles of group intervention techniques.

### 447 Topics in Social Psychology (3)

Focused and in-depth analysis of contemporary problems in social psychology. One or more specific topic areas will be covered in a given semester. May be taken twice for credit.

### 448 Multicultural Issues in Clinical Psychology (3)

A survey of theoretical perspectives utilized in the treatment of various cultural groups. Their relationship to and implications for the treatment of members of various cultural groups will be explored. Strategies and ethical concerns in diagnosis, test interpretation, and treatment are considered.

### 449 Research Methods in Applied Psychology (3)

Prerequisite: One graduate course in statistics. This course focuses on the basics of conducting research in applied psychology. Topics include: philosophy of science; reliability and validity; experimental, quasi-experimental, and nonexperimental designs; power; and meta-analysis.

### 450 Clinical Internship I (1)

Prerequisite: Consent of adviser. Supervised training in an affiliated agency or organization following completion of two years of course work.

### 451 Clinical Internship II (1)

Prerequisites: Psych 450 and consent of adviser. Supervised training in an affiliated agency or organization following completion of two years of course work.

### 452 Survey of Industrial/Organizational Psychology (3)

A review of theoretical, practical, and legal issues faced by personnel specialists. Topics covered include personnel selection and testing, performance appraisal and criteria development, leadership, motivation, job design, and job satisfaction.

### 453 Compensation and Applied Motivational Theory (3)

A review of compensation theory, compensation programs, job evaluation, the Equal Pay Act and comparable worth, applied motivational theory, and the use of incentive systems for relating pay to individual and organizational performance.

### 454 Seminar: Personnel Psychology (3)

An analysis of theories and research in personnel and industrial psychology. Topics include testing, assessment centers, performance appraisal, and interviewing.

### 455 Seminar: Organizational Psychology (3)

An analysis of theories and research in organizational psychology. Topics include theories of motivation, leadership, job design, group process decision making, organizational effectiveness, and the relation between organizations and their environment.

### 456 Seminar: Employment Interviewing (3)

A survey of the theory, research, and technology of employment interviewing. Topics include selection interviewing and job analysis interviewing.

### 457 Seminar: Special Topics in Industrial Psychology (3)

A seminar of selected issues and methods in personnel psychology.

### 458 Seminar: Special Topics in Organizational Psychology (3)

A seminar of selected issues and methods in organizational psychology.

### 459 Practicum in Industrial/ Organizational Psychology (1-4)

Supervised experience in personnel or human resource management.

### 460 Current Issues in Organizational Psychology (3)

Prerequisites: Psych 427, 428, 408, or equivalent. A consideration of special issues and methods in organizational psychology. This course is intended for students concentrating in Industrial/Organizational Psychology within the Master's Program.

### 461 Seminar: Learning (3)

A critical examination of contemporary problems in learning.

### 462 Seminar: Motivation (3)

A critical examination of contemporary problems in motivation.

### 464 Seminar: Perception (3)

A critical examination of contemporary problems in perception.

### 465 Seminar: Physiological Psychology (3)

A critical examination of contemporary problems in physiological psychology.

### 466 Seminar: Developmental Psychology (3)

A critical examination of contemporary problems in developmental psychology.

### 467 Seminar: Conceptual Systems (3)

A critical examination of the evolution of contemporary theory in psychology.

### 468 Seminar: Cognitive Processes (3)

A critical examination of contemporary problems in cognitive processes.



# Psychology

## **469 Seminar: Animal Behavior (3)**

A critical examination of contemporary problems in animal behavior.

## **470 Seminar: Behavior Genetics (2)**

A critical examination of contemporary problems in behavior genetics.

## **471 Seminar: Comparative Psychology (3)**

A critical examination of contemporary problems in comparative psychology.

## **472 Special Topics in Psychology (3)**

A seminar of selected issues and methods in psychology.

## **474 Clinical Research in Applied Settings (3)**

Prerequisite: Psychology 421 and 422. This course provides information on the design and implementation of research in applied settings (e.g., human service agencies). Topics include program evaluation, consultation models, risk factor analysis, presentation and health promotion, and quality control.

## **475 Introduction to Evaluation Research Methods (3)**

(Same as Sociology 475, Public Policy Administration 475, and Criminology and Criminal Justice 475.) Prerequisite: At least one course in research design and statistics at the graduate level. A comparative study of research strategies with regard to data sources, data collection, and modes of analysis that are appropriate for program evaluation research. Attention is given to observational, survey, and quasi-experimental methodologies.

## **476 Seminar in Clinical Child Psychology (3)**

Introduction to principles, theory, and methods of study in the field of clinical child psychology. Emotional and behavioral dysfunctions are considered from developmental and socialization perspectives.

## **477 Principles of Child Psychotherapy (3)**

Prerequisites: Psych 434 and 476. The course will focus on treatments for children with clinical problems. Play therapy, family therapy, and behavioral therapy techniques will be reviewed. Special attention will be given to differentiating when to use each modality, as well as how they can be effectively combined.

## **478 Directed Research in Industrial/Organizational Psychology (1-4)**

Independent study of an issue in industrial/organizational psychology through the application of research techniques.

## **479 Directed Readings in Industrial/Organizational Psychology (1-4)**

Independent literature review of a topic in industrial/organizational psychology.

## **480 Research Methods in Clinical Psychology (3)**

Prerequisite: Psychology 421 or equivalent. An overview of research methods that are appropriate for clinical and other nonlaboratory settings.

## **481 Principles of Scientific Inquiry (3)**

Problems in the logic of inquiry and understanding in science.

## **482 Ethics for Psychologists (1)**

Prerequisite: Admittance to doctoral program in clinical psychology. A study of ethical standards as they relate to teaching, research, and professional practice.

## **483 Directed Research (1-10)**

## **484 Directed Readings (1-10)**

## **485 Research Team I (1)**

Prerequisite: Admittance to doctoral program in clinical psychology. Group supervision of beginning research leading to the Independent Research Project.

## **486 Research Team II (1)**

Prerequisite: Completion of Independent Research Project or Third Year standing in doctoral program in clinical psychology. Group supervision of advanced research leading to the dissertation proposal.

## **491 M.A. Thesis Research (1-10)**

## **492 Ph.D. Thesis Research (1-10)**

## **494 Integrative Research Seminar in Gerontology (3)**

(Same as Gerontology 494.) Prerequisite: A graduate level research methods course (e.g., PPA 401) This seminar requires students to critically examine research in gerontology in terms of methodology. Topics covered include: reliability and validity of measures; internal and external validity; needs assessment; treatment implementation and process evaluation; and qualitative methods.

## **495 Practicum in Gerontology (3)**

(Same as Gerontology 495.) Prerequisite: Consent of instructor. This course provides supervised work experience in an agency that serves the elderly.

## **496 Gerontology Colloquium (1)**

(Same as Gerontology 496.) Presentation of current topics in gerontology by faculty and invited speakers. May be repeated for a total of three credits.

## Social Work

### Faculty

**Lois Pierce**, Chairperson; Associate Professor\*

Ph.D., Washington University

**Muriel Pumphrey**, Professor Emeritus\*

D.S.W., Columbia University

**Norman Flax**, Associate Professor\*

Ph.D., St. Louis University

**Joan Hashimi**, Associate Professor\*

Ph.D., Washington University

**Uma Segal**, Associate Professor\*

Ph.D., Washington University

**Margaret Sherraden**, Assistant Professor\*

Ph.D., Washington University

**Beverly Sporleder**, Lecturer

M.S.W., Washington University

\* members of Graduate Faculty

The social work faculty reflects a cross section of the social work profession. Many specialties are represented, including child welfare, gerontology, community organization, and health care policy. The faculty, in addition to maintaining high standards of teaching, provide many hours of community service and practice to the numerous social service agencies in St. Louis. Research is also an integral part of the faculty's activities and many papers are given by our faculty to local, national, and international meetings.

## General Information

**Degrees and Areas of Concentration** The Department of Social Work offers courses leading to a Bachelor of Social Work degree (B.S.W.) and a Graduate Certificate in Gerontological Social Work. The B.S.W. program is fully accredited by the Council on Social Work Education. The faculty stresses the scientific and applied aspects of social work. Professional social work education enables students to integrate the knowledge, values, and skills of the profession into competent practice. Throughout, the contribution of arts and sciences toward a well-rounded liberal arts education is emphasized. A minor in social work is also offered.

The department's approach is reflected in an emphasis on the development of theoretical and methodological tools. There is a strong emphasis on practice, with community and social agency field work as important parts of the program. Many faculty members are engaged in research on urban-related issues and work with various urban agencies, particularly in the areas of health care, family violence, social welfare, gerontology, and education.

Social work majors should obtain a copy of the Student Handbook. Students must set up an appointment with the practicum coordinator one semester prior to enrolling in the practicum and attend a series of prepracticum classes.

## Undergraduate Studies

### General Education Requirements

Majors must satisfy the University and College general education requirements, except that proficiency in a

foreign language is not required.

Courses required for the B.S.W. degree may not be taken on a satisfactory/unsatisfactory basis except Social Work 320 and Social Work 321.

## Degree Requirements

Students entering UM-St. Louis as freshman should indicate a pre-social work major. Transfer students must apply to the Social Work program when they apply to the university. Admission to the program is conditional upon the successful completion of all necessary requirements.

### Requirements for Admission to the Social Work Program

1. Junior Standing
2. Submission of:
  - a. Application for admission to social work program
  - b. Transcript of all university work
  - c. Two letters of reference: one from a college or university professor and one other, preferably from a work or volunteer experience supervisor.
3. Completion of Social Work 100, 150, and 151 or their equivalents or completion of an AAS in Human Services.
4. Completion with a "C-" or better of all courses listed as prerequisites for Social Work 210, 280 and 285.
5. Applicants may be asked to meet with the social work admissions committee.

**Bachelor of Social Work** Students completing this degree may enter beginning positions as social workers or choose to enter professional schools of social work, working toward eventual careers in supervision, administration, research, and other specialized areas of practice. Candidates for this degree program must complete the **core requirements** including the following social work courses:

**100**, Introduction to Social Service

**150**, Social Welfare as a Social Institution

**151**, Social Welfare as a Social Institution Laboratory

**210**, Introduction to Interventive Strategies

**280**, Human Behavior in the Social Environment

**285**, Social Issues and Social Policy Development

**300**, Interventive Strategies for Social Work with Individuals, Families, and Groups

**305**, Interventive Strategies for Social Work with Organizations and Communities

**320** and **321**, Supervised Field Experience in Social Work I and II

**320a** and **321a**, Integrative Field Experience Seminar I and II

A minimum of 34 hours and a maximum of 50 hours may be taken in social work. A minimum of 36 hours is required in related area departments.

Evaluation of social work transfer credits will be done by a social work adviser on an individual basis.

### Related Area Requirements

The following courses, or their alternatives, are required:

**Biology 1**, General Biology, or

**Biology 11**, Introductory Biology I

**Econ 40**, Introduction to the American Economy

**PolSci 11**, Introduction to American Politics

## Social Work

**Psych 3**, General Psychology  
**Sociology 10**, Introduction to Sociology  
**Sociology/Psych 160**, Social Psychology  
**Sociology 220**, Sociological Statistics

Either

**Sociology 230**, Research Methods and  
**Sociology 231**, Research Methods Lab or  
**Social Work 330**, Research Design in Social Work

and one additional biology course from the following:  
**110**, Human Biology  
**113**, Human Physiology and Anatomy  
**115**, Human Heredity and Evolution  
**120**, Environmental Biology  
**140**, Female Sexuality

At least nine additional hours must be taken in social work, sociology, political science, psychology, anthropology, criminology and criminal justice, or economics at the 100 level or above. Hours taken in social work will apply toward the maximum of 50 hours that may be taken in social work courses.

After fulfilling the general education and specific major degree requirements, students are to take the remaining 29 hours required to complete the Bachelor of Social Work degree from courses, which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), astronomy, biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, geology, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and interdisciplinary. The social work department may require students to pass a placement test in order to enroll in the next level course, provided this or an equivalent test is administered to all students seeking to enroll in that course.

Social work majors must have a cumulative grade point average of 2.5 or better in all course work specifically required for the major, with satisfactory grades in practicum.

**Note** Anthropology, biological sciences, and Spanish are strongly advised by graduate social work schools.

### Requirements for the Minor in Social Work

Candidates must complete the following social work courses:  
**100**, Introduction to Social Service  
**150**, Social Welfare as a Social Institution  
**210**, Interventive Strategies in Social Work Practice  
**285**, Social Issues and Social Policy Development

and one course at the 200 level or above.

### Graduate Certificate in Gerontological Social Work

The Graduate Certificate in Gerontological Social Work is a program designed for students who wish to pursue

advanced study in social work practice with the elderly. While the program draws from several disciplines, the focus is on practice and/or administration in gerontological settings. The program can be taken by itself or in conjunction with the pursuit of a graduate degree in another field.

### Admission Requirements

Program applicants must have the following:

- 1) baccalaureate degree;
- 2) a 2.75 grade point average (students with exceptions should contact the director of the Gerontology program);
- 3) official transcripts of all previous undergraduate/graduate work;
- 4) three letters of recommendation.

### Certificate Requirements

Eighteen credit hours are required to complete the certificate. Students must complete 15 hours of required core courses and three hours of gerontology electives at the 300 level or above.

### Required Core Courses

**Social Work 316**, Clinical Gerontology  
**Psych 373**, Psychology of Aging, or **Sociology 361**, Social Gerontology  
**PolSci 444** (or **Public Policy Administration 444**), Public Policy and Aging  
**Social Work 330**, Research Design in Social Work  
**Social Work 491**, Professional Leadership Practice

## Career Outlook

The bachelor of social work program is designed to prepare persons for employment in social welfare agencies, schools, hospitals, correctional institutions, or day care, geriatric, or rehabilitation centers. Individuals currently working in social welfare settings can improve their skills or increase their opportunities for job advancement.

# Social Work

## Course Descriptions

The following courses fulfill the Social Sciences [SS] breadth of study requirements: 100, 150, 210, 275, 280, 285, 290, 316, 322, 350, 390.

### 100 Introduction to the Social Services (3)

Prerequisite: Sociology 10 or Psychology 3. Examination of the network of social programs and services presently operating in modern urban communities and the various roles and functions performed by the helping professions. Students will be introduced to basic values, skills, and training involved in a helping relationship, as well as the characteristics of both clients seeking help and of professionals and paraprofessionals engaged in the helping process.

### 150 Social Welfare as a Social Institution (4)

Prerequisite: Social Work 100 or consent of instructor. A study of the: 1) development of social welfare services and the philosophy underlying the present practices and systems; 2) present social welfare programs with particular emphasis given to public income-maintenance provisions; 3) special welfare needs of blacks, elderly, women, Hispanic and Native Americans; and 4) the development of social work as a profession. This course may be taken by non-social work majors.

### 151 Social Welfare as a Social Institution Laboratory (1)

Prerequisites: Simultaneous with Social Work 150. The lab session will be used for field trips to social agencies. This course is required for all Social Work majors.

### 210 Introduction to Interventive Strategies for Social Work Practice (3)

Prerequisites: Social Work 150, Sociology 10 and Psychology 03, or permission of instructor. A presentation of basic knowledge, skills, and theory used for entry-level professional practice, such as problem assessment, interviewing skills, crisis intervention, and referral procedures. The course objectives also will be to teach students how to help clients negotiate systems effectively, and to use resources, services, and opportunities.

### 265 Human Sexuality (3)

Prerequisite: Social Work 280, Biology 110, or consent of instructor. This course will provide knowledge about physical, psychophysiological, and legal aspects of human sexuality. The range of human sexual behavior and sexual dysfunctions will be discussed. This course will also help students learn how to help clients recognize and express their concerns in sexual matters, recognize limits of their own intervention skills, and make appropriate referrals.

### 275 Stress and Stress Management (3)

Prerequisite: Social Work 280 or Psychology 268. This course will explore the causes of stress, with special emphasis given to stressors on the job; linkage between stress and mental and physical disorders; and stress management techniques such as cognitive restructuring, environmental change, progressive relaxation, and biofeedback.

### 280 Human Behavior in the Social Environment (3)

Prerequisite: Biology 1 and Sociology 160 or Psvch 160 or permission of instructor. This course will focus on the normative stages in the life span, specifically how human development is affected by the physical environment and social status characteristics. Empirical information and theoretical views on human development will be included. Human development will be viewed as a complex interaction of individual developmental stages with family, social, and community systems.

### 285 Social Issues and Social Policy Development: (3)

Prerequisites: Social Work 150, PolSci 11, and Econ 40. The identification of issues concerning governmental provisions to meet contemporary social needs, with analysis of the principles and values underlying alternative solutions. A study of the processes by which citizen opinions and public policies evolve and are implemented in areas such as income maintenance, crime and delinquency, employment, family and child welfare, and public mental health.

### 290 Selected Topics in Social Work Practice (3)

Prerequisite: Social Work 210 or Social Work 285, or consent of instructor. A course examining special topics in social work practice. Relative theories, strategies, and skills will be presented for topics selected. Course may be taken more than once for credit as different topics are offered.

### 300 Interventive Strategies for Social Work with Individuals, Families, and Groups (3)

Prerequisites: Social Work 210, and Social Work 280. This course continues the presentation of basic knowledge and practice skills for entry level professional practice begun in Social Work 210. It builds on the generalized helping model, incorporating specialized skills for working with specific groups of clients (e.g., children, aged, mentally ill, and physically handicapped), with families and small groups.

### 305 Interventive Strategies for Social Work with Organizations and Communities (3)

Prerequisites: Social Work 285 taken prior to or concurrently, senior standing. Continuation of basic practice skills with emphasis given to analysis and intervention at the organization and community levels. Includes assessment of available services, organization of client groups, efforts to modify resources for a client group unable to intervene effectively on its own behalf. Also emphasis on helping the practitioner evaluate the impact of intervention.

### 308 Leadership and Management in Nonprofit Organizations (3)

(Same as Public Policy Administration 394, PolSci 394, Sociology 308.) Prerequisite: Junior standing. This course addresses the role and scope of the independent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent sector, the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include: (1) the dynamics,

## Social Work

functions and membership structure of NPOs, especially staff-board and other volunteer relations; (2) governance and management of NPOs; (3) resource mobilization; and (4) program development management and evaluation.

### 312 Women's Social Issues (3)

Prerequisite: Social Work 280. This course will help students become more sensitive to the social and welfare concerns of women. The discussions will include work and pension concerns, welfare benefits, family responsibilities (in the new dual career family), family violence, and special health and mental health service needs. Emphasis will be placed on integrating a knowledge base of women's needs with professional social work practice.

### 314 Social Work with Culturally Diverse Populations (3)

Prerequisite: Sociology 10. Focuses on increasing knowledge, understanding, and skills for working with diverse groups in US society. Emphasis is placed on economically disadvantaged and oppressed groups, including racial/ethnic minority groups, immigrants, and other vulnerable populations. The objective of the course is to increase knowledge for effective culturally-sensitive practice.

### 316 Clinical Gerontology (3)

(Same as Gerontology 316.) Prerequisite: Social Work 280 or Psych 268. This course includes: 1) an examination of the social, economic, health, and psychological problems specific to an older adult population; 2) consideration of special needs of the frail elderly, to include problems in long-term care; and 3) the special practice skills (individual, group) needed for intervention with older adults.

### 320 Supervised Field Experience in Social Work I (4)

Prerequisites: Social Work 300 must be taken prior to or concurrently, Social Work 320a must be taken concurrently, consent of instructor. This course provides students practice experience in social service agencies. Students work at the agencies approximately 20 hours per week. The purpose of this experience is to familiarize students with agency operations. Selection of the agency is based on student education needs.

### 320a Integrative Field Experience Seminar I (2)

Prerequisites: Consent of instructor and concurrent registration in Social Work 320. This seminar provides an opportunity for students to integrate previous course work with their experience in social work agencies. Classroom discussion will emphasize direct practice issues.

### 321 Supervised Field Experience in Social Work II (4)

Prerequisites: Social Work 320, Social Work 320a, and consent of instructor. This is a continuation of agency practice experience. Students work at the agency approximately 20 hours per week and may continue at the same agency as Social Work 320 or change agencies with the consent of the instructor.

### 321a Integrative Field Experience Seminar II (2)

Prerequisites: Consent of instructor and concurrent registration in Social Work 321. This seminar is a continuation of Social Work 320a. Classroom discussion will emphasize administration and community organization issues.

### 322 Child Welfare Practicum Seminar (3)

Prerequisites: Social Work 320 and consent of instructor. This seminar allows students to integrate previous course work with their experience in child welfare agencies. Classroom discussion will emphasize core competencies needed for child welfare practice.

### 330 Research Design in Social Work (3)

Prerequisite: Satisfaction of Math Proficiency requirement and Sociology 220. Students explore research concepts and procedures (hypothesis testing, sampling, measurement, and design) emphasizing issues in social work research. Students learn to collect, analyze and present data.

### 350 Special Study (1-10)

Prerequisite: Consent of instructor. Independent study through advanced readings in method and philosophy on a topic of particular interest, or field research in an agency.

### 390 Seminar in Social Work Issues (1-3)

Prerequisite: Consent of instructor. A variable-credit course examining current and future considerations in designing and implementing social work service and delivery arrangements. Issues will be selected according to interests of the class. Course may be taken more than once for credit as different topics are offered.

### 391-A Management Issues in Non-Profit Organizations: Staff Management Issues (1)

(Same as Public Policy Administration 391-A) Prerequisite: Junior Standing. This course addresses issues involved in managing staff in non-profit organizations. The course will cover the following topics:

- Fundamentals of staff supervision: balancing supervisory processes with counseling and coaching;
- Effective internal communications and decision making: including planning and leading meetings, cultural diversity, and creative conflict management,
- Preparing, hiring and coaching people to work in stressful environments.

### 391-B Management Issues in Non-Profit Organizations: Legal Issues in Governing and Non-Profit Organizations (1)

(Same as Public Policy Administration 391-B) Prerequisite: Junior Standing. This course addresses legal issues involved in managing and governing non-profit organizations. The course will cover the following topics:

- The Board as steward of the organization
- Director and officer liability
- Tax laws concerning charitable giving
- Legal issues in managing staff and volunteers (e.g., hiring, evaluating, and terminating employees)

### 391-C Management Issues in Non-Profit Organizations: Financial Issues (1)

(Same as Public Policy Administration 391-C) Prerequisite: Junior Standing. This course addresses financial issues involved in governing and managing non-profit organizations. The course will cover the following topics:

- Cash flow analysis
- Budgeting

## Social Work

- Cost accounting (determining costs for programs and services)
- Understanding and using standard financial statements, including balance sheets, cash flow statements, statements of activity, and operating and capital budgets.

### **396 American Philanthropy and Non-Profit Resources Development (3)**

(Same as Public Policy Administration 396). This course addresses the history, philosophy, roles, and scope of philanthropy in the United States, including its role in the non-profit, voluntary sector of democratic society. It further examines the contemporary philanthropic landscape, giving special attention to the economic, political, and social/cultural forces which impact philanthropy and charitable giving, both by institution and individuals. The course also studies the effective planning and management of development programs within a non-profit organization.

### **420 Medical Social Work (3)**

This course is for new health care professionals presently at work in health care settings or for upper level undergraduate students interested in medical social work. The course will include: major changes in health care legislation, advances in medical technology (those aspects important to the medical social worker), an overview of the organization of the health care system, and social work roles and tasks in health care settings.

## Sociology

### Faculty

**William P. Darby**, Professor; Dean, Joint Engineering Program  
Ph.D., Carnegie Mellon University

**K. Peter Etzkorn**, Professor\*; Chairperson  
Ph.D., Princeton University

**Jerome Himelhoch**, Professor Emeritus\*  
Ph.D., Columbia University

**George J. McCall**, Professor\*  
Ph.D., Harvard University

**Herman W Smith**, Professor\*  
Ph.D., Northwestern University

**Harry H. Bash**, Associate Professor Emeritus\*  
Ph.D., University of Pennsylvania

**Sarah L. Boggs**, Associate Professor Emeritus\*  
Ph.D., Washington University

**Kay Young McChesney**, Assistant Professor\*  
Ph.D., University of Southern California

**Nancy M. Shields**, Assistant Professor\*; Associate Dean, UM-St. Louis/Washington University Joint Undergraduate Engineering Program  
Ph.D., Southern Illinois University-Carbondale

**Chikako Usui**, Assistant Professor\*  
Ph.D., Stanford University

**Sheryline Zebroski**, Assistant Professor\*  
Ph.D., State University of New York at Stony Brook

**Frances Hoffmann**, Associate Professor\*; Director, UM-St. Louis Institute for Women's and Gender Studies  
Ph.D., University of Oregon, Eugene, Oregon

**Robert Keel**, Lecturer  
AbD., Washington University

**Edith Graber**, Adjunct Professor  
Ph.D., University of Denver

**Patsy West**, Adjunct Associate Professor  
Ph.D., St. Louis University

**Gretchen Arnold**, Adjunct Assistant Professor  
Ph.D., Boston University

**Susan Tuteur**, Adjunct Assistant Professor  
Ph.D., University of Chicago

**Adinah Raskas**, Lecturer  
M.A., St. Louis University

**Miranda Duncan**, Lecturer  
LL.B., University of California-Berkeley

\*members of Graduate Faculty

The faculty prides itself on its commitments to high standards of teaching and sound scholarly research. Systematic course evaluations by students each semester are taken seriously, and individual faculty have been singled out as nominees and recipients of University Excellence in Teaching Awards. The ongoing scholarly research of the faculty is reflected in the department's upper-level and graduate courses, as well as in the numerous publication credits of faculty in journals and books or presentations at national and international meetings.

## General Information

### Degrees and Areas of Concentration

The sociology department offers courses leading to the B.A. in sociology, the B.S. in sociology; in cooperation with the School of Education, the B.A. in sociology with teacher certification; in cooperation with the School of Business Administration, the B.A. in sociology with a business option; and cooperative minor or certificate programs in American Studies, Black Studies, Legal Studies, Urban Studies, Religious Studies, Women's & Gender Studies, and International Studies.

The sociology department is accredited by the American Sociological Association. Students completing the B.A. or B.S. degree in sociology are well-prepared for graduate study in sociology or careers in industry, health and social services, urban, intergroup, political or community issues.

Since the sociology department also offers work leading to the M.A. degree in sociology (see below), opportunities are available for graduate-level instruction to selected undergraduate students. The graduate emphasis areas include (1) demography and population; (2) social problems and social change; (3) social and family networks; and (4) applied analysis, measurement, and program evaluation. Undergraduate students with exceptional records at UM-St. Louis are encouraged to enroll in graduate-level classes in the last year of their undergraduate program. Graduate credit for such course work is given only in the student's last undergraduate semester and each course must be approved in advance by the Graduate School on the recommendation of the department.

In addition to a balanced program of basic undergraduate to advanced graduate courses, the department provides a range of opportunities for students to develop concrete research design and data analysis skills. Focused topics courses, specialized research methods seminars, and internship placements are offered in support of this goal and are typically designed around the ongoing research interests of department faculty. Currently, faculty are investigating such areas as homelessness, industrial competitiveness, racial and ethnic conflict, international business, popular culture, and mental illness. The department provides students with opportunities for intensive direction and guidance from faculty. Students and faculty working in particular subject areas consult freely with members working in other areas.

Research interests of sociology faculty extend beyond the department into a wide variety of joint projects with faculty in other departments and programs, including Criminology and Criminal Justice, Engineering, Political Science, Women's & Gender Studies, Gerontology, Public Policy Administration, the Bush Center for Law, Social Change and Conflict Resolution, the Center for International Studies, and the Dispute Resolution Program. The department currently includes nine full-time and six part-time members.

## Sociology

A minor in sociology is available to students majoring in related areas.

### Department Awards

The department offers several annual awards to outstanding students on the basis of merit.

The **Ray Collins Alumni Award** is given annually by the Sociology Alumni Association to the top graduating senior. The awardee is selected by the faculty on the basis of GPA, and the award consists of first-year membership dues in the Sociology Alumni Association and a cash award.

**Honors Program Student Association Awards** are given annually to exceptional seniors and graduate students. The awards include student affiliate memberships in the Honors Program Student Association of the American Sociological Association to aid the establishment of a network of colleagues who are at similar points in their career development.

The **Alumni Agent Scholarship** and the **Sociology Alumni Scholarship** are given to deserving junior or senior sociology majors annually. The awardees are selected by the faculty on the basis of merit, and the scholarships consist of a stipend for books and educational materials.

A series of undergraduate awards are given to outstanding students. The Freshman Sociology Award is given to the outstanding freshman student in lower-division sociology course work; the Outstanding Junior Sociology Major Award is given to the outstanding junior sociology major; the Outstanding Sociology Minor Award is presented to the graduating student with the most outstanding minor GPA record; and the Outstanding Sociological Statistics and Methods Award is given to the junior sociology major with the best overall record in Sociology 220, 230, and 231. This award carries tuition remission for a three-credit hour Sociology 350, Independent Study, to act as an undergraduate course assistantship for Sociology 220, 230, and 231.

**Department Honors** The sociology department will award Department Honors to those B.A. and B.S. degree candidates in sociology with an overall grade point average of 3.2 or better. They must also successfully complete an independent study through Sociology 350, Special Study.

## Undergraduate Studies

### General Education Requirements

Students must satisfy the University and College general education requirements. Courses in sociology may be used to meet the social science requirement. The foreign language requirement for the B.A. degree may be satisfied in any language. Not more than 10 hours of junior college transfer credit may be applied toward the combined minimum of required credit hours for the B.A. (31 credit hours) or B.S. (37 credit hours) major.

**Satisfactory/Unsatisfactory Restrictions** Sociology majors may not take courses counting toward their major requirements on a satisfactory/unsatisfactory basis.

## Degree Requirements

### Bachelor of Arts in Sociology

In addition to specific Baccalaureate Degree Requirements of the College of Arts and Sciences, candidates must complete 31 hours of sociology course credit including the following required core courses:

**Sociology 10**, Introduction to Sociology  
**Sociology 210**, Sociological Theory  
**Sociology 220**, Sociological Statistics, or **Math 31**, Elementary Statistical Methods, or **Math 102**, Finite Mathematics I  
**Sociology 230**, Research Methods  
**Sociology 231**, Laboratory in Research Methods

**Note** Students planning to continue their studies in graduate school are urged to meet the statistics requirement by taking Sociology 220 rather than one of the optional mathematics courses.

Beyond these **core courses**, B.A. sociology majors are required to take at least 18 additional hours of sociology courses, selected according to career objectives, of which **at least six hours** are at the **300 level** (other than Sociology 350, Special Study). No more than three hours in sociology below the 100 level can count toward this 18-hour requirement.

Applied training through one or more practicum courses may be used as part of the requirements for the major.

A minimum of 2.0 average must be maintained for all sociology courses.

After fulfilling the general education and specific major degree requirements, students are to take the remaining 49 hours required to complete the B.A. degree from courses which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), astronomy, biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, geology, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and inter-disciplinary.

### Bachelor of Science in Sociology

In addition to specific Baccalaureate Degree Requirements of the College of Arts and Sciences, Bachelor of Science in Sociology candidates must complete a total of 37 hours of sociology course credit, including the following **core courses**:

**Sociology 10**, Introduction to Sociology  
**Sociology 210**, Sociological Theory  
**Sociology 220**, Sociological Statistics  
**Sociology 230**, Research Methods  
**Sociology 231**, Laboratory in Research Methods



## Sociology

and six credit hours from **sociology** research courses such as

**Sociology 298**, Practicum in Field and Laboratory Research  
**Sociology 304**, Survey Research Practicum  
**Sociology 330**, Field Research in Criminology  
**Sociology 331**, Qualitative Methods in Social Research  
**Sociology 346**, Demographic Techniques  
**Sociology 370**, Selected Topics in Techniques of Sociological Research

Six additional **sociology** courses (18 hours), chosen with the concurrence of the student's faculty adviser from offerings of the department's focused areas of study, are required for the B.S. degree in sociology, including a minimum of two courses (six hours) at the 300 level (exclusive of Sociology 350, Special Study).

### Related Area Requirements for the B.S. Degree in Sociology

Students must complete five courses in related fields, drawn from at least four of the following nine areas:

#### 1) Computer Science:

**Computer Science 122**, Computers and Programming  
**Computer Science 125**, Introduction to Computer Science

#### 2) Economics

**Econ 40**, Introduction to the American Economy  
**Econ 51**, Principles of Microeconomics  
**Econ 52**, Principles of Macroeconomics

#### 3) Mathematics:

**Math 80**, Analytic Geometry and Calculus I  
**Math 175**, Analytic Geometry and Calculus II  
**Math 180**, Analytic Geometry and Calculus III  
**Math 202**, Introduction to Differential Equations

#### 4) Philosophy

**Philosophy 60**, Logic and Language  
**Philosophy 160**, Formal Logic  
**Philosophy 260**, Advanced Formal Logic  
**Philosophy 280**, Philosophy of Science  
**Philosophy 282**, Philosophy of Social Science

#### 5) Political Science:

**PolSci 11**, Introduction to American Politics  
**PolSci 135**, Introduction to Urban Politics

#### 6) Probability and Statistics:

**Statistics 232**, Applied Statistics II  
**Statistics 320**, Mathematical Statistics II  
**Statistics 321**, Mathematical Statistics III

#### 7) Psychology

**Psych 3**, General Psychology  
**Psych 160**, Social Psychology  
**Psych 256**, Environmental Psychology

#### 8) Public Administration:

**PolSci 140**, Public Administration

**PolSci 240**, Bureaucratic Politics  
**PolSci 245**, Urban Administration  
**PolSci 346**, Urban Planning and Politics

#### 9) International Studies:

**Anthropology 25**, World Cultures  
**Comm 332**, Intercultural Communication  
**Econ 238**, Comparative Economic Systems  
**Geography 102**, World Regions  
**PolSci 180**, World Politics

Courses in other Departments or Division may be applied to these requirements with written consent of the student's faculty adviser.

After fulfilling the general education and specific major degree requirements, students are to take the remaining hours required to complete the B.S. degree from courses which the appropriate department has evaluated as being of university-level quality, from one or more of the following areas or their university-quality equivalents at other institutions: anthropology/archaeology, art (appreciation, history, studio), biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, history, mathematics/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, and inter-disciplinary.

#### Also required are:

**Econ 40**, Introduction to the American Economy  
**Psych 3**, General Psychology  
**PolSci 11**, Introduction to American Politics

#### one of the following philosophy courses:

**Philosophy 60**, Logic and Language  
**Philosophy 282**, Philosophy of Social Science

#### and one of the following political science courses:

**PolSci 140**, Public Administration  
**PolSci 240**, Bureaucratic Politics  
**PolSci 245**, Urban Administration  
**PolSci 343**, Studies of Policy Formation

Practicum courses in other departments may be applied to the required six hours of research courses with the written consent of the student's faculty adviser.

#### Combined Degree: Bachelor of Science in Civil Engineering and Bachelor of Science in Sociology

Students pursuing the combined degree are simultaneously enrolled in the College of Arts and Sciences and the Joint Undergraduate Engineering Program. They have an engineering faculty advisor as well as a faculty advisor in the Department of Sociology.

#### Degree Requirements

A program of 159 semester hours is required for the Bachelor of Science in Civil Engineering and the Bachelor of Science in Sociology. Earned alone the Bachelor of Science in Engineering requires a minimum of 137

# Sociology

semester hours. Because of the overlap in required course work for the two curricula, the combined degree program, including the BS in Sociology, require only 22 additional semester hours.

**For Additional Information** See the section on the Joint Undergraduate Engineering Program in this Bulletin or contact:

Dr. Nancy Shields  
Assistant Professor of Sociology and Associate Dean of the Joint Undergraduate Engineering Program  
228 Benton Hall

or

Department of Sociology  
707 Tower  
University of Missouri-St. Louis  
8001 Natural Bridge Road  
St. Louis, MO 63121-4499.

## **B.A. or B.S. in Sociology with Teacher Certification**

Students must complete the B.A. or B.S. in sociology requirements, as well as the requirements for teacher certification. (See the School of Education section of this Bulletin.)

## **B.A. or B.S. in Sociology with an Interest in Business**

The following courses are suggested for students seeking careers in sales, market research, and so forth. In addition to the B.A. or B.S. in sociology requirements, the following core courses are suggested:

**Econ 51**, Principles of Microeconomics  
**Sociology 220**, Sociological Statistics  
**Sociology 346**, Demographic Techniques  
**BA 140**, Fundamentals of Financial Accounting

Students may then choose to complete one of the following three sets of courses:

- 1) **Marketing Management**  
**BA 206**, Basic Marketing  
**BA 275**, Marketing Intelligence  
**BA 303**, Industrial marketing
- 2) **Financial Management**  
**BA 204**, Financial Management  
**BA 334**, Investments  
**BA 350**, Financial Policies
- 3) **Accounting**  
**BA 145**, Managerial Accounting  
**BA 340**, Intermediate Accounting I  
**BA 345**, Cost Accounting

## **Focused Areas of Study**

For those students who wish to focus on one area of sociological study, one of the following areas is suggested.

## **Urban Problems**

**Sociology 040**, Social Problems  
**Sociology 099**, The City  
**Sociology 202**, Urban Sociology  
**Sociology 312**, Sociology of Wealth and Poverty  
**Sociology 314**, Social Change  
**Sociology 316**, Power, Ideology and Social Movements  
**Sociology 342**, World Population and Ecology  
**Sociology 344**, Problems of Urban Community  
**Sociology 380**, Selected Topics in Social Policy

## **Minorities and Power**

**Sociology 100**, Women in Contemporary Society  
**Sociology 105**, Group Prejudice and Minority Identity  
**Sociology 202**, Urban Sociology  
**Sociology 312**, Sociology of Wealth and Poverty  
**Sociology 316**, Power, Ideology, and Social Movements  
**Sociology 360**, Sociology of Minority Groups

## **Deviance, Conformity, and Social Control**

**Sociology 75**, Crime and Punishment  
**Sociology 99**, The City  
**Sociology 164**, Criminological Theory  
**Sociology 175**, Women, Crime and Society  
**Sociology 180**, Alcohol, Drugs, and Society  
**Sociology 200**, Sociology of Deviant Behavior  
**Sociology 214**, Juvenile Delinquency and Youth Crimes  
**Sociology 300**, Communities and Crime  
**Sociology 320**, Forms of Criminal Behavior  
**Sociology 325**, Gender, Crime, and Justice  
**Sociology 326**, Criminology  
**Sociology 328**, Institutions and the Control of Crime and Delinquency  
**Sociology 340**, Race, Crime, and Justice

## **Social Psychology: The Individual and Society**

**Sociology 102**, Sex Roles in Contemporary Society  
**Sociology 160**, Social Psychology  
**Sociology 240**, Selected Topics in Micro-Sociology  
**Sociology 260**, Social Interaction in Small Groups  
**Sociology 270**, Socialization  
**Sociology 361**, Social Gerontology  
**Sociology 377**, Personality and Culture  
**Sociology 378**, Selected Topics in Social Psychology  
**Sociology 380**, Selected Topics in Social Policy

## **Organizational Dynamics: Conflict and Consensus**

**Sociology 218**, Social Choice in Political-Economic Systems  
**Sociology 224**, Sociology of the Family  
**Sociology 234**, Political Sociology  
**Sociology 241**, Selected Topics in Macro-Sociology  
**Sociology 264**, Sociology of Religion  
**Sociology 268**, Sociology of Conflict  
**Sociology 278**, Sociology of Law  
**Sociology 286**, Society, Arts, and Popular Culture  
**Sociology 336**, Organizations and Environments  
**Sociology 338**, Sociology of Health  
**Sociology 354**, Sociology of Business and Work Settings

# Sociology

**Sociology 356**, Sociology of Education

## Applied Analysis and Measurement

**Sociology 205**, Introduction to Models in the Social Sciences

**Sociology 240**, Selected Topics in Micro-sociology

**Sociology 298**, Practicum in Field and Laboratory Research

**Sociology 304**, Survey Research Practicum

**Sociology 330**, Field Research in Criminology

**Sociology 331**, Qualitative Methods in Social Research

**Sociology 342**, World Population and Ecology

**Sociology 346**, Demographic Techniques

**Sociology 370**, Selected Topics in Techniques of Sociological Research

**Sociology 394**, Methods in Theory Construction

## Requirements for the Minor

Students must apply for the minor in sociology. Candidates must complete at least 15 hours of departmental course work in sociology, of which at least six hours must be at the 300 level (other than Sociology 350, Special Study).

Candidates who anticipate that their background in sociology may play a substantial role in their career plans are strongly encouraged to take some or all of the **core requirements**.

Candidates must have a cumulative grade point average of 2.0 or better in all courses pertaining to the minor. Department courses taken on a satisfactory/unsatisfactory basis may not be applied to the minor.

## Graduate Studies

### Curriculum

The department offers a flexible program of studies leading to the Master of Arts degree in sociology with a general orientation toward Urban Problems and Social Change. Course work combines intensive examination of the core areas of sociology with acquisition of the analytical skills of sociological investigation. A variety of career options are available to the Master's-level graduate, including program evaluation and research; field or case work related to community issues; administrative roles in social agencies and planning organizations; or doctoral studies in sociology or related fields.

The curriculum is designed to serve the needs of full-time students, as well as working students who are able to engage only in part-time studies. This design allows pre-career and mid-career students to prepare for employment in education, service agencies, community organizations, government agencies, or businesses. The curriculum also invites students to take advantage of the University's urban setting through integration of selected work experiences with practicum courses and academic seminars under faculty guidance. The curriculum emphasizes theoretical, analytic, and substantive approaches to urban-related problem solving.

### Admission Requirements

Individuals with at least the equivalent of the department's B.A. or B.S. degree in sociology may be admitted to the

Graduate School as candidates for the M.A. degree. Students with bachelor's degrees in fields other than sociology may be admitted to pursue graduate sociology studies under the condition that they make up core deficiencies prior to graduate work.

In addition to meeting the general admission requirements of the Graduate School, a student should ordinarily have

- 1) a baccalaureate degree with a minimum grade point average of 3.00;
- 2) at least 15 hours in the social sciences, of which 12 should be in upper-level courses;
- 3) three letters of recommendation from persons qualified to judge the candidate's potential for success in the program; and
- 4) a statement describing the applicant's interest in graduate study in sociology.

Students who do not meet these requirements may be provisionally admitted upon approval of the department and the dean of the Graduate School. Admission and financial aid decisions are made on the basis of past academic record, program performance, and career commitment. Students wishing to continue regular employment outside the University may enroll on a part-time basis. Requests for further information about the program should be sent to the:

Director of Graduate Studies  
Department of Sociology  
University of Missouri-St. Louis  
8001 Natural Bridge Road  
St. Louis, MO 63121-4499

Students admitted to the program are assigned a graduate adviser from whom they should obtain a copy of the *Graduate Student Handbook* and with whom they should consult periodically on academic and career considerations.

Students meeting departmental M.A. degree requirements may be admitted to the coordinated Ph.D. program with the sociology departments of the University of Missouri at Columbia and Kansas City.

## Degree Requirements

**Master of Arts in Sociology** Each student shall prepare an adviser-approved course of study during the first semester of enrollment. Candidates for the M.A. degree shall complete a minimum of 30 hours of approved study, at least 21 of which must be taken in courses offered by the department.

### Core Curriculum

**Sociology 400**, Proseminar in Sociology

**Sociology 402**, Advanced Quantitative Techniques

**Sociology 404**, Advanced Methodology

## Sociology

The sociology department participates in a joint quantitative techniques and methodology series of courses with the other social sciences which can be substituted for the above.

**Concentration** The department offers opportunities for intensive work in one of the several research areas of department faculty members, which allows the flexibility for comprehensive and coherent exposure to the methods and insights of the discipline. Matriculating students are encouraged to plan, with their advisers, a coherent program of studies consistent with their career interests.

**Exit Requirements** A student's program must include one of the following exit projects: a six-hour internship (Sociology 480, Individual Study) or a six-hour preparatory sequence and an approved paper (Sociology 490, Supervised Research, and Sociology 495, Sociological Reporting). Each candidate is given a final oral review conducted by a faculty committee and focused on the course work completed and the student's chosen exit project or thesis.

## Career Outlook

The undergraduate major in sociology can lead to further training at the graduate level. Job opportunities include working in business, government, social welfare, and probation and parole. Majors learn to analyze complex social and urban issues and to develop a thorough understanding of the workings of major social institutions. Sociology is a particularly good major for prelaw, pre-M.B.A., and pre-M.S.W. students. For more career information, see a sociology adviser.

To function specifically as a sociologist, a graduate degree in the discipline is required, and students with such an interest should plan for this additional training. The M.A. in Sociology prepares students with skills suitable for the career areas of 1) administrative and supervisory positions at the local, state, and federal level; 2) private sector positions in evaluation and policy research, marketing, consulting, and nonprofit organizations; and high school level sociology teaching for persons with a teaching certificate.

# Sociology

## Course Descriptions

The following courses fulfill the Social Sciences [SS] breadth of study requirements: 10, 40, 75, 99, 100, 102, 105, 160, 164, 175, 180, 200, 202, 205, 210, 214, 220, 224, 230, 231, 234, 240, 241, 260, 264, 268, 270, 278, 286, 290a, 290b, 290c, 298, 300, 304, 308, 310, 312, 314, 316, 320, 325, 326, 328, 330, 331, 336, 338, 340, 342, 344, 346, 350, 352, 354, 356, 360, 361, 370, 377, 378, 380, 394.

### 10 Introduction to Sociology (3)

An introduction to sociological approaches to human behavior, including types of social organizations, patterns of social interaction, and social influences on individual conduct.

### 40 Social Problems (3)

Conditions defined by society as social problems, as well as potential solutions, are examined from various sociological perspectives. Emphasis is given to problem issues prevalent in metropolitan settings. Analyses focus on victims and beneficiaries of both problem conditions and alternative solutions.

### 75 Crime and Punishment (3)

(Same as Criminology and Criminal Justice 75 and Interdisciplinary 75.) An introduction to sociological and psychological explanations of crime and punishment. An examination of private and governmental responses to the threats of crime and delinquent behavior.

### 99 The City (3)

(Same as Criminology and Criminal Justice 99, Political Science 99, and Interdisciplinary 99.) Consideration of economic factors, urban institutions, historical developments in urbanization, problems of the inner city, suburbia and the metropolitan area, ethnic groups, stratification, and psychological implications of urban living. This course is for freshmen and sophomores. It is open to juniors and seniors with the consent of instructor.

### 100 Women in Contemporary Society (3)

Prerequisite: Sociology 10 or Interdisciplinary 50 or consent of instructor. An introduction to the sociological analysis of the status of women in society, including their work, family, and political roles. Socialization, education, and the women's movement will also be considered, as these affect the position and participation of women in a variety of social arenas.

### 102 Sex Roles in Contemporary Society (3)

Prerequisite: Sociology 10 or Interdisciplinary 50 or consent of instructor. The study of social processes through which sex roles are developed and acquired; the impact of gender and sex roles on personal identity and social conduct; the relationship between sex roles and social inequality; and individual and social consequences of changing sex roles in contemporary society.

### 105 Group Prejudice and Minority Identity (3)

Prerequisite: Psychology 3 or Sociology 10 or consent of instructor. The psychological and sociological study of determinants of identity formation and transformation among minority groups.

### 160 Social Psychology (3)

(Same as Psych 160.) Prerequisite: Sociology 10 or Psych 3. Study of the interaction between the individuals and their social environment. Examination of basic principles, concepts, and methods.

### 164 Criminological Theory (3)

(Same as Criminology and Criminal Justice 164.) Prerequisites: Sociology 10 and Criminology and Criminal Justice 10 or consent of instructor. An introduction to explanations of criminal behavior and societal reactions to crime which bear upon the administration of justice. Includes historical and contemporary approaches.

### 175 Women, Crime, and Society (3)

Prerequisite: Sociology 10 or consent of instructor. Topics include social origins of laws relating to women; quantitative and qualitative views of women's criminality; theories of women's criminality; women as crime victims; treatment of women in the correctional process; and women personnel within the criminal justice structure.

### 180 Alcohol, Drugs, and Society (3)

(Same as Criminology and Criminal Justice 180.) Prerequisite: Sociology 10 or Psych 3. This course examines the medical, legal, and social aspects of alcohol and drug use. Medical aspects considered include treatment approaches and the role of physicians in controlling such behavior. In the legal realm, past and present alcohol and drug laws are explored. Cultural and social influences on alcohol and drug use are discussed.

### 200 Sociology of Deviant Behavior (3)

Prerequisite: Sociology 10 or consent of instructor. Theories of the nature, causes, and control of deviance as a social phenomenon. Application of theories to specific substantive areas, such as mental disorder, delinquency, drug abuse, suicide, unconventional sexuality, and physical disability.

### 202 Urban Sociology (3)

Prerequisite: Sociology 10 or consent of instructor. Urbanization as a world phenomenon; urban social and ecological structures and changing life styles; the decision-making processes in urban problem-solving.

### 205 Introduction to Models in the Social Sciences (3)

Prerequisite: Sociology 10 or Anthro 11 or PolSci 11 or consent of instructor. The course will focus on explaining social and cultural behavior. Elementary models of decision making, exchange, and adaptation will be covered. Computer processing of data to test empirical hypotheses will be introduced.

### 210 Sociological Theory (3)

Prerequisite: Sociology 10 or consent of instructor. The nature of sociological theory. An investigation of theory from Comte through contemporary developments. Contributions made by theorists in related disciplines.

### 214 Juvenile Delinquency and Youth Crimes (3)

Prerequisite: Three hours of 100-level sociology. A theoretical and research-oriented approach to delinquency and youth crime, including types, trends, causation, correction, and prevention.

# Sociology

## 220 Sociological Statistics (3)

Prerequisites: Sociology 10 and satisfaction of mathematics proficiency requirement. Issues and techniques of statistical analyses relevant to quantitative sociological research, e.g., elementary probability, measurements of central tendency and dispersion, measures of relationships including linear regression and correlation, inferential statistics.

## 224 Sociology of the Family (3)

(Same as Nursing 224.) Prerequisite: Sociology 10. Universal and variable aspects of family organization, family role systems, and changes in family social structure.

## 230 Research Methods (3)

Prerequisites: Sociology 10 and satisfaction of mathematics proficiency requirement and Sociology 220 or consent of instructor. Research planning and interpretation, principles of research design, measurement, and sampling. Techniques for the collection, analysis, and presentation of data.

## 231 Laboratory in Research Methods (1)

Prerequisite: Must be taken concurrently with Sociology 230. Laboratory course to accompany Sociology 230. The course will include practical experience in the conduct of research. Required for the B.A. in sociology.

## 234 Political Sociology (3)

Prerequisite: Sociology 10 or PolSci 11 or consent of instructor. The analysis of power as a social phenomenon. The processes of legitimizing power and instituting authoritative structures. Stabilizing of social control and social integration at various levels of social and political organization.

## 240 Selected Topics in Micro-sociology (1-3)

Prerequisite: Sociology 10 or consent of instructor. Examination of a specific sociological topic that focuses on small groups and interpersonal relations. May be taken more than once for credit provided the topic of the course is different each time.

## 241 Selected Topics in Macro-sociology (1-3)

Prerequisite: Sociology 10 or consent of instructor. Examination of a specific topic that focuses on large-scale social systems and the structural relationships among social organizations and institutions. May be taken more than once for credit provided the topic of the course is different each time.

## 245 Sociology of South Africa (3)

Prerequisite: Sociology 10 or consent of instructor. An analysis of South African society as a sociocultural system, with attention to its demographic, ecological, and social structures; its distinctive social institutions and life styles; and the social dynamics of modernization, urbanization, and ethnicity. This course satisfies the Cultural Diversity requirement.

## 260 Social Interaction in Small Groups (3)

Prerequisite: Sociology 160 or Psych 160 or consent of instructor. Analysis of human interaction with emphases on group problem solving, group structure, and group process.

## 264 The Sociology of Religion (3)

Prerequisite: Sociology 10 or consent of instructor. Religion as a universal social institution, its development, forms, and influence in the world, including Western and Eastern religions. Sociological analysis of the effects of religion upon the individual and societies. Religion, its roles in social change, and contemporary trends.

## 268 The Sociology of Conflict (3)

Prerequisite: Sociology 10 or consent of instructor. The conditions under which social conflicts arise, develop, and are terminated (or in some cases resolved) are examined. The functions of different levels of conflict are studied to determine the potential effects and outcomes of planned intervention.

## 270 Socialization (3)

Prerequisite: Sociology 10 or consent of instructor. Analysis of the structural and social psychological aspects of roles and the self as a product of social interaction.

## 278 Sociology of Law (3)

Prerequisite: Sociology 10 or consent of instructor. A study of law and society with emphasis on the sociological analysis of specific problems of legal doctrines and legal institutions. The law is examined as an instrument of social control through study of the courts, the legal profession, the police, and various social institutions. Consideration is given to law as an instrument of social change.

## 280 Society and Technology (3)

Prerequisite: Sociology 10 or consent of instructor. Technology in industrial and post-industrial societies. The social shaping of technological systems. The role of technology in social change.

## 286 Society, Arts, and Popular Culture (3)

(Same as Anthro 286.) Prerequisite: Sociology 10 or Anthro 11. The relationship of artists, writers, and musicians; their traditions and modes of artistic expression to variant social structures and institutions; and social pressures and rewards.

## 290a, 290b, 290c Undergraduate Seminar in Sociological Issues (3)

Prerequisites: Sociology 10 and consent of instructor. Consideration of an issue or area of the instructor's choice not already covered by other undergraduate courses. May be taken up to three times for nine hours of credit, provided the subject matter is different each time the seminar is taken.

## 298 Practicum in Field and Laboratory Research (1-3)

Prerequisites: Sociology 220 and Sociology 230, or consent of instructor. Intensive field or laboratory research to be taken subsequent to, or concurrent with, a specific substantive course. May be taken twice for credit.

Note: Any 300-level course taken for major elective credit requires prior completion of two of the following: Sociology 210, Sociology 220, or Sociology 230.

## Sociology

### 300 Communities and Crime (3)

(Same as Criminology and Criminal Justice 300). Prerequisite: Criminology and Criminal Justice 110, 120, 130, 210, 220, or consent of instructor. Analysis of the sources, consequences, and control of crime within communities. Emphasis on social and ecological theories of crime and on population instability, family structure, and the concentration of poverty as causes of crime. Community crime prevention efforts are also addressed.

### 304 Survey Research Practicum (3)

(Same as Econ 304 and PolSci 304.) Prerequisites: Junior standing, Sociology 220, Sociology 230, and consent of instructor. The execution of a sample survey, including establishing study objectives, sampling, questionnaire construction, interviewing, coding, data analysis, and presentation of results. May be taken more than once for credit provided the course topic is different each time.

### 308 Leadership and Management in Nonprofit Organizations (3)

(Same as Social Work 308, PolSci 394, and Public Policy Administration 394.) Prerequisite: Junior standing. This course addresses the role and scope of the independent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent sector, the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include:

- 1) the dynamics, functions and membership structure of NPOs, especially staff-board and other volunteer relations
- 2) governance and management of NPOs
- 3) resource mobilizations and
- 4) program development management and evaluation.

### 310 Selected Topics in Sociological Theory (1-3)

Prerequisite: Sociology 210. Focused examination of selected issues, the contributions of individual theorists, and methodological implications in the study of sociological theory. May be taken twice for credit.

### 312 Sociology of Wealth and Poverty (3)

Prerequisites: Sociology 10 and junior standing or consent of instructor. Theory and research on social stratification and inequality in contemporary societies.

### 314 Social Change (3)

Prerequisites: Sociology 10 and junior standing, or consent of instructor. Theories of social change applied to the analysis of small and large social systems, including the planning of change and projecting of alternative futures.

### 316 Power, Ideology, and Social Movements (3)

Prerequisite: Sociology 10 and Junior Standing or consent of instructor. Effect of events and social processes on thought and action in the twentieth century. Social functions of ideologies as expressed in movements and formal and informal organizations seeking social change.

### 320 Forms of Criminal Behavior (3)

(Same as Criminology and Criminal Justice 320.) Prerequisite: Criminology and Criminal Justice 110, 120, 130, 210, 220, or consent of instructor. Examination of major types of criminal behavior including violent, property, public order, and organizational offenses. Emphasis on theories of, and responses to, these crimes.

### 325 Gender, Crime, and Justice (3)

(Same as Criminology and Criminal Justice 325.) Prerequisite: Criminology and Criminal Justice 110, 120, 130, 210, 220, or consent of instructor. Analysis of the role of gender in crime and the justice system. Emphasis on gender differences in crime commission, criminal processing, and employment in criminal justice agencies.

### 326 Criminology (3)

Prerequisites: Sociology 200 and Sociology 214 or six hours of sociology or anthropology. Crime as a social phenomenon. Theory and research concerning the causes of crime.

### 328 Institutions and the Control of Crime and Delinquency (3)

(Same as Criminology and Criminal Justice 328.) Prerequisite: Sociology 214 or Sociology 326. Institutional responses to crime and delinquency. Theories and programs of rehabilitation and punishment. Organizational conditions affecting behavior of correctional personnel.

### 330 Field Research in Criminology (2-4)

Prerequisites: Sociology 214 and Sociology 230, or Sociology 326, or their equivalent. Students will participate in individual or group research projects involving systematic data collection and sociological analysis concerning the causation or societal reaction to crime, delinquency, or related forms of deviance. One option available to students will be an opportunity to study organizations dealing with juvenile or adult offenders.

### 331 Qualitative Methods in Social Research (3)

Prerequisite: Sociology 220 and Sociology 230, or their equivalent, or consent of instructor. This course is devoted to such qualitative methods as participant observation, intensive interview, content analysis, and oral history, among others. The place of these kinds of techniques in social research, as well as the issues raised by them, will be considered. Students will participate in individual or group research projects using one or more of the methods discussed.

### 336 Organizations and Environments (3)

Prerequisites: Sociology 10 and junior standing or consent of instructor. Internal and external forces that influence the structures, adaptive flexibility, and actions of public and private organizations and agencies are examined. Specific foci include: organizational responses to environmental opportunities, constraints, and contingencies; sources of conflict and impediments to organizational goal attainment; and strategies for increasing organizational effectiveness, efficiency, and chances for survival.

# Sociology

## 338 Sociology of Health (3)

(Same as Nursing 338.) Prerequisites: Sociology 10 and junior standing. Exploration of social dimensions and issues related to health and illness, such as access to the health care delivery system; factors influencing prevention, utilization and compliance; changing relationships among health care providers and consumers; health care costs, trends, and cross-cultural variations.

## 340 Race, Crime, and Justice (3)

(Same as Criminology and Criminal Justice 340.) Prerequisite: Criminology and Criminal Justice 110, 120, 130, 210, 220, or consent of instructor. Analysis of the involvement of racial minorities in crime and the criminal justice system. Emphasis on group differences in offending, processing, victimization, and employment in criminal justice agencies.

## 342 World Population and Ecology (3)

Prerequisites: Sociology 10 and junior standing or consent of instructor. Sociological theories and research relating people to their ecological environments. Topics include fertility and population change in the non-Western world. Emphasis is directed to population policies in e.g., Africa and India and China.

## 344 Problems of Urban Community (3)

Prerequisites: Sociology 10 and junior standing, or consent of instructor. The urban community as an area of social action and problem solving with emphasis on the sociological aspects of urban problems.

## 346 Demographic Techniques (3)

Prerequisites: Sociology 220 and Sociology 230, or consent of instructor. Practicum experience with computation and analysis of major demographic measures of population size, growth, and shape; fertility; mortality; immigration; emigration; and morbidity. Special attention to comparisons of standard Western and non-Western demographic models, with emphasis on computer modeling.

## 350 Special Study (1-10)

Prerequisite: Consent of instructor. Independent study through readings, reports, and field work.

## 352 Advanced Principles of Sociology (3)

Prerequisites: Sociology 10 and junior standing or consent of instructor. Analysis of the main concepts and principles of sociology and survey of sociology as a social science.

## 354 Sociology of Business and Work Settings (3)

Prerequisites: Sociology 10 and junior standing, or consent of instructor. The sociology of work and occupations in America, Europe, and Asia; organization structures and worker participation; worker attitude, behaviors, and commitment; the socialization of the worker; determinants of worker behavior; social problems of work and business; and the impact of community on work place and business behavior.

## 356 Sociology of Education (3)

Prerequisite: Sociology 10 and junior standing, or consent of instructor. Education as a social institution, its role as an

agent of socialization, and its effect upon the processes of social change and social mobility. The relationship between the school and its community.

## 360 Sociology of Minority Groups (3)

Prerequisites: Sociology 10 and junior standing or consent of instructor. The study of dominant-subordinate group relations. Religion, ethnicity, race, and gender as factors in the unequal distribution of power.

## 361 Social Gerontology (3)

(Same as Gerontology 361.) Prerequisites: Sociology 10 and junior standing, or consent of instructor. Topics include: sociological theories of aging, technological and social change and its effects on the environment of older people, and prejudice and discrimination against the elderly.

## 370 Selected Topics in Techniques of Sociological Research (1-3)

Prerequisite: Sociology 220, 230, or consent of instructor. The study of a specific research technique used in sociological analyses. May be taken more than once for credit provided the course topic is different each time.

## 375 The Social Psychology of Disabilities (3)

Prerequisite: Sociology 160 or Psych 160 or consent of instructor. (Same as Psychology 375). A social psychological and micro-sociological examination of attitudes and behaviors affecting persons with disabilities. Topics include stigma and empowerment, adaptive behaviors, stereotypes and prejudices, and images of disabilities in popular culture and mythology. The course will address the experience of disability and its social consequences for the lives of persons with disabilities.

## 377 Personality and Culture (3)

Prerequisites: Sociology 10 and junior standing or consent of instructor. Analysis of behavior from the standpoint of interaction between psychological, sociological, and cultural systems.

## 378 Selected Topics in Social Psychology (1-3)

Prerequisite: Psych 160 or Sociology 160, or consent of instructor. Focused examination of selected issues, concepts, and methods in the study of social interaction. May be taken twice for credit.

## 380 Selected Topics in Social Policy (1-3)

Prerequisite: Sociology 10, Junior standing or consent of instructor. Examination of a specific sociological topic of current relevance in the community. May be taken more than once for credit provided the course topic is different each time.

## 394 Methods in Theory Construction (3)

Prerequisite: Sociology 210 or consent of instructor. An in-depth comparison of selected techniques of theory building and testing. Verbal and/or mathematical formalization of selected sociological examples of theory will be the central activity.

## 400 Proseminar in Sociology (3)

Required of all entering graduate students in the fall



## Sociology

semester of the first year of residency. An overview of the field of contemporary sociology, with emphasis on the major theories, issues, research approaches, and ethical problems in the field today, and an introduction to theory construction, measurement, and design strategies.

### 402 Advanced Quantitative Techniques (3)

Prerequisite: Sociology 220 or consent of instructor. A study of advanced quantitative analysis of sociological data, focusing on problems of multivariate analysis, sampling theory and techniques, and the use of electronic data processing in approaching these problems.

### 404 Advanced Methodology (3)

Prerequisite: Sociology 230 or consent of instructor. A study of methodological problems on an advanced level, focusing on contemporary issues in the processes of inquiry with particular emphasis on the applicability of different modes of research to various types of theoretical problems. Consideration of ethical problems in social research.

### 406 Research Practicum (3)

Prerequisites: Sociology 400 and consent of instructor. Involvement of students in an individual or group project culminating in a report, in order to provide firsthand experience in integration of theoretical concerns, methodological principles, and appropriate research techniques in an empirical study, the subject of which shall be determined in collaboration with the instructor.

### 410 Comparative Social Structures (3)

Prerequisite: Sociology 400 or consent of instructor. Social institutions in selected societies are examined in terms of their similarities and differences. Typically, non-American and American social structures such as religion, education, politics, family, and economy are compared, along with population dynamics and change, myths, values, and norms. Societies are selected depending on specialty of faculty and interests of students. May be repeated for credit if the topic is different.

### 415 Foundations of Criminological Theory (3)

(Same as Criminology and Criminal Justice 415.) Prerequisites: Graduate standing and consent of instructor. Examination of the history of criminological thought incorporating the major works of such theorists as Bentham, Beccaria, Marx, Durkheim, Lombroso, Sutherland, and Merton.

### 420 Theories of Conflict (3)

Prerequisite: Sociology 400 or consent of instructor. The conflict perspective in sociology is contrasted with consensus models of society. Conflict theorizing is traced from the Classical social thought tradition in Western civilization to its modern Marxist and non-Marxist formulations in contemporary sociology. Ethical implications for social conflict intervention are considered.

### 422 Family and Interpersonal Conflict Resolution (3)

Prerequisite: Sociology 420 or consent of instructor. The sources and functions of interpersonal conflict in family and neighborhood settings are analyzed. Mediation and

conciliation strategies are developed in relation to primary and secondary structures, role systems, and social change.

### 424 Conflict Management in Organizations (3)

Prerequisite: Sociology 420 or consent of instructor. Intrinsic sources of inter- and intraorganizational conflict and related methods of mediation are examined. Conflict management strategies and situational manifestations of conflict are analyzed within the context of antecedent conditions, such as domain dissensus, differential interests and goals, previously unresolved disputes, unbalanced power relations, structural barriers to communications, internal and external competition for resources, and environmental change.

### 426 Community and Regional Conflict Intervention (3)

Prerequisite: Sociology 420 or consent of instructor. Community and regional conflicts are examined, with emphasis on paradigms for analyzing power, policy, and social change, and on developing intervention skills through simulation exercises. Intervention roles and approaches, such as mediation, conciliation, arbitration, and advocacy are discussed.

### 430 Policy Mediation Processes (3)

Prerequisite: Sociology 426 or consent of instructor. Sociological theories of conflict are applied to public issues and policy-making, with an emphasis on building analysis and practice skills. Processes of mediated problem solving are studied and applied to conflict between jurisdictions, between citizens and governments, and between public and private sectors.

### 440 Seminar in Urban Sociology (3)

Prerequisites: Nine hours of undergraduate course work in sociology and consent of instructor.

### 442 Minority Aging (3)

(Same as Gerontology 442.) Prerequisite: Sociology 361 or consent of instructor. The experience of aging for racial and ethnic minority elderly will be examined in the context of their families, communities, and society. Key questions concerning minority elderly frame the course, such as the relative importance of culture versus social structure, and the applicability of gerontological theory to the minority aging experience.

### 444 Social Policy and Community Planning (3)

Prerequisite: Consent of instructor. Analysis of the formulation of policy as a social process with concentration on political as well as technical-rational elements. Relation of social policy formation to planning at the community level and analysis of the elements and dynamics of community planning. Analysis of and exposure to planning agencies in the St. Louis metropolitan area.

### 445 Sociological Dimensions of Chronic Illness (3)

(Same as Gerontology 445.) Prerequisite: Sociology 400 or consent of instructor. The consequences of chronic illness for social roles, family and organizational dynamics, and the functioning of society are examined. Chronic illness is presented as both a medical problem and a social phenomenon that is shaped by the changing age structure of society.

## Sociology

### **446 Selected Topics in Health Care Policy (3)**

(Same as Public Policy Administration 446 and PolSci 446.) Prerequisite: Consent of instructor. The study of specialized issues and methods relating to health care policy. May be repeated for credit, provided the subject matter is different.

### **447 Health Policy and the Elderly (3)**

Prerequisite: Consent of instructor. Examination of how public policy addresses the acute medical problems, as well as the long-term care needs, of the elderly. The influence of health policy on the structure of the long-term care system is analyzed, along with the consequences of age-based versus need-based policies.

### **449 Issues in Retirement (3)**

(Same as Gerontology 449.) Prerequisite: Graduate standing. This course examines macro and micro issues of retirement in the United States. It considers experiences of older persons in retirement—its processes, causes, and consequences—in relation to economic market conditions, demographic changes, and programs and policies that are targeted to support the elderly (e.g., Social Security). It also examines issues relating to older women and retirement.

### **450 Seminar in Social Psychology (3)**

Prerequisites: Nine hours of undergraduate course work in sociology and consent of instructor.

### **460 Seminar in Deviant Behavior (3)**

Prerequisites: Nine hours of undergraduate course work in sociology and consent of instructor.

### **461 Law and Social Control (3)**

(Same as Criminology and Criminal Justice 430.) Prerequisites: Graduate standing and consent of instructor. Examination of the relationship between law and other social institutions, the values and interests that are expressed in law and shaped by legal structures and processes, and law as an instrument of public policy, social control, and social change.

### **462 Sociology of Criminal Law (3)**

Prerequisites: Nine hours of undergraduate course work in sociology and consent of instructor. A survey of research on the formulation, enforcement, and administration of criminal law.

### **464 Seminar in Criminological Theories (3)**

(Same as Criminology and Criminal Justice 464.) Prerequisite: Sociology 400 or consent of instructor. Theories of criminality are examined, with an emphasis on explanations of criminal behavior and societal responses. Theories discussed include: structural strain, differential association, subcultural deviance, differential opportunity, labeling, and social control.

### **470 Seminar in Sociological Issues (1-3)**

Prerequisites: Nine hours of undergraduate course work in sociology and consent of instructor. Consideration of an issue or area of the instructor's choice not already covered by one of the other 400-level courses. May be taken up to three times for up to nine hours of credit, provided the subject matter is different each time the seminar is taken.

### **475 Introduction to Evaluation Research Methods (3)**

(Same as Psych 475, Public Policy Administration 475, and Criminology and Criminal Justice 475.) Prerequisite: At least one course in research design and statistics at the graduate level. A comparative study of research strategies with regard to data sources, data collection, and modes of analysis that are appropriate for program evaluation research. Attention is given to observational, survey, and quasi-experimental methodologies.

### **476 Research Practicum in Evaluation Research Methods (3)**

Prerequisites: Sociology 475 and consent of instructor. Instruction in, and supervision of, research design and data collection for evaluation of social-deviance action program research report. Concurrent with on-site participant observation.

### **480 Individual Study (3)**

Prerequisite: Consent of adviser and instructor. Designed to give the student the opportunity to pursue particular interests within the discipline and/or to study areas not currently covered by formal courses. Guided by faculty with appropriate interests. May be taken only twice.

### **490 Supervised Research (1-10)**

Prerequisites: Sociology 322, Sociology 332, Sociology 492, and consent of instructor. Individual supervision of research leading to the preparation of a thesis, research paper, or publishable article, in which the student demonstrates skills in the discipline of sociology.

### **492 Advanced Sociological Theory (3)**

Prerequisite: Sociology 210 or consent of instructor. Recent and current developments in sociological theory in light of its tradition and methodological issues. The state of modern theory with regard to specific conceptual, substantive, and methodological concerns.

### **495 Sociological Reporting (3)**

Prerequisites: Sociology 400, Sociology 402, and Sociology 404. As part of the M.A. degree exit requirement, the seminar offers directed practice in the interpretation and reporting of sociological data in a wide range of styles, including those appropriate for research reports, journal articles, policy papers, nontechnical magazines, books, and monographs, as well as oral reports to diverse consumers. Ethical dimensions of interpretation and dissemination are explored.

## Interdisciplinary Studies

### Minors in Interdisciplinary Studies

The College of Arts and Sciences offers a number of interdisciplinary programs leading to either a minor or a certificate in a designated area of study. There are also a number of courses which are designated as interdisciplinary and which may or may not be part of a particular interdisciplinary minor or certificate program.

These interdisciplinary courses and programs bring together the resources of two or more subject areas in order to focus on topics that benefit from being studied from the point of view of more than one discipline. In some cases, faculty from several departments teach as a team, giving students the opportunity to experience faculty dialogue in a cross-disciplinary fashion.

#### Minor in American Studies

American studies is an internationally recognized discipline and a minor is available at the University of Missouri-St. Louis. The minor is primarily an organization of courses from several departments that focus on America and on American culture. Students interested in this minor should contact the coordinator of American studies for advice and information.

Candidates must have a cumulative grade point average of 2.0 or better in the 18 credit hours required for the minor. Three hours (excluding Interdisciplinary 90 and 295) may be taken on a satisfactory/unsatisfactory basis.

#### Requirements

The following **interdisciplinary courses** are required.

- 90, The Foundations of American Culture
- 295, Issues in American Culture

Candidates must also select **four courses** from the following lists. No more than two courses can be taken in the same department. One course must be taken from the humanities list and one from the social sciences list.

**Humanities** courses applicable to the minor.

##### Art and Art History:

- 65, Photography and Society (Same as Interdisciplinary 65)
- 116, North American Indian Art
- 158, American Art
- 159, American Architecture
- 191, Art since 1945
- 215, Topics in Tribal Art
- 258, Topics in American Art
- 263, Photography Since 1945
- 291, Topics in Contemporary Art

##### English:

- 70, African-American Literature
- 71, Native American Literature (Same as Anthro 71)
- 171, American Literature I
- 172, American Literature II

- 373, Selected Major American Writers I
- 374, Selected Major American Writers II
- 375, American Fiction to World War I
- 376, Modern American Fiction
- 395, Special Topics in Literature (When Applicable)

##### Music:

- 6, Introduction to African American Music
- 7, Introduction to Jazz

##### Philosophy:

- 107, American Philosophy
- 210, Significant Figures in Philosophy (When Applicable)

##### Interdisciplinary:

- 65, Photography and Society (Same as Art 65)

**Social Science** courses applicable to the minor.

##### Anthropology:

- 71, Native American Literature (Same as English 71)
- 120, Native People of North America
- 121, Native Peoples of Eastern North America
- 122, Native Peoples of Western North America
- 131, Archaeology of Missouri
- 132, Archaeology of North America

##### Communication:

- 243, Communications in American Politics
- 343, The Rhetoric of Protest
- 350, Mass Communication History
- 352, Mass Media Criticism

##### Criminology and Criminal Justice:

- 240, Policing
- 340, Race, Crime, and Justice

##### History:

- 107, History of Missouri
- 202, Black History in the United States
- 212, African-American History: From Civil Rights to Black Power
- 300, Selected Topics in History (When applicable)
- 301, United States History: Colonial America to 1763
- 302, United States History: Revolution and the New Nation, 1763-1815
- 303, United States History: Nationalism and Sectionalism, 1815 to 1860
- 304, United States History: 1860-1900
- 305, United States History: 1900-1940
- 306, United States History: 1940 to the Present
- 311, Topics in American Constitutional History
- 313, American Military History to 1900
- 314, American Foreign and Military Affairs, 1900-Present
- 315, History of Women in the United States

##### Political Science:

- 129, Women and the Law
- 135, Introduction to Urban Politics
- 165, American Political Thought
- 228, The Federal Judicial System: Politics, Process, and Behavior
- 230, The American Presidency

## Interdisciplinary Studies

**231**, Congressional Politics  
**232**, African Americans and the Political System  
**235**, Political Parties and Elections  
**238**, Women in Politics  
**246**, The Politics of Poverty and Welfare  
**282**, United States Foreign Policy  
**320**, Constitutional Law  
**321**, Civil Liberties  
**332**, Studies in American Politics  
**333**, Mock Constitutional Convention

### Social Work:

**150**, Social Welfare as a Social Institution  
**285**, Social Issues and Social Policy Development

### Sociology:

**40**, Social Problems  
**360**, Sociology of Minority Groups

In addition, courses with variable topics such as Topics in ... , Studies in ... , and seminars may be taken when the topics are appropriate. See the coordinator of American studies.

## Minor in Black Studies

This minor is designed to provide a focus for new and existing courses in the area of black and African studies. A faculty member from the department of art, history, or psychology is designated as coordinator. Students planning to pursue this minor should consult the coordinator for advisement.

Candidates must have a cumulative grade point average of 2.0 or better in the minor. Courses taken on a satisfactory/unsatisfactory basis may not be applied to the minor. Courses applied to the minor may not be counted for a major.

Special topics courses, directed studies or readings relevant to black studies may be included in the minor when approved by the coordinator of black studies.

### Requirements

Students must take:

**Interdisciplinary 40**, The Black World

and a minimum of **two** courses from the following:

**Anthro 124**, Cultures of Africa  
**Art 117**, African Art  
**English 70**, African-American Literature  
**History 81**, African Civilization to 1800  
**History 82**, African Civilization Since 1800  
**History 202**, Black History in the United States  
**Music 6**, Introduction to African-American Music  
**History 212**, African-American History: From Civil Rights to Black Power

and a minimum of **three** courses from the following:

**History 381**, West Africa Since 1800  
**History 382**, History of Southern Africa  
**Political Science 232**, Black Americans and the Political System  
**Sociology 360**, Sociology of Minority Groups  
**Comm 332**, Inter-cultural communications  
**Anthro 234**, Cultural Continuity and Change in

Sub-Saharan Africa

**Anthro 235**, Women in Subsaharan Africa: A Contemporary Perspective

## Minor in Classical Studies

The Minor in Classical Studies is an interdisciplinary course of studies intended to encourage undergraduates in various disciplines to come to a fuller awareness of the cultures of ancient Greece and Rome and of the classical tradition that underlies much of modern Western civilization. In addition to appealing to any student's curiosity about the early stages of society in the West, the minor provides an especially valuable supplement to those who are majoring in many liberal arts areas including history, literature, philosophy, foreign languages, and art

The Classical World (Interdisciplinary 10), the only required course in the minor, is an introductory survey focusing on central issues and themes and major works from the entire period.

Students pursuing the minor will acquire a foundation in either Greek or Latin. They may choose to use either sequence to fulfill the foreign language requirement in the College of Arts and Sciences.

### Requirements

Candidates for the minor must complete 19 credit hours of course work including:  
**Interdisciplinary 10**, The Classical World

and either

**Latin 1**, Latin 1

**Latin 2**, Latin 2

or

**Ancient Greek 1**, Ancient Greek 1

**Ancient Greek 2**, Ancient Greek 2

and **two courses** from the following list.

**Ancient Greek 101**, Intermediate Ancient Greek Language and Culture

**Art 111**, Art and Archeology of the Ancient World

**Art 112**, Greek Art and Archeology

**Art 113**, Roman Art and Archeology

**Art 212**, Topics in Ancient Art and Archeology

**English 20**, Classical Mythology

**English 120**, Classical Literature in Translation

**History 130**, Ancient Civilization

**History 330b**, The Ancient World: History of Greece to the End of the Hellenistic Period

**History 330c**, The Ancient World: Rome

**Interdisciplinary 200**, Special Topics in Classical Studies

**Latin 101**, Intermediate Latin Language and Culture

**Philosophy 101**, Ancient Philosophy

**Philosophy 201**, Plato

**Philosophy 202**, Aristotle

## Minor in Legal Studies

The minor in Legal Studies is open to all undergraduate students at UM-St. Louis, whatever their major field. It offers a secondary field of concentration in one of the

## Interdisciplinary Studies

most important areas of social life. Students may use the minor as a complement to their major, as an additional qualification for career opportunities, or as general education.

This interdisciplinary minor coordinates liberal arts courses related to law. A faculty member in Legal Studies will advise students and will work with their major advisers in planning appropriate courses.

### Candidates must take:

**Interdisciplinary 20**, Foundations of Law: An Introduction to Legal Studies (cross listed as PolSci 20).

and **five courses** from the following list. At least **three** courses must be taken at the 200 level and above. No more than **two** courses from a single discipline may be included in the minor.

**CCJ 10**, Introduction to Criminology and Criminal Justice  
**CCJ 75**, Crime and Punishment  
**CCJ 130**, Criminal Justice Policy  
**CCJ 226**, Law and the Individual  
**CCJ 227**, Urban Law: Poverty and the Justice System  
**CCJ 345**, Rights of the Offender  
**Comm 355**, Media Law and Regulation  
**Econ 219**, Law and Economics  
**History 311**, Topics in American Constitutional History  
**History 330f**, Medieval England  
**Philosophy 287**, Philosophy of Law  
**Philosophy 387**, Seminar in Philosophy of Law  
**PolSci 129**, Women and the Law  
**PolSci 226**, Law and the Individual (cross listed as CCJ 226)  
**PolSci 228**, The Federal Judicial System: Politics, Process and Behavior  
**PolSci 320**, Constitutional Law  
**PolSci 321**, Civil Liberties  
**PolSci 326**, Judicial Decision Making  
**PolSci 329**, Studies in Public Law  
**PolSci 385**, International Law  
**Sociology 175**, Women, Crime, and Society  
**Sociology 278**, Sociology of Law

### Minor in Public Affairs Journalism

The Minor in Public Affairs Journalism provides students with an overview of media operations, including basic writing and reporting skills, as well as a specialty area of advanced study. Ordinarily the specialty or cognate area focuses on a particular field, such as consumer affairs, economics, or political science—areas in which a journalist would specialize. Cognate areas are proposed by students seeking the minor and approved by a faculty committee.

A minimum grade point average of 2.0 is required in the minor. No more than three hours credit may be taken on a satisfactory/unsatisfactory basis. A total of 18 hours is required for the minor. At least 12 of the 18 required hours must be taken at UM-St. Louis.

### Requirements

- A. Nine hours in communication/English professional training:**  
**English 214**, News Writing, or **Comm 214**, News Writing

**English 218**, Reporting, or **Comm 212**, Broadcast Writing and Reporting

**English 320**, Independent Writing Project, or **Comm 394, 396 or 397**, Internship

- B. Nine hours in Public Affairs at the 200 level or above**

1. Students earning a Writing Certificate or majoring in Communication with a mass communication emphasis must take 15 hours (at least nine of these at the 200 level or above) in economics, political science, or sociology.
2. Students majoring in economics, political science, or sociology must take nine hours (in addition to the required English/communication courses) at the 200 level or above in addition to English/communication courses chosen from those listed above and/or in the two cognate areas outside their major (i.e., economics, political science, or sociology).

### Minor in Urban Studies

A Minor in Urban Studies includes 18 hours of course work. Candidates must have a cumulative grade point average of 2.0 or better in the minor. Courses taken on a satisfactory/unsatisfactory basis may not be applied to the minor.

Special topics courses relevant to urban studies may be included in the minor when approved in advance by the coordinator of the urban studies minor.

### Requirements

Students must take:

**Interdisciplinary 99**, The City

and **five** courses selected from the following list, at least **three** courses at the 200 level or above. No more than **two** courses from a single discipline may be included in the minor.

### Courses Applicable to the Minor

**Anthro 142**, The Culture of Cities

**Art 159**, American Architecture

**CCJ 227**, Urban Law: Poverty and the Justice System

**CCJ 260**, Police in the Urban Community

**CCJ 230**, Crime Prevention

**Econo 270**, Urban and Regional Economics

**Econo 317**, Public Finance: State and Local

**Geography 210**, Urban Geography

**Geography 211**, Location Theory

**History 300**, Selected Topics in History (when urban or St. Louis history)

**PolSci 135**, Introduction to Urban Politics

**PolSci 227**, Urban Law: Poverty and the Justice System

**PolSci 245**, Urban Administration

**PolSci 327**, Urban Judicial Systems

**PolSci 346**, Urban Planning and Politics

**Psych 235**, Community Psychology

**Psych 256**, Environmental Psychology

**Sociology 40**, Social Problems

**Sociology 202**, Urban Sociology

**Sociology 344**, Problems of the Urban Community

## Interdisciplinary Studies

### Course Descriptions

In addition to regular departmental offerings, the College of Arts and Sciences also offers several interdisciplinary courses, listed below. These courses bring together the resources of two or more disciplines to focus on topics that benefit from being studied from the point of view of more than one discipline. In many cases faculty from several departments teach an interdisciplinary course together, giving students the opportunity to experience faculty dialogue on issues in a cross-disciplinary fashion. Most interdisciplinary courses have no prerequisites. Freshman and sophomore students are especially encouraged to take these courses.

The following courses fulfill the Social Sciences [SS] breadth of study requirements: 10\*, 20, 40, 50, 60, 75, 90\*, 91\*, 99, 101, 120, 269\*, 287, 295\*, 310.

The following courses fulfill the Humanities [H] breadth of study requirement: 65, 70, 265.

\*These courses may fulfill the Humanities [H] or Social Sciences [SS] breadth of study requirements.

#### 10 The Classical World (3)

A survey of the cultures of ancient Greece and Rome—from the beginning of Hellenic civilization during the second millennium B.C. to the start of the breakup of the Roman Empire in the West. Focuses on various central issues and trends; illustrated primarily by the history, literature, philosophy, and art of the period.

#### 20 Foundations of Law: An Introduction to Legal Studies (3)

As a broad liberal-arts approach to the study of law, this course is designed to familiarize students with legal ideas, legal reasoning, and legal processes. It also provides comparative and historical perspectives on law that will help explain legal diversity and legal change. Finally, it offers opportunities to explore some of the persistent issues in law and legal theory: for example, issues about the sources of law, the responsibilities of the legal profession, or the relative merits of the adversary system.

#### 40 The Black World (3)

A survey of the cultural life, historical experience, and contemporary socio-political issues facing the black peoples of Africa, the Caribbean, and United States.

#### 50 Interdisciplinary Perspectives on Women (3)

An interdisciplinary study of the role of women in the family and in society. Areas of coverage will include the biological, psychological, anthropological, economic, social, political-legal, and historical.

#### 60 Aging in America (3)

(Same as Gerontology 60.) An introduction to the major issues, research, problems, and current service approaches in the study of the aging process. An overview of information useful for students in the arts and sciences, business, education, and nursing schools. This course is primarily for freshmen and sophomores.

#### 65 Photography and Society (3)

(Same as Art and Art History 65.) A study of photography as a means of information and expression, as an influence on culture, and as a reflection of concepts in politics, science, morality, and art.

#### 70 Introduction to the Study of Religion (3)

The nature of religion and approaches to its study. Examples will be drawn from representative Western and non-Western traditions.

#### 75 Crime and Punishment (3)

(Same as Criminology and Criminal Justice 75 and Sociology 75.) An introduction to sociological and psychological explanations of crime and punishment. An examination of private and governmental responses to the threats of crime and delinquent behavior.

#### 90 The Development of American Cultures (3)

An examination of the conflict and amalgamation of diverse cultures in the origins and development of American society. Consideration is given to the emergence of a national political and economic system, national and regional cultures, racial and gender ideology, and sectional conflict. These developments will be examined through their impact on art, literature, religion, music, science, anthropology, architecture, political philosophy, and economic thought.

#### 99 The City (3)

(Same as Criminology and Criminal Justice 99, Political Science 99, and Sociology 99.) Consideration of economic factors, urban institutions, historical developments in urbanization, problems of the inner city, suburbia and the metropolitan area, ethnic groups, stratification, and psychological implications of urban living. This course is primarily for freshmen and sophomores. It is open to juniors and seniors with the instructor's permission.

#### 101 AIDS: Myths, Threats, and Realities (3)

Issues regarding the AIDS threat are examined, along with their ramifications. Topics include biological aspects of HIV retroviruses, how they are contracted and spread; methods of testing for them, and issues of public health versus individual rights; similarities and differences with past plagues and epidemics; ethical and theological positions; projected and actual effects of AIDS on society including workplace, education, the law, insurance industry, and economy; problems of labeling and deviance, psychological stigma, interpersonal communication and counselor burnout; political responses and the rational promotion of political strategies and policies to control the spread of AIDS.

#### 120 Special Topics in Gerontology (1-3)

(Same as Gerontology 120.) Selected topics dealing with various aspects of gerontology. The specific contents of this course will vary from semester to semester. The course may be repeated for credit with permission of the Gerontology director.

## Interdisciplinary Studies

### **200 Special Topics in Classical Studies (3)**

**Prerequisite:** Interdisciplinary 10 or consent of minor coordinator. Selected topics dealing with various aspects (e.g. literature, history, philosophy, politics, sociology, fine arts) of ancient Greece and Rome. The specific contents of this course will vary from semester to semester. The course may be repeated for credit with the consent of the Coordinator for the Minor in Classical Studies. Readings will be in English.

### **265 Topics In Photographic Studies (3)**

(Same as Art and Art History 265.) **Prerequisite:** Permission of instructor. Advanced study of specific styles, periods, or issues within photographic history.

### **269 The Marxist Heritage (3)**

(Same as Philosophy 269, and PolSci 269.) Study of Marx and leading Marxists. Designed to evaluate their influence on recent political, economic, and social thought and institutions.

### **287 The World Food Problem (3)**

**Prerequisite:** Econ 40 or 51, or consent of instructor. An introduction to the world's food problem and an examination of the economic and political problems in distributing basic food-stuffs among the earth's people.

### **295 Issues In American Culture (3)**

**Prerequisites:** Interdisciplinary 90 or consent of instructor. An examination of specific topics in American culture from the point of view of a number of disciplines. This exit seminar for the American Studies minor may be repeated for credit.

### **310 Child Abuse and Neglect: An Interdisciplinary Approach (3)**

**Prerequisite:** Social Work 280 or consent of instructor. This course will use an interdisciplinary approach drawing on the fields of Social Work, Nursing, and Education to explore the major concepts necessary for understanding abused and neglected children and their families. Emphasis will be placed on:

(1) defining the problem including societal stresses which contribute to the abuse and neglect; (2) exploring existing practice methods; and (3) becoming familiar with treatment programs currently available.

### **350 Topics in Women's Studies (3)**

**Prerequisites:** Junior standing and three Women's Studies courses including Interdisciplinary 50 or consent of instructor. This course will focus on a particular aspect of woman's condition (to be announced prior to registration) and will draw upon recent theoretical and methodological work in the field of women's studies from a variety of disciplines.

### **351 Theories of Feminism (3)**

**Prerequisites:** Junior standing and three Women's Studies courses including Interdisciplinary 50 or consent of instructor. An analysis of contemporary theories of feminism, including liberal, radical, socialist, and women-of-color perspectives, and an exploration of the underpinnings of feminist theory in major systems of thought.

### **352 Special Readings in Women's Studies (1-5)**

**Prerequisite:** Consent of instructor. Directed independent work in selected Women's Studies topics through readings, research, reports and/or conferences.

### **390 Independent Studies in Photographic Studies (1-10)**

**Prerequisites:** Twelve hours completed in photographic studies. Integrated individual projects conducted under photographic studies committee and departmental faculty supervision.

## Certificate Programs

In order to find the descriptions of the courses listed within a specific certificate program, refer to the individual departments.

Certificate programs are offered in biochemistry, biotechnology, photographic studies, studies in religions, women's studies, writing, and East Asian, Latin American, European, and international studies. These programs, which usually combine course offerings from different departments, make it possible for students to earn the equivalent of a minor in a given area in addition to their major.

### Biochemistry Certificate

The University of Missouri-St. Louis offers a certificate program for science majors who are interested in careers in biochemistry. The Biochemistry Certificate is an interdisciplinary specialization which may be earned by completing the core requirements and either a chemistry track or a biology track. All students complete the following core requirements:

**Biology 11**, Introductory Biology I  
**Biology 12**, Introductory Biology II  
**Biology 210**, Cell Structure and Function  
**Biology 224**, Genetics  
**Chem 11**, Introductory Chemistry I  
**Chem 12**, Introductory Chemistry II  
**Chem 122**, Quantitative Analysis  
**Chem 261**, Structural Organic Chemistry  
**Chem 262**, Organic Reactions  
**Chem 263**, Techniques of Organic Chemistry

and **one** of the following **biology** courses:

**216**, Microbiology  
**235**, Development  
**310**, Cell Physiology  
**326**, Gene Expression in Eukaryotes

Students choosing to complete the certificate through the **biology track** must take these **additional courses**:

**Biology 376**, Topics in Biological Chemistry  
**Biology 378**, Topics in Biological Chemistry Laboratory  
**Biology 389**, Senior Seminar  
**Chem 230**, Physical Chemistry for the Life Sciences

Students choosing to complete the certificate through the chemistry track must take these additional chemistry courses:

**231**, Physical Chemistry I  
**232**, Physical Chemistry II  
**233**, Laboratory in Physical Chemistry  
**289**, Seminar  
**371**, Biochemistry  
**372**, Advanced Biochemistry  
**373**, Biochemical Techniques

### Undergraduate Certificate in Biotechnology

The University offers an undergraduate certificate program for biology majors who are interested in careers in biotechnology, including biochemistry, microbiology,

molecular biology, cell biology, developmental biology, and molecular evolution.

#### Requirements

Undergraduate biology majors must enroll in the Biotechnology Certificate Program after the completion of 60 credit hours. A student will receive the Certificate in Biotechnology by completing the requirements for the bachelor's degree and fulfilling all the science (Biology, Chemistry, Math, and Computer Science) course requirements of the B.S. in biology program. The required biology courses for the certificate are:

**Biology 216**, Microbiology  
**Biology 218**, Microbiology Laboratory  
**Biology 226**, Genetics Laboratory  
**Biology 278**, Biological Chemistry Laboratory  
**Biology 328**, Techniques in Molecular Biology

**One of the following two courses:**

**Biology 326**, Gene Expression in Eukaryotes  
**Biology 338**, Gene Expression in Prokaryotes

**One of the following four courses:**

**Biology 317**, Immunobiology  
**Biology 335**, Molecular Cell Biology  
**Biology 334**, Virology  
**Biology 376**, Topics in Biological Chemistry, or  
**Chemistry 372**, Advanced Biochemistry

### Photographic Studies Certificate

UM-St. Louis students, graduates, and postbaccalaureate candidates may obtain a certificate in photographic studies by coordinating courses in and related to photography.

To be eligible for the certificate, undergraduates must complete a degree in a chosen major field. A faculty member of the Interdisciplinary Photographic Studies Committee will act as adviser to all students and will consult with the faculty adviser in the student's major to plan appropriate credits.

The Photographic Studies Certificate is the only such program in the country and should be of special interest to those considering a career in the arts, communications, history, science, business, advertising, or in photography itself. The program should also interest professional photographers, teachers, interested lay people, and graduates who are returning to school. This certificate is designed for all who have an intense interest in the myriad aesthetic and practical aspects of the medium.

#### Requirements

The following courses are required:

**Art 60**, Photography I  
**Art 160**, Photography II  
**Art 165**, History of Photography, or **History 168**, Pictohistory  
**Interdisciplinary 65/Art 65**, Photography and Society  
**Art 360**, Photography III, or **Interdisciplinary 390**,  
 Independent Studies in Photographic Studies



## Certificate Programs

Students must also take at least one three-hour course selected from the following departmental offerings: (New courses will be reviewed periodically for inclusion.)

Art 5, Introduction to Art  
 Art 161, Introduction to Digital Photography  
 Art 261, Color Photography I  
 Art 262, Non-Silver Photography  
 Art 263, Photography Since 1945  
 Art 264, Video Art I  
 Art 274/Philosophy 274, Philosophy of Art  
 Art 277, Printmaking: Photolithography  
 Art 360, Photography III  
 Art 361, Color Photography II  
 Art 364, Video Art II  
 Art 390, Special Studies  
 Art 391, Advanced Problems in Photography I  
 Art 392, Advanced Problems in Photography II  
 Biology 360, Techniques in Electron Microscopy  
 Comm 50, Introduction to Mass Media  
 Comm 70, Introduction to Cinema  
 Comm 210, Television Production  
 English 214/Comm 214, News Writing  
 English 215, Feature Writing  
 History 168, Photohistory  
 Interdisciplinary 40, The Black World  
 Interdisciplinary 365, Seminar in Photographic Studies  
 Interdisciplinary 390, Independent Studies in Photographic Studies  
 Psych 213, Principles of Perception  
 Psych 355, Psychology of Perception  
 Extension course, Professional Photography Seminar

### Studies in Religions Certificate

A Certificate in Studies in Religions requires the completion of 18 hours with a grade of C or better.

Courses must be chosen from two or more departments (interdisciplinary offerings excluded), and the program must include two or more courses which focus on different, major religious traditions. (Courses which fulfill this requirement are marked with an asterisk [\*] in the list below.)

In addition, students are encouraged to broaden their understanding of religions and religious experience by enrolling in several courses in which these subjects are studied in philosophical or cultural contexts.

Students must obtain the approval of the coordinator of studies in religions before completing twelve hours toward this certificate.

#### Requirements

Students must take 18 hours chosen from the following list in accordance with the guidelines above:

Anthro 244, Religion, Magic, and Science  
 Art 125, Medieval Art  
 \*Art 114, Early Christian Art and Archaeology  
 \*Art 326, Monasteries, Cathedrals, and Preaching Churches  
 \*English 13, Topics in Literature: Jewish Folklore

\*English 123, Jewish Literature  
 \*English 124, Literature of the New Testament  
 \*English 125, Literature of the Old Testament  
 \*English 391, Special Topics in Literature  
 \*English 395, Topics in Jewish Literature  
 \*History 144, Christianity: Jesus to Martin Luther  
 \*History 252, The World of Islam  
 \*History 330a, The Ancient World: Israel  
 \*History 330d, History of the Church: Early Christianity  
 \*History 330e, History of the Church: The Middle Ages  
 History 331b, The Age of Reformation  
 Music 103, Music in Religion  
 Philosophy 85, Philosophy of Religion  
 Philosophy 102, Medieval Philosophy  
 Philosophy 120, Asian Philosophy  
 \*Philosophy 185, Topics in Philosophy of Religion  
 Philosophy 385, Seminar in Philosophical Theology  
 PolSci 165, American Political Thought  
 PolSci 261, Ancient and Medieval Political Thought  
 Sociology 264, The Sociology of Religion

### Institute for Women's and Gender Studies Certificate

#### Faculty

Frances Hoffmann, Director; Associate Professor of Sociology  
 Ph.D., University of Oregon  
 Janet Berlo, Professor of Art  
 Ph.D., Yale University  
 Carol K. Peck, Professor of Optometry  
 Ph.D., University of California-Los Angeles  
 Suzanna Rose, Professor of Psychology  
 Ph.D., University of Pittsburgh  
 Victoria Sork, Professor of Biology  
 Ph.D., University of Michigan  
 Jayne Stake, Professor of Psychology  
 Ph.D., Arizona State University  
 Zuleyma Tang Martinez, Professor of Biology  
 Ph.D., University of California-Berkeley  
 Diane Toulitos, Professor of Music  
 Ph.D., Ohio State University  
 Yael Even, Associate Professor of Art  
 Ph.D., Columbia University  
 Michele Hoyman, Associate Professor of Political Science  
 Ph.D., University of Michigan  
 Joyce Mushaben, Associate Professor of Political Science  
 Ph.D., Indiana University  
 Gail Ratcliff, Associate Professor of Mathematics  
 Ph.D., Yale University  
 Stephanie Ross, Associate Professor of Philosophy  
 Ph.D., Harvard University  
 Kathy Gentile, Associate Professor of English  
 Ph.D., University of Oregon  
 Margo-Lea Hurwicz, Associate Professor of Anthropology  
 Ph.D., University of California-Los Angeles  
 Barbara Kachur, Associate Professor of Communication  
 Ph.D., Ohio State University  
 Kimberly Kempf Leonard, Associate Professor of Criminology and Criminal Justice  
 Ph.D., The Wharton School, University of Pennsylvania

## Certificate Programs

**Kay McChesney**, Assistant Professor of Sociology

Ph.D., University of Southern California

**Gerda Ray**, Assistant Professor of History

Ph.D., University of California-Berkeley

**Sally Barr-Ebest**, Associate Professor of English

Ph.D., University of Indiana

**Margaret Sherraden**, Assistant Professor of Social Work

Ph.D., Washington University

**Linda Kick**, Lecturer, Department of English

M.A., University of Toronto

M.A., University of Missouri-Columbia

**Nanora Sweet**, Senior Lecturer, Department of English

Ph.D., University of Michigan

**Susan Brownell**, Assistant Professor of Anthropology

Ph.D., University of California-Santa Barbara

**Janet Lauritsen**, Associate Professor of Criminology and Criminal Justice

Ph.D., University of Illinois-Urbana

**Joan Hashimi**, Associate Professor of Social Work

Ph.D., University of Illinois-Urbana

**Sheryline Zebroski**, Assistant Professor of Sociology

Ph.D., SUNY Stony Brook

**Sheila Clark-Ekong**, Assistant Professor of Anthropology

Ph.D., University of California-Los Angeles

**Edith Graber**, Adjunct Professor of Sociology

Ph.D., University of Denver

**Margaret Phillips**, Lecturer in Foreign Languages

Ph.D., Saint Louis University

**Deborah Larson**, Associate Professor of English

Ph.D., Columbia University

**Jean Zarucchi**, Associate Professor of Foreign Languages

Ph.D., Harvard University

**Beverly Sporleder**, Lecturer in Social Work

MSW, Washington University

**Anne Winkler**, Associate Professor of Economics

Ph.D., University of Illinois-Urbana

**Lois Pierce**, Associate Professor of Social Work

Ph.D., Washington University

**Leslie Brown**, Instructor of History

M.A., Duke University

The Institute for Women's and Gender Studies program at the University of Missouri-St. Louis draws upon the rich body of interdisciplinary feminist scholarship to investigate emerging theories and research on women and gender. Courses in the Institute for Women's and Gender Studies program examine women's lives, roles, and contributions among different cultures and times, enabling students to broaden their educational experience and develop new insights into their own lives and aspirations. The program offers both day and evening courses.

The faculty and students in the Institute for Women's and Gender Studies program believe in cooperative education. Institute for Women's and Gender Studies classes promote the exchange of knowledge among women and men of different classes, races, sexual orientations, and social conditions.

The Institute for Women's and Gender Studies program offers an undergraduate Certificate which is similar to a minor. (For graduate study, see listing for Institute for Women's and Gender Studies Graduate Certificate.)

A Certificate is meant to supplement a student's traditional academic major, to encourage a reassessment of women's roles in society, and to facilitate career goals that focus on women's issues. The opportunity to earn a Certificate is available to all undergraduates pursuing a degree at UM-St. Louis and to individuals with a bachelor's degree from any university.

Institute for Women's and Gender Studies courses are open to all students, whether or not they are working toward a Certificate.

Candidates for the Certificate should register with the Institute for Women's and Gender Studies program after they have taken one or two courses. To register, students should complete the Institute for Women's and Gender Studies Certificate form available from any Institute for Women's and Gender Studies faculty or from the Institute for Women's and Gender Studies office. Students interested in the program should contact the director of the program or any member of the Women's Studies faculty.

### Requirements

A student must complete **18 hours** in Women's Studies courses, including:

**Interdisciplinary 50**, Interdisciplinary Perspectives on Women

and **either** a 300-level course in Women's Studies; or an independent study (3 hours) to be taken in the junior or senior year. Students choosing the independent study option will write a research paper on some aspect of Women's Studies.

Also required are four additional courses chosen from the following list. These shall be distributed among at least two of the following areas: social science, humanities, and natural science. They should also be distributed among at least three academic departments. No more than three hours may be taken on a satisfactory/unsatisfactory basis.

**Art 276**, Women and the Visual Arts

**Biology/Psych 140**, Female Sexuality

**Comm 395**, Seminar in Communication (Women and Theater)

**English 13**, Topics in Literature (when appropriate topic)

**English 280**, Topics in Women and Literature (e.g., Black Women Writers; Women and Theater)

**History 101**, History of Women in Comparative Cultures

**History 300**, Selected Topics in History (Topics in American History: Women and Work)

**History 320**, History of Feminism in Western Society

**History 321**, History of Women in the United States;

**Interdisciplinary 50**, Interdisciplinary Perspectives on Women

**Interdisciplinary 350**, Topics in Women's Studies (e.g., Women and Science; Women and Religion, Feminist Ethics)

**Interdisciplinary 351**, Theories of Feminism

**Music 108**, Women in Music

**Nursing 365**, Women's Issues in Health Care

**Philosophy 153**, Philosophy and Feminism

**PolSci 129**, Women and the Law

**PolSci 247**, Women, Power, and Public Policy

## Certificate Programs

**Psych 230**, Psychology of Women  
**Social Work 312**, Women's Social Issues  
**Sociology 100**, Women in Contemporary Society  
**Sociology 175**, Women, Crime, and Society

### Institute for Women's and Gender Studies Certificate-Graduate

The Graduate Certificate in the Institute for Women's and Gender Studies is designed for those students who wish to receive post-baccalaureate training in Women's Studies. This program provides a multidisciplinary course of study for students wishing to specialize in women's issues. It is appropriate for students in the College of Arts and Sciences or any of the Schools of the University. (See Institute for Women's and Gender Studies Certificate for listing of faculty.)

#### Admission Requirements

Program applicants must have the following:

- 1) Baccalaureate degree;
- 2) 2.75 grade point average
- 3) Official transcripts of all previous undergraduate/graduate work;
- 4) Two letters of recommendation.

#### Certificate Requirements

A student may earn the Graduate Certificate in Women's Studies by completing a total of 18 hours from the following courses listed (or from additional courses approved by the Director for Women's Studies). At least nine hours of course work must be at the 400 level; no more than six hours of course work may be Independent Study.

#### Core Courses

**English 416**, Feminist Critical Theory  
**History 320**, History of Feminism  
**History 321**, History of Women in the United States  
**History 300**, Topics in History: Women and Work in U.S. History  
**Interdisciplinary 350**, Topics in Women's Studies  
**Interdisciplinary 351**, Theories of Feminism  
**Nursing 365**, Women's Issues in Health Care  
**Psych 418**, Human Sexuality  
**Psych 410**, Women and Mental Health  
**Social Work 312**, Women and Social Issues

### Writing Certificate

The Writing Certificate provides an opportunity for students to obtain a focused specialty in writing in addition to their major. A student may earn a Certificate in Writing by completing a total of 18 hours in writing courses chosen from the following:

**CCJ 200**, Writing in Criminology and Criminal Justice  
**Comm 212**, Broadcast Writing and Reporting  
**Comm 217**, Script Writing for Business and Industry  
**English 103**, Poetry Writing  
**English 104**, Short Story Writing  
**English 105**, Play Writing  
**English 108**, or **Comm 108**, Advertising Copywriting  
**English 112**, Topics in Writing  
**English 209**, Practical Criticism: Writing About Literature

**English 210**, Advanced Expository Writing  
**English 211**, Advanced Expository Writing for International Students  
**English 212**, Business Writing  
**English 213**, Technical Writing  
**English 214** or **Comm 214**, News Writing  
**English 215**, Feature Writing  
**English 216**, Writing in the Sciences  
**English 218**, Reporting  
**English 228** or **Comm 228**, Writing for Public Relations  
**English 300**, Writing in the Professions  
**English 302**, Writing Literary Criticism  
**English 303**, Advanced Poetry Writing  
**English 304**, Advanced Fiction Writing  
**English 305**, Writing for Teachers  
**English 313**, Advanced Business and Technical Writing  
**English 319**, Editing

**Required:** English 320, Independent Writing Project. Students serve a supervised writing internship or work with the instructor to complete an extensive writing project.

Courses taken to fulfill requirements for the Writing Certificate may not be taken on a satisfactory/unsatisfactory basis.

### Gerontological Studies Certificate

The requirements for an undergraduate Certificate in Gerontological Studies are listed in the Interschool Studies in this Bulletin.

### Trauma Studies Certificate

The Trauma Studies Certificate is designed for students who are interested in a focused specialty in trauma studies or victim services in addition to their own major. It is appropriate for students in the College of Arts and Sciences or any of the Schools of the University. It is particularly appropriate for students wishing to pursue careers in psychology, social work, sociology, criminology, law, public health or nursing.

#### Requirements

A student may earn a Trauma Studies Certificate by completing 18 hours with a GPA of 2.0 or better from at least three departments from the following courses:

Students must complete at least 12 hours from the following group:  
**CCJ 120**, Criminal Law  
**CCJ 300**, Communities and Crime  
**CCJ 350**, Victimology  
**Nursing 370**, Topics in Nursing (Women at Risk: Women and Safety)  
**Psych 232**, Psychology of Victims  
**Psych 280**, The Psychology of Death and Dying  
**Psych 295**, Selected Projects in Field Placement  
**Interdisciplinary 310**, Child Abuse and Neglect: An Interdisciplinary Approach  
**Sociology 278**, Sociology of Law

## Certificate Programs

Only one of the following highly recommended courses may be counted toward the Trauma Studies Certificate:  
**Psych 161**, Helping Relationships  
**Social Work 210**, Introduction to Interventive Strategies for Social Work Practice

Students may count up to six hours from the following group toward the Trauma Studies Certificate:  
**CCJ 230**, Crime Prevention  
**CCJ 240**, Policing  
**CCJ 340**, Race, Crime, and Justice (same as Sociology 340)  
**PolSci 140**, Public Administration  
**PolSci 242**, Introduction to Public Policy  
**PolSci 394**, Leadership and Management in Nonprofit Organizations (same as **Social Work 308** & **Sociology 308**)  
**Psych 160**, Social Psychology (same as **Sociology 160**)  
**Psych 235**, Community Psychology  
**Psych 245**, Abnormal Psychology  
**Social Work 308**, Leadership and Management in Nonprofit Organizations (same as **PolSci 394** & **Sociology 308**)  
**Social Work 312**, Women's Social Issues  
**Sociology 102**, Sex Roles in Contemporary Society  
**Sociology 160**, Social Psychology (same as **Psych 160**)  
**Sociology 175**, Women, Crime, and Society  
**Sociology 214**, Juvenile Delinquency and Youth Crimes  
**Sociology 268**, The Sociology of Conflict  
**Sociology 308** Leadership and Management in Nonprofit Organizations (same as **PolSci 394** & **Social Work 308**)  
**Sociology 340** Race, Crime, and Justice (same as **CCJ 340**)

Special Topics courses relevant to trauma studies may be included in the certificate when approved in advance by the Coordinator of the Trauma Studies Certificate.

### Undergraduate Certificate in Conservation Biology

The Certificate in Conservation Biology is a multidisciplinary program of study integrating theoretical and applied topics associated with conservation biology. The Certificate is intended for undergraduate students with majors in biology, or in any other field who wish to develop a specialization in conservation. The Certificate is sponsored by the International Center for Tropical Ecology in cooperation with the Department of Biology and the Departments of Anthropology, Economics, History, Political Science, Social Work, and Sociology. Building on a core curriculum, students can elect courses from these departments to complete their requirements. Regularly enrolled undergraduates at UM-St. Louis or individuals with baccalaureate degrees who wish to receive a Certificate in Conservation Biology are eligible to participate in the Conservation Certificate Program. In order to participate, students must officially apply to the Certificate Program. Application forms are available from the Director of the ICTE. Guidelines for admission to the Certificate Program are available with the application forms. Individuals with a baccalaureate degree who are interested in this certificate must apply simultaneously to the University as an unclassified undergraduate and to the ICTE. The Certificate requires completion of 21 credit hours as outlined below. Students should consult the Bulletin and the Certificate

Program Director with regard to prerequisites for any of the courses listed here.

**Core Courses**  
**Biology 220**, General Ecology  
**Biology 240**, Conservation Biology  
**Biology 347**, Practicum in Conservation

**Electives:** the remaining 12 credits must be selected from courses listed below. Six credits must be taken from within Biology and six credits outside of Biology, from at least two departments.

**Anthro 120**, Indians of North America  
**Anthro 121**, Native Peoples of Eastern North America  
**Anthro 122**, Native Peoples of Western North America  
**Anthro 131**, Archaeology of Missouri  
**Anthro 132**, Archaeology of North America  
**Biology 342**, Population Biology  
**Biology 350**, Plant Environmental Physiology  
**Biology 354**, Entomology  
**Biology 359**, Evolutionary Ecology of Animals  
**Biology 362**, Plant Taxonomy  
**Biology 364**, Ornithology  
**Biology 385**, Wildlife Ecology and Conservation  
**Biology 395**, Field Biology  
**Biology 396**, Marine Biology  
**Econ 360**, Natural Resource Economics  
**History 300**, Selected Topics when relevant and endorsed by ICTE  
**PolSci 248**, Environmental Politics  
**PolSci 285**, International Organizations and Global Problem Solving  
**PolSci 351**, Comparative Public Policy and Administration  
**PolSci 359**, Studies in Comparative Politics when relevant and endorsed by ICTE  
**Social Work 390**, Seminar in Social Work, when relevant and endorsed by ICTE  
**Sociology 342**, World Population and Ecology  
**Sociology 346**, Demographic Techniques

### Graduate Certificate in Biotechnology

The Graduate Certificate in Biotechnology is offered for students with a Bachelor's degree who wish to obtain advanced level training in those fields of biology that pertain to biotechnology without necessarily earning a Master's degree. Students who enter this program may have a variety of interests including biochemistry, microbiology, molecular biology, cell biology, developmental biology, or molecular evolution.

**Admission**  
 Students who wish to earn a Graduate Certificate in Biotechnology must apply to the Biotechnology Certificate Program for admission to the program. Students must be enrolled in the graduate program at the University of Missouri-St. Louis either as non-degree students or as Master's students. Students who wish to obtain a Master's degree with a Biotechnology Certificate must be accepted into the Master's degree program in Biology as well as into the Biotechnology Certificate Program. Students who apply to the certificate program as non-degree students

## Certificate Programs

will earn only the certificate. Students must have at least a 3.0 GPA for undergraduate course work to be accepted into the program. The minimum course prerequisites for admission to the program are undergraduate courses in genetics, cell biology, and biochemistry.

### Requirements

Students must maintain a minimum GPA of 3.0 to remain in the certificate program and earn the certificate. The certificate is awarded after completion of the courses listed below. Students enrolled in the Master's program may simultaneously earn a graduate degree and count the appropriate courses from the list below toward the Biotechnology Certificate.

Courses for Graduate Certificate in Biotechnology

**Biology 317**, Immunobiology  
**Biology 376**, Topics in Biological Chemistry  
 or **Chem 372**, Advanced Biochemistry  
**Biology 426**, Advanced Gene Expression in Eukaryotes  
**Biology 428**, Advanced Techniques in Molecular Biology  
**Biology 434**, Advanced Virology  
**Biology 435**, Advanced Molecular Cell Biology  
**Biology 438**, Advanced Gene Expression in Prokaryotes

## Graduate Certificate in Tropical Biology and Conservation

The Certificate is awarded after completion of 18 credit hours of core courses and electives with a minimum of 12 credits at the 400 level. Up to three credits may be taken at the 200 level upon permission of the ICTE Director. Electives must include a minimum of 3 credits outside of biology with a maximum of 7 outside of biology. A maximum of 3 credits may be taken elsewhere than UM-St. Louis. Students may simultaneously earn a graduate degree and count credits earned in their degree program toward the Certificate when appropriate.

### Required Core Courses:

**Biology 445**, Public Policy of Conservation and Sustainable Development  
**Biology 447 (1-4)**, Internship in Conservation Biology (may be replaced with a biology elective for individuals with applied conservation or environmental agency experience upon consent of Director, ICTE)

Choice of:

**Biology 446**, Theory and Application of Conservation Biology  
**Biology 487**, Advanced Tropical Ecology and Conservation

### Electives:

**Biology 342**, Population Biology  
**Biology 354**, Entomology  
**Biology 362**, Plant Taxonomy  
**Biology 364**, Ornithology  
**Biology 368**, Quantitative Methods in Plant Ecology  
**Biology 385**, Wildlife Ecology and Conservation  
**Biology 396**, Marine Biology  
**Biology 442**, Advanced Population and Community Ecology  
**Biology 450**, Advanced Plant Environmental Physiology

**Biology 458**, Advanced Evolutionary Ecology of Plants  
**Biology 459**, Advanced Evolutionary Ecology of Animals  
**Biology 465**, Methods in Plant Systematics  
**Biology 480**, Advanced Behavioral Ecology  
**Biology 481**, Advanced Theoretical Systematics and Evolution  
**Biology 487**, Advanced Tropical Ecology and Conservation  
**Biology 489**, Graduate Seminar, when relevant and endorsed by ICTE  
**Chem 417**, Environmental Chemistry  
**Econ 360**, Natural Resource Economics  
**History 300**, Selected Topics in History, when appropriate  
**History 371**, History of Latin America: To 1808  
**History 372**, History of Latin America: Since 1808  
**History 381**, West Africa Since 1800  
**History 460**, Readings in Latin American History, when relevant and endorsed by ICTE  
**History 470**, Readings in African History, when relevant and endorsed by ICTE  
**PolSci 248**, Environmental Politics  
**PolSci 253**, Political Systems of South America  
**PolSci 254**, Political Systems of Mexico, Central America, and the Caribbean  
**PolSci 285**, International Organizations and Global Problem Solving  
**PolSci 359**, Studies in Comparative Politics, when relevant and endorsed by ICTE  
**PolSci 388**, Studies in Comparative Politics, when relevant and endorsed by ICTE  
**PolSci 414**, Topics in Public Policy Analysis, when appropriate  
**PolSci 448**, Political Economy of Public Policy  
**PolSci 459**, Seminar in Latin American Politics, when relevant and endorsed by ICTE  
**PolSci 462**, Political Theory and Public Policy  
**PolSci 481**, Seminar in International Relations  
**Sociology 342**, World Population and Ecology  
**Sociology 346**, Demographic Techniques

## Africana Studies Certificate

Students seeking the Africana Studies Certificate have two options: an emphasis in African Studies and an emphasis in African Diaspora Studies.

### I. African Studies:

1) At least one course in two of the following four areas for a total of nine hours:

**Area 1: Anthropology**  
**124**, Cultures of Africa

**Area 2: Art and Art History**  
**117**, African Art

**Area 3: History**  
**81**, African Civilization to 1800  
**82**, African Civilization Since 1800

**Area 4: Political Science**  
**258**, African Politics

## Certificate Programs

- 2) One course in two of the following areas, a total of six hours:

**Area 1: Anthropology**

**234**, Cultural Continuity and Change in Sub-saharan Africa  
**235**, Women in Sub-saharan Africa

**Area 2: Art and Art History**

**\*215**, Topics in Tribal Arts

\* Note: Students should take Art History 215 only when the topic is appropriate to Africa.

**Area 3: History**

**380**, West Africa to 1800  
**381**, West Africa Since 1800  
**382**, History of Southern Africa

**Area 4: Sociology**

**245**, Sociology of South Africa

- 3) An independent study course (three hours) in which a research paper will be written on some aspect of African Studies

### II. African Diaspora Studies

- 1) **Interdisciplinary 40**: The Black World (3)

- 2) One course from each of the following areas, a total of six hours.

**Area 1: Africa**

**Anthro 124**: Cultures of Africa  
**History 81**: African Civilization to 1800  
**History 82**: African Civilization Since 1800

**Area 2: Diaspora**

**Anthro 05**: Human Origins  
**History 83**: The African Diaspora to 1800  
**History 84**: The African Diaspora Since 1800  
**History 202**: Black History in the United States  
**History 212**: African-American History: From Civil Rights to Black Power

3. At least one course from each of the following areas, a total of six hours:

**Area 1: Africa**

**Anthro 234**: Cultural Continuity and Change in Sub-saharan Africa

**Anthro 235**: Contemporary Women in Sub-saharan Africa

**Art History 117**: African Art

**History 380**: West Africa to 1800

**History 381**: West Africa Since 1800

**History 382**: History of Southern Africa

**PolSci 258**: African Politics

**Sociology 245**: Sociology of South Africa

**Area 2: Diaspora**

**Comm 332**: Intercultural Communication

**English 70**: African-American Literature

**History 385**: African Diaspora to 1800

**History 386**: African Diaspora Since 1800

**Music 6**: Introduction to *African-American Music*

**PolSci 232**: African Americans and the Political System

**\*Psych 392**: Selected Topics in Psychology: African-American Psychology

**Sociology 360**: Sociology of Minority Groups

\* **Note**: Students should take Psychology 392 or ly when the African American Psychology topic is offered.

### Undergraduate Certificate Program in Non-profit Organization Management and Leadership

The University offers an undergraduate certificate program for students who are current professional staff, board members, other leaders of non-profit and voluntary organizations, as well as those who wish to consider entering the field. It is the only such undergraduate program in Missouri.

The certificate requires the completion of 18 semester hours. Nine (9) of these hours must be the following core courses:

1. Leadership and Management in Nonprofit Organizations  
**PolSci 394**, same as Sociology or Social Work 308)
2. Management Issues in Nonprofit Organizations: Staff Management Issues (Social Work 391-A)
3. Management Issues in Nonprofit Organizations: Legal Issues in Governing and Managing Nonprofit Organizations (Social Work 391-B)
4. Management Issues in Non-profit Organizations: Financial Issues (Social Work 391-C)
5. Sociology and Social Work: Philanthropy and Development (course number to be determined).

The remaining 9 hours of electives can be selected from the following courses:

**Business Administration**

**206** Basic Marketing

**210** Management and Organizational Behavior

**309** Human Resource Management

**311** Advanced Management and Organizational Behavior

**Communication**

**228** Public Relations Writing (Same as English 228)

**230** Small Group Communication

**231** Communication in the Organization

**240** Persuasive Communication

**358** Communication in Public Relations

**English**

**212** Business Writing

**213** Advanced Business and Technical Writing

## Certificate Programs

### Political Science

342 Public Personnel Management

344 Public Budgeting

### Psychology

222 Group Processes in Organization

320 Personnel Assessment

### Social Work

305 Intervention Strategies for Social Work with Organizations and Communities

### Sociology

268 The Sociology of Conflict

280 Society, Arts and Popular Culture

312 Sociology of Wealth and Poverty

314 Social Change

336 Organizations and Environment

The Certificate will be conferred upon completion of a Bachelor's degree from the University of Missouri at St. Louis.

## Graduate Certificate Program in Nonprofit Organization Management and Leadership

Through the Public Administration Program, the University offers a graduate certificate program for students who are current professional staff, board members, and other leaders of nonprofit and voluntary organizations, as well as those who wish to consider entering the field. There are only two such graduate programs in Missouri. The certificate can be taken by itself or in conjunction with the pursuit of the Master's in Public Policy Admin. or a graduate degree in another field.

- A. The certificate in Nonprofit Management and Leadership requires the completion of 18 semester hours. Nine (9) of these are the following core courses:
1. Leadership and Management in Nonprofit Organizations (3 hours) (Political Science 394, same as Public Policy Administration 394, Sociology or Social Work 308)
  2. Management Issues in Nonprofit Organizations: Staff Management Issues (1 hour) (Public Policy Administration and Social Work 391-A)
  3. Management Issues in Nonprofit Organization: Legal Issues in Governing and Managing Nonprofit Organizations (1) (Public Policy Administration and Social Work 391-B)
  4. American Philanthropy and Nonprofit Resource Development (3 hours) (Public Policy Admin. and Social Work)

- B. Six hours of electives are to be taken from selected courses in Accounting, Business Admin., Economics, Management, Marketing, Political Science, Psychology, Public Policy Administration, and Sociology (see attached list). A student may choose among these courses or other courses approved by the Program Director. (All Graduate electives must be at the 400 course level.)
- C. Three hours of internship is also required. Graduate students should demonstrate either a professional field experience equivalent to the internship or be required to participate. Any request for an exemption from the internship requirement must be approved by the Program Director after a review of the student's professional or managerial field experience with appropriate documentation. Students who receive an exemption must take another three (3) hours of electives from the selection in area B.
- D. The internship will include learning activities in management and governance processes in nonprofit organizations, as well as a seminar in which students will critically reflect on their field experience with a faculty supervisor.

Requirements of admission to the certificate program are the same as those required for admission to the Graduate school: an undergraduate degree, and a G.P.A of 2.75 or better.

## Preprofessional Programs

Students at the University of Missouri-St. Louis may develop preprofessional study programs from the University's academic offerings in architecture, engineering, dentistry, journalism, law, medicine, optometry, or pharmacy. With early and careful advising, students may develop a two-year study program in preparation for transfer into a professional program in the junior year, or they may select a major field of study and related area courses which provide strong undergraduate preparation for graduate professional study.

Students should seek preprofessional faculty advisers in their interest area early in their academic careers to ensure development of sound, comprehensive study programs which fulfill the admission requirements of the professional program to which they wish to apply.

The following information on preprofessional study at UM-St. Louis is provided to give students minimal guidelines and assistance in planning a program.

### Pre-Architecture

The Department of Art and Art History sponsors the 3+4 Program for the School of Architecture at Washington University. A student who transfers to the School of Architecture, Washington University, at the end of the junior year may graduate from UM-St. Louis after the satisfactory completion of the first year of professional school upon meeting one or more of the following conditions:

- 1) The student has completed all general education requirements and all requirements for a major and lacks only the total hours (electives) necessary for a degree.
- 2) A student who has not completed required courses for a degree must remedy the deficiency with courses taken at the University of Missouri-St. Louis within three years of entering the professional school. At the time of graduation the student must remain in good standing in the professional school or have successfully graduated from professional school.
- 3) A student who has not completed all the courses required for a major may, if the major department at UM-St. Louis agrees, substitute up to six hours of appropriate course work from the professional school.

The requirement that 24 of the last 30 hours of course work for a degree be taken at UM-St. Louis shall be waived where necessary for students graduating under this procedure. For more information on admission requirements, please contact the College of Arts and Sciences at 516-5300.

### Pre-Engineering

The Joint Undergraduate Engineering Program of the University of Missouri-St. Louis and Washington University was established in 1993. It allows UM-St. Louis to offer complete Bachelor of Science degree programs in Mechanical Engineering and in Electrical Engineering.

A pre-engineering curriculum has been in place at UM-St. Louis for more than 10 years. Students who enter the joint program take the pre-engineering half of their course work on the campus of UM-St. Louis. The remaining half of their degree programs, consisting of upper-level engineering courses and laboratories, is taken on the campus of Washington University and taught by Washington University engineering faculty members. The two campuses are separated by a driving time of about 15 minutes.

The UM-St. Louis pre-engineering program provides a solid base in mathematics, physics, chemistry, and introductory engineering subjects. Students completing the pre-engineering program will be well prepared for transferring to engineering schools throughout the United States including UM-Columbia, UM-Rolla, Washington University, and SIU-Edwardsville in addition to continuing their education and earning their engineering degrees here at UM-St. Louis.

The college or university granting the engineering degree typically sets preferences for the course work to be included in a pre-engineering curriculum. Furthermore, the student's selection of a pre-engineering curriculum usually includes course work that satisfies the humanities and social sciences requirements, English composition requirements and general education requirements of the institution granting the engineering degree. Transfer guides for many local engineering programs are available in the offices of the undergraduate engineering and pre-engineering program, 228 Benton Hall, and in the Admissions Office. Engineering advisers are available to help students plan their pre-engineering curricula from the course work offered at UM-St. Louis.

### Admission Requirements

In addition to the general admission requirements, prospective undergraduate engineering and pre-engineering students must take a mathematics placement test, given at UM-St. Louis, the semester before enrolling.

Although there is no required pattern of high-school units for admission to the undergraduate engineering or pre-engineering programs, students are urged to complete at least three units of mathematics, including units in algebra (excluding general mathematics) and trigonometry. Calculus, if available, is also strongly recommended.

### Available Course Work

#### Science and Mathematics

- Math 80**, Analytic Geometry and Calculus I\*
- Math 175**, Analytic Geometry and Calculus II\*
- Math 180**, Analytic Geometry and Calculus III\*
- Math 202**, Introduction to Differential Equations\*
- Computer Science 122**, Computers and Programming
- Computer Science 125**, Programming Methods I
- Chem 11**, Introductory Chemistry I\*
- Chem 12**, Introductory Chemistry II\*
- Physics 111**, Physics: Mechanics and Heat\*
- Physics 112**, Physics: Electricity, Magnetism, and Optics\*



## Preprofessional Programs

### Introductory Engineering

Engineering 30, Engineering Graphics\*  
 Engineering 124, Circuit Analysis I  
 Engineering 125, Circuit Analysis II  
 Engineering 144, Statics\*  
 Engineering 145, Dynamics\*  
 Engineering 146, Strength of Materials  
 Engineering 147, Thermodynamics

### Humanities, Social Sciences, and English Composition

English 10, Freshman Composition\*  
 English 213, Technical Writing  
 Humanities Electives (Three Courses)\*  
 Social Sciences Electives (Three Courses)\*

Asterisks indicate pre-engineering course work required for students planning to pursue a Bachelor of Science degree in engineering at UM-St. Louis through the joint program with Washington University.

Students planning to earn a Bachelor of Science degree in engineering at UM-St. Louis should choose humanities and social sciences electives to meet both the UM-St. Louis General Education Requirements and the humanities and social sciences requirements of the Joint Undergraduate Engineering Program. In particular:

- A course in American history or government, or in Missouri history or government, must be included.
- The cultural diversity requirement must be fulfilled.
- At least 8 credit hours must be in one department or area within humanities or social sciences; of these 8 credit hours, at least 1 credit hour must be in a course at the junior level or higher, taken at a four-year institution.
- Some courses that fulfill the humanities or social sciences breadth of study requirement do not count as Humanities and Social Sciences Electives; an example would be a statistics course taught in economics or psychology.

### For Further Information

For information about undergraduate engineering and pre-engineering programs at UM-St. Louis, please contact our offices at 228 Benton Hall; 516-6800.

## Prejournalism

Students wishing to pursue a journalism degree should review the entrance requirements of the schools they would like to attend for information on suggested prejournalism courses of study.

Students seeking a journalism degree from the University of Missouri must complete their junior and senior years at the School of Journalism, University of Missouri-Columbia. For admission, students must present to the UMC School of Journalism 60 acceptable credit hours with a cumulative grade point average of 3.0 or higher at the University of Missouri or another accredited two- or four-year institution.

### Required Courses

The following studies are required for admission to the School of Journalism:

- 1) **English Composition:** Six credit hours. English 10, Freshman Composition, and English 210, Advanced Expository Writing, satisfy the requirement with a grade of B or better in English 210.
- 2) **Foreign Language:** Thirteen credit hours are required unless the student has completed four or more high school units in a single foreign language.
- 3) **Behavioral, Biological, Physical, and Mathematical Science:** Fourteen hours from four of six areas including anthropology, psychology, sociology, and biological, physical, and mathematical science. The fourteen hours must include at least one course with a lab (minimum four hours credit), and an appropriate statistics course (Math 31 at UM-St. Louis).
- 4) **Social Science:** 3-6 hours in Economics, 6 hours in American History and three hours in American Government.
- 5) **Humanistic Studies:** Eight hours in three of seven areas including appreciation or history of art or music; foreign civilizations; classics; literature; theatre appreciation. Three hours are required in American or British Literature.

Nontransferable courses at the School of Journalism are basic military science, basic physical education, typing or shorthand, journalism or communication, and no more than three hours each of applied or performance music, dance, drama, or studio art.

**Recommended**, but not required, are courses in American history, general sociology, general psychology, introductory philosophy, principles of marketing, elementary accounting, statistics, and general anthropology.

For advisement and information, contact the Advising Office, College of Arts and Sciences, 303 Lucas, telephone 516-5300.

## Prelaw

A "prelaw curriculum" is a myth, a mistaken notion based on an inexact analogy to premedical programs, which are quite specific and virtually obligatory for medical school candidates. While no single curricular path is the ideal preparation for law school, a broadly based undergraduate program that includes training in analytical reasoning and writing will serve the student well.

English language and literature courses are virtually indispensable. An awareness of the institutional processes of government obtained through study in political science is needed. Since law is inseparable from historical experience, an acquaintance with American history is important. Students should acquire a knowledge of macro- and microeconomics. Statistics, accounting, and computer science are valuable in understanding special legal subjects and the practice of law.

## Preprofessional Programs

The University of Missouri has law schools at Columbia and Kansas City. University of Missouri-St. Louis students will find everything needed in planning an undergraduate program, preparing for the LSAT, and applying to law school in the office of the prelaw adviser, 303 Lucas, 516-5300. Students should contact the prelaw adviser early in their undergraduate career.

## Premedical Sciences

Students wishing to enter medical, dental, optometry, or veterinary medicine schools should pursue the B.A. or B.S. degrees with majors in the disciplines of their choice, but they should take whatever additional courses may be necessary for admission to the professional school. Pre-veterinary students will have to obtain certain animal sciences courses not offered at the University of Missouri-St. Louis.

Since medical school admission requirements vary, students are urged to consult the catalogs of the schools to which they intend to apply. Updated information may be found in Medical School Admission Requirements (United States and Canada) for the current year, available from the:

Association of American Medical Colleges  
One Dupont Circle, N.W.  
Washington, D 20036

The dean's office has a copy available for student use within the office.

### Suggested Courses

Many medical schools recommend the following undergraduate courses:

**Biology:** **Biology 11**, Introductory Biology I; **Biology 12**, Introductory Biology II; **Biology 224**, Genetics; and additional courses in developmental biology and/or physiology.

**Chemistry:** **Chemistry 11**, Introductory Chemistry I; **Chemistry 12**, Introductory Chemistry II; **Chemistry 261**, Structural Organic Chemistry; **Chemistry 262**, Organic Reactions; **Chemistry 263**, Techniques of Organic Chemistry; and additional courses in organic chemistry and quantitative analysis.

**Mathematics:** Students should take courses at least through calculus, as appropriate for the major degree.

**Physics:** Eight credit hours or as appropriate for the degree chosen.

Since students are not confirmed for admission to professional schools until the science requirements for admission are fulfilled, students should meet the science requirements before the end of the junior year. To complete these requirements in time, premedical students should take Chemistry 11 and 12, Introductory Chemistry I and II, during the freshman year.

Students also should take the required national standardized examination before or during the junior year; the Medical College Admission Test for premed students; the Veterinary Medical Aptitude Test for prevet students; the Dental Aptitude Test for pre-dental students; and the Optometry Admission Test for pre-optometry students.

Each year the number of applicants to health profession schools exceeds the number of available places. Students, therefore, are encouraged to have alternative plans should they not gain entrance. Pharmacy, nursing, and laboratory technology may be considered as alternative fields.

For further information, testing dates, or premedical advising, contact the premedical adviser, 303 Lucas Hall, telephone 516-5300.

## Pre-Optometry

The University of Missouri-St. Louis offers a four-year program of study leading to the Doctor of Optometry degree. This professional degree is administered by the School of Optometry. It is one of only 19 schools of optometry nationwide and the only one in the state of Missouri.

Because the University offers the Doctor of Optometry degree, it is an ideal institution for pre-optometry education. Undergraduate students have access to the optometry school students, faculty, and staff for career and academic guidance.

For more information contact the Office of Student Affairs at the School of Optometry (516-6263).

## Preprofessional 3+4 Program

The Department of Biology sponsors a 3+4 Program for the UM-St. Louis School of Optometry. In this program students may be admitted to the School of Optometry after completing three years (90 semester hours) of study in the Department of Biology. The undergraduate degree is granted when students satisfactorily complete the first year of optometry school. One or more of the following conditions must be met in order to qualify for the undergraduate degree.

- 1) All general education requirements and all requirements for the major, except electives, must be completed.
- 2) Any deficiency in required courses must be remedied with courses taken at UM-St. Louis within three years after entering the School of Optometry.
- 3) Up to six hours from the School of Optometry may be substituted for undergraduate degree requirements, with approval of the Department of Biology.

## Prepharmacy

Admission to a school of pharmacy usually requires one to two years of college work in specified areas. Most colleges of pharmacy recommend the 1+4 plan which includes one

## Preprofessional Programs

year of college work followed by four years of professional courses in the college of pharmacy. In some cases the old 2+3 program is used. Since entrance requirements vary, students should consult the catalog of the college to which they intend to apply.

### One-Year Prepharmacy Course Sequence

A typical one-year sequence for prepharmacy students which meets the admission requirements of the School of Pharmacy at the University of Missouri-Kansas City and also those of the St. Louis College of Pharmacy is as follows:

### Freshman Year

#### First Semester (16 Hours)

**Chemistry 11**, Introductory Chemistry I  
**English 10**, Freshman Composition  
**Math 30**, College Algebra, and **Math 35**, Trigonometry  
 (At UMKC mathematics through survey calculus, **Math 101**, is preferred.)

**Elective\***: One three-hour course

\* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

#### Second Semester (16 hours)

**Biology 11**, Introductory Biology I  
 (At UMKC a physics course, **Physics 11**, is preferred to the biology course.)

**Chemistry 12**, Introductory Chemistry II

**Literature**: Any three-hour course

**Elective\***: One three-hour course

\* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

### Sophomore Year

(for 2+3 programs)

#### First Semester (15 hours)

**Biology 12**: Introductory Biology II  
**Chemistry 261**, Structural Organic Chemistry  
**Literature**: Any three-hour course  
**Physics 11**, Basic Physics  
**Elective\***: One three-hour course

\* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

#### Second Semester (14 hours)

**Biology**: One biology elective  
**Chemistry 262**, Organic Reactions  
**Chemistry 263**, Techniques of Organic Chemistry  
**Physics 12**, Basic Physics  
**Elective\***: One three-hour course

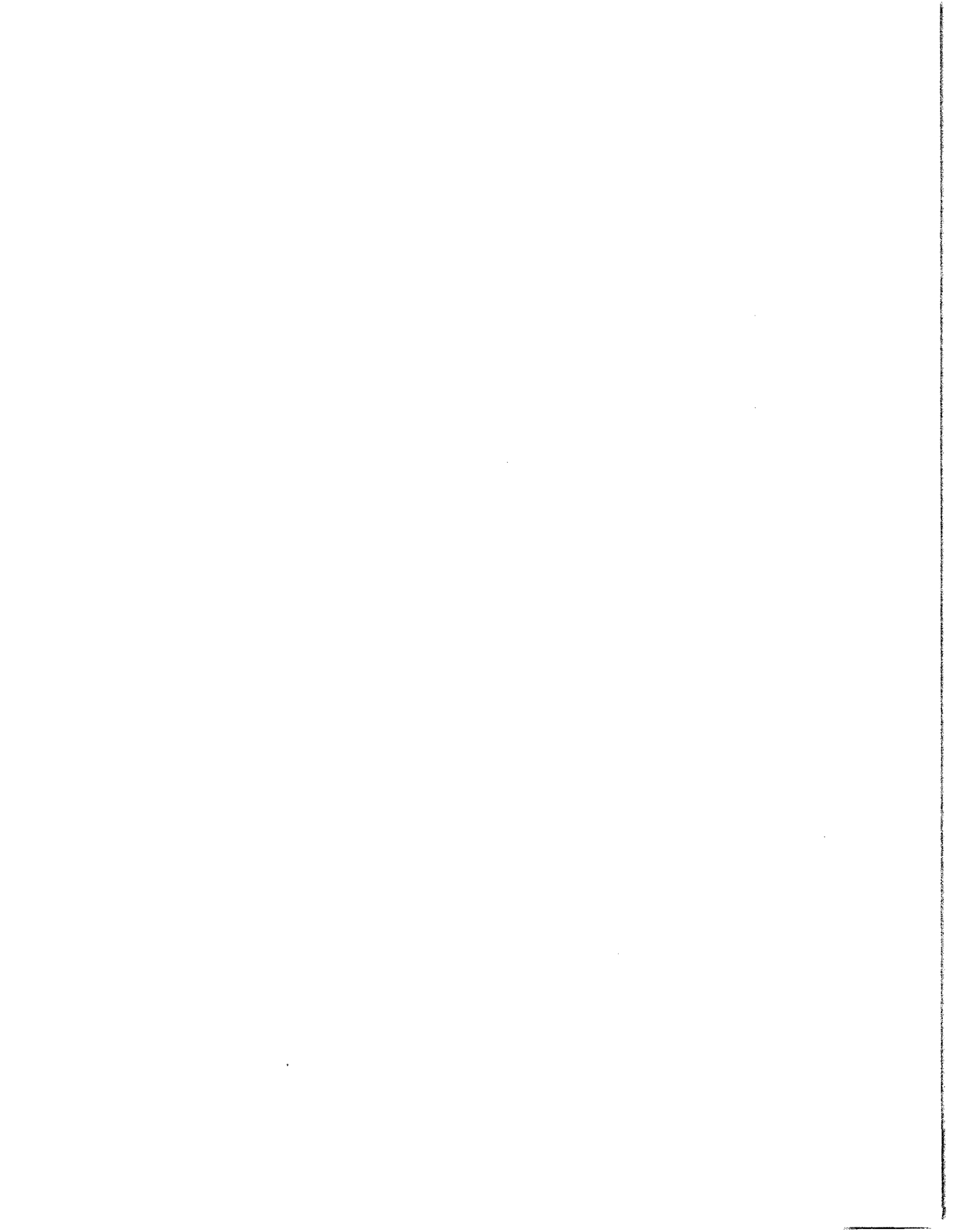
\* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

For additional information and prepharmacy advising, contact the chemistry department, 324 Benton Hall, telephone 516-5311.



SCHOOL OF BUSINESS  
ADMINISTRATION

UM-St. Louis 1996-97 Bulletin



## Business Administration

### Faculty

**Robert M. Nauss**, Dean; Professor\*

Ph.D., University of California, Los Angeles

**John J. Anderson**, C.P.A., C.M.A., Associate Dean; Professor\*

Ph.D., University of Wisconsin-Madison

**David R. Ganz**, Associate Dean and Director of Undergraduate Studies in Business; Assistant Professor M.S. in C., St. Louis University

**Albert P. Ameiss**, Professor Emeritus

Ph.D., St. Louis University

**Howard B. Baltz**, Professor Emeritus

Ph.D., Oklahoma State University

**James A. Breugh**, Coordinator in Management; Professor\*

Ph.D., Ohio State University

**William P. Dommermuth**, Professor Emeritus

Ph.D., Northwestern University

**Sioma Kagan**, Professor Emeritus

Diplom-Ingenieur, Ph.D., Columbia University

**Edward C. Lawrence**, Coordinator in Finance; Professor\*

Ph.D., Pennsylvania State University

**Silvia A. Madeo**, C.P.A., Coordinator in Accounting; Professor\*

Ph.D., North Texas State University

**Joseph S. Martinich**, Professor\*

Ph.D., Northwestern University

**David Ronen**, Coordinator in Management Science and Information Systems; Professor\*

Ph.D., Ohio State University

**L. Douglas Smith**, Director, Center for Business and Industrial Studies; Professor\*

Ph.D., University of Minnesota

**Robert S. Stich**, Professor Emeritus

Ph.D., New York University

**Fred J. Thumin**, Professor\*

Ph.D., Washington University

**Steven L. Wartick**, Professor\*

Ph.D., University of Washington

**Michael J. Alderson**, Associate Professor\* (On Leave)

Ph.D., University of Illinois

**Nasser Arshadi**, Associate Professor\*

(On Leave Fall Semester)

Ph.D., University of Nebraska

**James F. Campbell**, Associate Professor\*

Ph.D., University of California, Berkeley

**William N. Dilla**, C.P.A., Associate Professor\*

Ph.D., University of Texas-Austin

**Dennis L. Dossett**, Associate Professor\* (On Leave)

Ph.D., University of Washington

**Donald H. Driemeier**, Deputy to the Chancellor;

Associate Professor\*

D.B.A., Washington University

**Thomas H. Eyssell**, Associate Professor\*

Ph.D., Texas A & M

**Timothy A. Farmer**, C.P.A., Associate Professor\*

Ph.D., Ohio State University

**D'Anne G. Hancock**, Associate Professor\*

Ph.D., University of New Orleans

**Michael M. Harris**, Associate Professor\*

Ph.D., University of Illinois-Chicago

**Marius A. Janson**, Associate Professor\*

Ph.D., University of Minnesota

**Kailash Joshi**, Associate Professor\*

Ph.D., Indiana University

**Charles R. Kuehl**, Director of Continuing Education and Outreach for the School of Business Administration; Associate Professor\*

Ph.D., University of Iowa

**Donald R. Kummer**, Director of Graduate Studies in Business; Associate Professor\*

Ph.D., University of Oregon

**Kenneth W. Locke**, Adjunct Associate Professor

D.B.A., Indiana University

**Haim Mano**, Coordinator in Marketing; Associate Professor\*

Ph.D., University of Chicago

**R. Frank Page**, C.P.A., Associate Professor\*

Ph.D., University of Illinois

**Susan M. Sanchez**, Associate Professor\*

Ph.D., Cornell University

**Vicki L. Sauter**, Associate Professor\*

Ph.D., Northwestern University

**Robert A. Schuchardt**, Associate Professor Emeritus

D.B.A., Washington University

**James P. Tushaus**, Associate Professor Emeritus

Ph.D., University of Illinois

**George C. Witteried**, Associate Professor Emeritus

M.B.A., J.D., Northwestern University

**Sriraman Bhoovaraghavan**, Assistant Professor\*

Ph.D., Temple University

**Mary B. Curtis**, C.P.A., Assistant Professor\*

Ph.D., University of Kentucky

**Michael T. Elliott**, Assistant Professor\*

(On Leave Winter Semester)

D.B.A., Mississippi State University

**Joseph P. Giljum**, C.P.A., Assistant Professor\*

L.L.M., New York University

**Geraldine E. Hynes**, Assistant Professor\*

Ph.D., St. Louis University

**Julius H. Johnson, Jr.**, Assistant Professor\* (On Leave

Fall Semester)

Ph.D., George Washington University

**James M. Krueger**, C.P.A., Vice Chancellor for Managerial

and Technological Services; Assistant Professor\*

D.B.A., Indiana University

**Mary Lacity**, Assistant Professor\*

Ph.D., University of Houston

**William K. Meade II**, Assistant Professor\*

Ph.D., Michigan State University

**Mary Beth Mohrman**, Assistant Professor\*

Ph.D., Washington University

**Paul S. Speck**, Assistant Professor\*

Ph.D., Texas Tech University

**Ashok Subramanian**, Assistant Professor\*

Ph.D., University of Houston

**Martha L. Wartick**, C.P.A., Assistant Professor\*

Ph.D., Pennsylvania State University

**Stacey M. Whitecotton**, C.P.A., Assistant Professor\*

Ph.D., University of Oklahoma

**David A. Bird**, Instructor

M.S., Washington University

**Lindell P. Chew**, Instructor

M.B.A., University of Missouri-Columbia

**Ottila N. Voegtli**, Instructor

M.B.A., University of Missouri-St. Louis

**Wayne W. Winter**, Assistant Coordinator in Legal Environment; Instructor

L.L.M., Washington University

## Business Administration

**Rober J. Banis**, Lecturer  
Ph.D., North Carolina State University  
**Joy Dakich**, Lecturer  
M.A., University of Missouri-St. Louis  
**Donna Free**, C.P.A., Lecturer  
M.B.A., University of Missouri-St. Louis  
**Terry C. Killian**, C.P.A., Lecturer  
M.B.A., University of Missouri-St. Louis  
**Peggy A. Lambing**, Lecturer  
M.B.A., University of Missouri-St. Louis  
**William R. Link**, C.P.A., Lecturer  
M.B.A., University of Missouri-Columbia  
**Laurence A. Madeo**, Lecturer  
Ph.D., University of Michigan  
**Donald C. Malm**, Lecturer  
M.B.A., University of Missouri-St. Louis  
**Elizabeth W. Vining**, Lecturer/Academic Advisor  
M.B.A., University of Missouri-St. Louis

\*members of Graduate Faculty

The University of Missouri-St. Louis School of Business Administration was established in 1967, and was accredited by the American Assembly of Collegiate Schools of Business (AACSB) six years later—the shortest time on record for any school to receive accreditation of its business program. The AACSB is the only nationally recognized accrediting agency for business and accounting programs. Of some 1,200 business schools nationally, only about 300 are accredited by the AACSB. In 1995, the School of Business Administration received reaccreditation of its business programs, and initial accreditation of its accounting programs, both undergraduate and graduate.

The mission of the School reflects the traditional academic activities of teaching, research, and service. Within the resource and strategic constraints placed on the School by the campus and the system, the School seeks to:

provide students with a high quality business education that prepares them to become productive contributors and leaders in both private and public sector organizations;

conduct research, the results of which extend and expand existing levels of knowledge and understanding relating to the operation, administration, and social responsibilities of enterprises in both the private and public sectors;

serve the university, the citizens of Missouri, and the St. Louis business community through useful outreach programs and through effective interactions with the School's faculty and staff.

At the undergraduate level, the School of Business Administration offers the Bachelor of Science in Business Administration (BSBA) degree with emphases in accounting, finance, logistics and operations management, management and organizational behavior, management information systems, and marketing; or an individual may earn the BSBA degree with no emphasis. At the graduate level, the School offers the Master of Business Administration (MBA), Master of Accounting (MAcc) and Master of Science in Management

Information Systems (MS in MIS) degrees. Several specialized certificate programs are also available.

Our diverse faculty, including forty doctorally qualified, full-time members, have degrees from thirty different Ph.D. degree-granting institutions, assuring students exposure to various management theories and educational approaches. In addition to the undergraduate and graduate degree programs mentioned above, the School supports three additional operations: a continuing education unit; an applied research center; and a community service research center. More information about these operations is available from the School.

## Undergraduate Studies

### Admission to the School of Business Administration

The School offers a two-year, junior/senior-level program. Admission prerequisites are:

- 1) At least a 2.0 campus grade point average for all work attempted at the University of Missouri-St. Louis.
- 2) A minimum of 60 total credit hours. Normally, the following introductory courses are included within the 60 hours:

**BA 103**, Computers and Information Systems  
**BA 140**, Fundamentals of Financial Accounting  
**BA 145**, Managerial Accounting  
**BA 156**, Legal Environment of Business  
**Econ 51**, Principles of Microeconomics  
**Econ 52**, Principles of Macroeconomics

### Transfer Students

Transfer students must meet all admission requirements; students failing to do so may be accepted for admission to the University but not directly to the School of Business Administration. Students transferring to UM-St. Louis are expected to take most of their specific business work during their junior and senior years. Business courses which are offered at the freshman or sophomore level and which are transferred in lieu of those offered at UM-St. Louis at the 200 level or above must be validated. Validation is determined by the appropriate discipline and may include:

- 1) Passing an approved 200-level or above course in that area with a grade of C- or better or
- 2) Passing a proficiency examination.

Business students must complete 48-60 hours in business for the BSBA degree. At least half of the 48-60 business hours must be completed in residence at UM-St. Louis on a regular graded basis. Students must also complete no fewer than sixty (60) hours (business and non-business) at an accredited baccalaureate degree granting institution and must meet the School's residency requirement.

## Degree Requirements

### General Education Requirements

All undergraduate business administration majors must complete the general education requirements of both the



## Business Administration

University and the School of Business Administration. The School's general education requirements are in keeping with those of the University. Many of the courses needed to complete the School's degree requirements, as outlined below, may be taken to fulfill the University's general education requirements.

### General Degree Requirements

All undergraduate business administration majors must complete the specific non-business courses which are business degree requirements. To satisfy the BSBA general degree requirements, the following pre-business administration requirements must be met:

- 1) Demonstration of basic skills in written communication by a minimum grade of C- in English 10, English Composition. For more information refer to the University General Education Requirements.
- 2) Students wishing to complete a degree at UM-St. Louis must complete a junior-level English requirement with a grade of C- or better.
- 3) Three courses in the humanities, to be chosen from selected offerings in art, English, music, philosophy and communication (applied courses do not qualify). See the Office of Undergraduate Academic Advising or the World Wide Web for a detailed listing of courses which fulfill this requirement.
- 4) Five courses in social science, to include: Econ 51, Principles of Microeconomics, and Econ 52, Principles of Macroeconomics; one course which meets the state requirement (see the University General Education Requirements); and two additional courses.
- 5) Three courses in mathematics and science which must include: a minimum proficiency in Math 100, Basic Calculus, and Math 105, Basic Probability and Statistics, and at least one lecture course in either a biological or physical science. (Note: Math 30, College Algebra, is a prerequisite to Math 100 and Math 105; also students planning to pursue a more in depth knowledge of calculus should take Math 80 in lieu of Math 100). [MT 100 and MT 105 are offered by way of Dean's approval; official approval is pending passage by the College of Arts and Sciences and by the Senate Committee for Curriculum and Instruction].
- 6) Global Awareness Requirement (9 hours):
  - A. Cultural Diversity Requirement: to expose students to a culture radically different from their own and to enhance their sensitivity to and awareness of cross-cultural differences, the School of Business Administration requires that students complete a three-hour course which focuses upon aspects of a culture and not upon the interactions of that culture with Euro-American cultures. This requirement may be met by one of the courses listed in the College of Arts and Sciences General Information.
  - B. International Studies: Graduates will work and live in an interdependent world; they will be part of a global economy and will work in an increasingly competitive global marketplace. Success in this changing environment requires knowledge and understanding of the international system, the global economy and other global issues. Towards meeting that objective the School of Business Administration requires that:
 

Students complete two three-hour courses in international studies. These courses are upper division courses, and will ordinarily be completed in the junior or senior year; at least one of the courses must be taken in the College of Arts and Sciences. A list\* of the courses that satisfy this requirement is available in the School of Business Administration Undergraduate Academic Advising Office.

Students who elect to take 13 hours in one foreign language may use the third course in the sequence in partial fulfillment of this requirement.

\* This list will be updated periodically by the Undergraduate Studies Committee with the advice of the Director of the Center for International Studies. Check with your advisor for the most up-to-date list of courses that will satisfy these requirements.

### School of Business Administration Core Degree Requirements

Candidates for the Bachelor of Science in Business Administration degree must complete the following business administration core courses:

- 103, Computers and Information Systems
- 140, Fundamentals of Financial Accounting
- 145, Managerial Accounting
- 156, Legal Environment of Business
- \*204, Financial Management
- \*206, Basic Marketing
- \*210, Management and Organizational Behavior
- \*250, Business Statistics
- \*252, Introduction to Operations Management
- \*390, Business Assessment Testing
- \*391, Strategic Management (seminar)

Students must earn a minimum grade of "C-" in each course included in the thirty (30) hour business core except BA 391, Strategic Management; and BA 390, Business Assessment Testing. A grade of "satisfactory" is required in Business Assessment Testing. Also to be admitted to BA 391, Strategic Management, all other core courses must be completed (except BA 390) with a passing grade.

### School of Business Administration Degree Requirements

All students who pursue the Bachelor of Science in Business Administration (BSBA) degree are required to complete a minimum of 36 hours in business courses at the junior/senior level (UM-St. Louis courses numbered 200 and above). Eighteen (18) of these hours are business **core** courses (those with an asterisk, above) and eighteen (18) hours are business **electives**.

## Business Administration

Transfer courses used to partially fulfill this requirement must be from four-year accredited schools and must be restricted to junior/senior level students at those schools. Business courses taken in the freshman/sophomore year at any accredited school may be granted transfer credit, but the credit will not be included within the thirty-six hours required at the junior/senior level. If the freshman/sophomore transfer course in business appears to be similar to a junior/senior level business course at UM-St. Louis, one may request to validate the transfer course. Successful validation will result in a waiver from the need to take the validated course at UM-St. Louis but the transfer credit will not be counted at UM-St. Louis as part of the minimum thirty-six (36) hours required at the junior/senior level.

### Approved Electives

In addition to the above, students must complete a minimum of 24 hours of approved electives. A list of the approved electives is available in the Undergraduate Advising Office of the School of Business Administration. Courses that are not on this list (free electives) may not be used as approved electives, except with the approval of the School's Undergraduate Studies Committee. Free electives are placed on a student's transcript but do not count toward the 120 required hours for the BSBA degree. At least 12 hours of approved electives must be taken outside the School of Business Administration; the remaining may be earned within the School. A minimum of 60 hours must be taken in non-business administration course work.

### Graduation Requirements

The degree program requires a minimum of 48 hours in business administration courses, a minimum of 72 hours in business administration and approved electives combined, and a minimum of 120 hours for all course work.

The student must earn a minimum campus grade point average of 2.0 and a minimum grade point average of 2.0 for all business courses attempted at UM-St. Louis. Grade modification cannot be used for calculating the business grade point average.

### School of Business Administration Residency Requirement

Business administration students must take their last 30 hours at the University of Missouri-St. Louis. Exceptions to this residency requirement would have to be approved by the School's Undergraduate Studies Committee.

### Limitation on Discipline Concentration

While a certain level of concentration in one of the various business fields is desirable, students should not concentrate their course selection to the extent of limiting their career flexibility. No more than 24 hours beyond required core courses are allowed in any business discipline—accounting, finance, logistics and operations management, management and organizational behavior, management information systems, and marketing. The combined hours in business and economics courses may not exceed 78 within the 120-hour program.

## Emphasis Areas

An emphasis area is not required within the BSBA degree program. Students who choose an emphasis must fulfill the general and specific requirements set forth below. An

emphasis area will be noted on the student's permanent record card (transcript)—not the diploma—upon completion of the emphasis area and the BSBA degree requirements. NOTE: An emphasis area designation may be added to the permanent record card for up to two years following graduation. Courses taken after graduation which are to be applied toward an emphasis area must be taken in residence at UM-St. Louis.

### General Requirements

All BSBA degree requirements must be satisfied including completion of the ten business core courses required of all persons.

A minimum of eighteen (18) hours of business electives beyond the business core are also required for all BSBA degrees seeking students. Business courses in fulfillment of a particular emphasis area would be counted among these 18 hours.

A student must earn a grade of C- or better in all business and non-business courses applied to the emphasis area. Additionally, a campus minimum GPA of 2.0 is required in both the business and emphasis area coursework. (Non-business courses required for an emphasis area are not averaged into either the business or the emphasis area GPA.)

The satisfactory/unsatisfactory option (see section following emphasis areas) may not be used for courses included in an emphasis area.

Each emphasis area has a residency requirement — a minimum number of business hours beyond the business core which must be taken at UM-St. Louis:

Finance, Logistics and Operations Management, Management and Organizational Behavior, and Marketing—six (6) hours; Accounting and Management Information Systems—nine (9) hours.

Hours transferred from four-year accredited institutions require UMSL area approval to satisfy emphasis area requirements. Transferred independent study courses will not fulfill emphasis area requirements.

The specific requirements for an emphasis area for a given individual will be those requirements in effect at the time of completion (with a passing grade) of the first course in the emphasis area beyond the business core courses.

No more than thirty (30) hours of business electives (sixty [60] business hours in total) may be applied toward the minimum of 120 hours required for the BSBA degree.

No more than 24 hours beyond the required business core courses may be taken in any area.

Various experimental courses and independent study courses may be offered under the BA 295, BA 296 and BA 395 numbers. The first such course taken in a given area will not count against the limit of courses in that area; any additional experimental and independent study courses will count against the limitations outlined in the previous paragraph.

## Business Administration

### Specific Requirements

#### Accounting

Accounting focuses on analyzing and measuring business activity, processing that data into reports, and communicating the information to decision makers. The successful accounting professional needs to acquire the education and skills necessary to fulfill these roles in whatever area of accounting he or she enters. Excellent skills in mathematics are necessary to analyze the quantitative, financial and operating data that decision makers use in marketing, finance, personnel administration, and other business activities. Because accounting is part of an information system, the ability to communicate financial results to managers, clients and others who need the information is a vitally important skill for professional accountants.

**Mission:** The Accounting Area of the University of Missouri-St. Louis endeavors to prepare high potential students of diverse backgrounds to succeed in accounting careers, either through a bachelors or masters degree program. We seek to provide these students with the means to deal with the challenges confronting the accounting profession and to contribute to their solutions. Our faculty strives to further the practice and understanding of accounting through its teaching, research, and service to the profession.

Effective November, 1995, the accounting degree programs at UM-St. Louis are separately accredited by the American Assembly of Collegiate Schools of Business (AACSB). This unique accreditation is not currently shared by any other St. Louis college or university.

For an emphasis in Accounting a student must complete at least 7 business courses (21 hours) beyond required business core courses. These 7 courses include:

**BA 340A** Financial Accounting and Reporting I  
**BA 340B** Financial Accounting and Reporting II  
**BA 345** Cost Accounting  
**BA 347** Income Taxes  
**BA 348** Auditing

In addition to the five above, either BA 215: Information Systems Analysis; or BA 344: Computer Applications in Accounting, must be completed;

A minimum of one business course must be selected from the following:

**BA 341** Financial Accounting and Reporting III  
**BA 342** Financial Accounting and Reporting IV  
**BA 343** Accounting for Governmental and Nonprofit Entities  
**BA 349** Business Income Taxation  
**BA 295/395** Business Administration Problems/Seminars

BA 295 and 395 are restricted to those courses offered and approved by the area faculty.

Finally two (2) additional courses (six [6] hours) must be successfully completed to earn the accounting emphasis:

One course selected from Comm 30: Interpersonal Communication; or Comm 40: Introduction to Public Speaking; or BA 205: Contemporary Business Communication.

One course selected from Phil 30: Approaches to Ethics; or Phil 154: Business Ethics.

#### Finance

Finance is a multidisciplinary field that combines various concepts from management, economics and accounting with financial techniques to make sound business decisions and solve problems. There are many business situations in both large and small companies that require knowledge of the latest financial theories and tools. Generally these applications involve investing (using funds) or financing (raising funds). As a result, the field is often considered to comprise three broad categories: investments; corporate financial management; and financial institutions.

To earn an emphasis in Finance, a student must complete a minimum of five (5) courses (fifteen [15] hours) beyond the business core selected from the following:

**BA 207** Practicum in Investments  
**BA 332** Principles of Insurance  
**BA 333** Life Insurance and Employee Benefits  
**BA 334** Investments  
**BA 335** Financial Risk Management  
**BA 337** Principles of Real Estate  
**BA 350** Financial Policies  
**BA 351** Computer Applications in Finance  
**BA 355** Financial Services Industry and Instruments  
**BA 356** Commercial Bank Management  
**BA 380** International Finance  
**BA 295/395** Business Administration Problems/Seminars  
**BA 296** Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

#### Logistics and Operations Management

The mission of Logistics and Operations Management is to get the appropriate goods or services to the right place, at the right time, in the right quality and quantity, while making the greatest contribution to the organization. In a business environment, Logistics and Operations Management encompasses the design, implementation and management of systems for efficient deployment of personnel, physical facilities, raw-materials, in-process inventories, finished goods and related information or services. Logistics and Operations Management covers the whole supply chain, from the point or origin to the point of consumption. Logistics and Operations Management analysts must be proficient in the use of quantitative models and computers, and communicate effectively.

For an emphasis in Logistics and Operations Management a student must complete four (4) courses (twelve [12] hours) from the following:

**BA 306** Decision Support and Expert Systems  
**BA 308A, B, C, or D** Production and Operations Management  
**BA 329** Business Forecasting  
**BA 330** Quality Assurance in Business

## Business Administration

- BA 331** Multivariate Analysis
- BA 375** Operations Research
- BA 385** Operations Research II
- BA 295/395** Business Administration Problems/Seminars
- BA 296** Independent Study
- CS 125** Introduction to Computer Science
- \* **BA 224** Managerial Applications of Object Oriented Programming I
- \* **BA 307** Management of End-User Computing

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

\* No more than one of these programming courses may be counted towards the emphasis area.

### Management and Organizational Behavior

The study of management and organizational behavior focuses on the behavior of individuals and groups in an organizational setting. The business environment today demands graduates with skills who can effectively make decisions involving working with and leading people.

The management and organizational behavior emphasis stresses the qualitative approaches to business.

The major areas of focus are: the theory and functions of management; the management of human resources; the development of strategic policies in an organization; organizational design and conflict resolution; entrepreneurship; and international management. In covering these topics, both classic and current perspectives are provided.

To earn the emphasis designation in Management and Organizational Behavior a student must complete four (4) courses (twelve [12] hours) to include BA 311, Advanced Management and Organizational Behavior, plus three (3) additional courses selected from:

- BA 309** Human Resource Management
- BA 312** Industrial and Labor Relations
- BA 317** International Management
- BA 318** Industrial and Organizational Psychology (This course is cross listed as Psych 318)
- BA 319** Employee Training and Development
- BA 392** Entrepreneurship/Small Business Management
- BA 295/395** Business Administration Problems/Seminars
- BA 296** Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

### Management Information Systems

Computer-based management information systems are of vital importance to modern organizations. Management Information Systems (MIS) professionals analyze, design, develop, implement and manage state-of-the-art telecommunications, multi-media and other computer-based information systems. In addition to maintaining traditional transaction processing systems, today's MIS professionals are involved in exciting developments in computing systems, such as decision support and expert systems, database development and enhancement,

development and use of Graphical User Interfaces (GUI), and design and management of telecommunications systems. The MIS program provides students with a foundation in both the functional areas of business and in computing technologies that enables graduates to pursue both technical and managerial careers incorporating leading edge technologies in public and private organizations.

To earn the emphasis designation in Management Information Systems a student must complete seven (7) courses (twenty-one [21] hours) beyond required business core courses. These 7 courses include:

1. A student must complete 5 courses (15 hours)

A) Programming/File Structure Requirement (6 hours) (Either Track 1 or Track 2)

Track 1

- BA 109** COBOL Programming and
- BA 209** File Management

Track 2

- BA 224** Managerial Applications of Object Oriented Programming I and
- BA 225** Managerial Applications of Object Oriented Programming II

B) Analysis and Design Requirement (6 hours)

- BA 215** Information Systems Analysis
- BA 310** Information Systems Design

C) Database Requirement (3 hours)

- BA 212** Database Management Systems

2. A student must complete two courses from the following to include at least one Business Administration course at the 300-level (6 hours):

- BA 109** COBOL Programming (if not used to fulfill requirements in 1A)
- BA 209** File Management (if not used to fulfill requirements in 1A)
- BA 224** Managerial Applications of Object Oriented Programming I (if not used to fulfill requirements in 1A)
- BA 225** Managerial Applications of Object Oriented Programming II (if not used to fulfill requirements in 1A)
- BA 304** The Management of Information Systems
- BA 305** Management of Telecommunications
- BA 306** Decision Support & Expert Systems
- BA 307** Management of End User Computing
- BA 344** Computer Applications in Accounting
- CS 240** Computer Hardware & Small Computer Systems I
- CS 241** Computer Hardware & Small Computer Systems II
- CS 332** Artificial Intelligence
- CS 376** Operating Systems
- BA 295/395** Business Administration Problems/Seminars
- BA 296** Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

## Business Administration

### Marketing

Marketing is an important part of any business or organization and can enhance growth, increase profits, and help achieve the organization's goals. Furthermore, marketing plays an important role in our society by enhancing our quality of life. Equally important, marketing offers varied and interesting career opportunities.

Marketing involves the activities needed to facilitate an exchange. This covers selling products, services or ideas to both consumers and business buyers. Many non-profit institutions are now enthusiastic users of marketing concepts; thus marketing majors find such untraditional areas as hospitals, churches, museums, universities and retirement homes often offer excellent entry level opportunities, in addition to such traditional firms as manufacturing and retailing concerns.

For an emphasis in Marketing, a student must complete at least four (4) courses (twelve [12] hours) selected from:

- BA 270 Management of Promotion
- BA 275 Marketing Research
- BA 301 Consumer Behavior
- BA 302 Quantitative Marketing Methods
- BA 303 Business-to-Business Marketing
- BA 315 Marketing Management
- BA 316 International Marketing
- BA 295/395 Business Administration Problems/Seminars
- BA 296 Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

### Satisfactory/Unsatisfactory Option

Business students in good standing may take up to 18 hours on a satisfactory/unsatisfactory basis. Exempt from this option are specific degree requirements, including such courses as Econ 51, Econ 52, mathematics courses, English 10, and junior-level English courses; courses fulfilling the mathematics requirement; and the required business administration core courses except BA 390. Up to nine of the allowable 18 hours of work taken on a satisfactory/unsatisfactory basis may, however, be in business electives. Students should consult the School of Business Administration's regulations on this option regarding particular emphasis area courses.

### Restrictions

A student who has not been formally admitted to the School of Business Administration, or who is not currently admissible to the School of Business Administration may take no more than thirty (30) hours of business courses. Admissibility to the School of Business Administration requires that one complete at least sixty (60) credit hours and have a minimum 2.0 campus grade point average.

The School of Business Administration faculty is currently considering the implementation of a higher GPA requirement for admission and graduation. This will be no more than 2.5 and may be imposed in the future on all students entering the School.

## Minor in Business Administration

The school also offers a minor in business administration for students pursuing other degree programs.

In order to obtain an academic minor in business administration, a student must satisfy the following requirements:

### Pre-Business General Education Requirements

A student must complete the following economics courses: 51, Principles of Microeconomics; 52, Principles of Macroeconomics

### Statistics Requirement

A student must take one of the following statistics courses:

- BA 250, Business Statistics  
(Prerequisites: Math 100 and 105)
- Econ 265, Economic Statistics  
(Prerequisites: Econ 51, 52 and Math 30)
- Math 232, Applied Statistics II  
(Prerequisite: Statistics 31 or 132 or equivalent)
- Psych 201, Psychological Statistics  
(Prerequisites: Psych 3 and Math 30, or equivalents)

### Business Course Requirements

A student must complete a minimum of 24 hours in business. The following six business administration courses must be taken:

- 103, Computers and Information Systems
- 140, Fundamentals of Financial Accounting  
(Prerequisites: 27 credit hours and Math 30)
- 145, Managerial Accounting  
(Prerequisites: BA 140 and Math 30)
- 204, Financial Management  
(Prerequisites: BA 140, Econ 52, Statistics requirement and a 2.0 campus GPA)
- 206, Basic Marketing  
(Prerequisites: Econ 51 and junior standing and a 2.0 campus GPA)
- 210, Management and Organizational Behavior  
(Prerequisites: junior standing and a 2.0 campus GPA)

and any two additional business courses (core or elective) other than those listed under Statistics and Business Course Requirements.

In addition to completing the above courses, the following requirements for a minor in business administration must also be met:

- 1) A student must not take more than 30 hours of business courses within the 120 required for the degree program.
- 2) A student must earn an average of 2.0 or better and earn a C- or better in all business courses taken.
- 3) No course taken on a satisfactory/unsatisfactory basis may be applied toward fulfilling the minor requirements.
- 4) At least 12 credits of the business course requirements must be taken in residence at UM-St. Louis.

### Minor in Employee Training and Development

The School of Business Administration and the Evening College offer a minor in employee training and

## Business Administration

development. Information on this minor can be found in the Evening College section of this book.

### Cooperative Education and Internship Programs

Cooperative Education and Internship Programs are available for students seeking career-related employment while enrolled in school. These programs afford business students an opportunity to gain practical experience and earn a substantial income. Co-ops and internships are administered through Career Services, 308 Woods Hall.

### International Business Certificate

Students who participate in the Missouri-London Program (take courses and work for one semester in London) or other study abroad programs may apply that experience toward an international Business Certificate. Details may be found in the Interdisciplinary Studies section of the *Bulletin*.

## Graduate Studies

The School of Business Administration offers three graduate degrees: the Master of Business Administration (MBA), the Master of Science in Management Information Systems (MS in MIS), and the Master of Accounting (MAcc).

### Admission Requirements

The admissions decision is based on a combination of factors. Consideration is given to a candidate's academic record, GMAT scores, work and leadership experience, a personal narrative on the application form, and recommendations.

Applicants are required to take the Graduate Management Admissions Test (GMAT). This test is given four times each year. This three and one-half hour aptitude test is designed to measure certain mental capabilities important in graduate business studies. The examination tests ability to read, understand, and reason logically with both verbal and quantitative material. The test is not a measure of achievement or knowledge of business administration curriculum. Applications for the examination may be made directly to the Graduate Management Admissions Test, Educational Testing Service, CN6103, Princeton, New Jersey 08541. Information concerning the GMAT may also be obtained from the admission advisers or the Office of Graduate Studies in Business.

## Master of Business Administration Program (MBA)

The MBA program is fully accredited by the American Assembly of Collegiate Schools of Business, the authorized professional accrediting body in collegiate business education, and is designed to prepare students for administrative positions. It also provides an appropriate foundation for students contemplating doctoral work and eventual careers in college teaching or in research. The program is designed for students who have bachelor's degrees from accredited institutions, including those with undergraduate backgrounds in the sciences, engineering, humanities, or arts. Students with undergraduate degrees in business administration or economics may pursue modified degree programs.

A 54-hour or two-year program, the MBA curriculum provides training in the fundamental areas of administration. The core program is designed to generate a working knowledge of the concepts and interrelationships of four broad categories fundamental to management training:

- The external environment confronting business organizations and management's response to interactive legal, economic, social, and political issues.
- The internal operation of various business organizations and management's role in channeling human behavior to satisfy both personal and organizational goals.
- Basic concepts, terminology, and interaction of the accounting, marketing, finance, information technology and operations management disciplines.
- Quantitative management decision-making models put to use in the context of current management information systems.

The total degree program is integrated by a course in strategy formulation and implementation in the student's last semester. There is no thesis requirement; however, students interested in undertaking an individual research project may earn elective credit by enrolling in a supervised independent study course.

### MBA Program Degree Requirements

Depending on the student's previous background, programs will range from 39 to 54 hours. Coursework must be completed within a six-year period. At least 30 hours of coursework must be taken while enrolled as an MBA candidate at UM-St. Louis.

Candidates must take at least one course at either the core level or from the business breadth requirements list in each of the following six areas: accounting, finance, management, marketing, information systems, and management science. Also no more than 15 credit hours may be taken in any one of the six areas.

Students are also required to have completed the equivalent of Econ 301, Quantitative Methods and Modeling in Economics, Business, and the Social Sciences, with a grade of C- or better by the end of their first 15 hours in the program.

### Required Courses

The following courses or their equivalents are required of all degree candidates:

### General Requirements

**Econ 301**, Quantitative Methods and Modeling in Economics, Business, and the Social Sciences (Economics 301 is offered by way of Dean's approval; official approval is pending passage by the College of Arts and Sciences and by the Senate Committee for Curriculum and Instruction)  
**BA 405**, Managerial Communication  
**BA 408**, Economics for Managers  
**BA 412**, Law, Ethics, and Business  
**MS/IS 481**, Statistical Analysis for Management Decisions  
**BA 490**, Strategy Formulation and Implementation

## Business Administration

### Core Requirements

**Accounting 440**, Financial and Managerial Accounting  
**Finance 450**, Financial Management  
**Management 460**, Organizational Behavior and Administrative Processes  
**Marketing 470**, Contemporary Marketing Concepts  
**MS/IS 480**, Management Information Systems  
**MS/IS 483**, Production and Operations Management

### Business Breadth Requirements

A student must take a second-level course in three of the following areas:

**Accounting: Accounting 442**, Accounting for Decision Makers  
**Finance:** Any approved 400-level course beyond Finance 450  
**Management:** Any approved 400-level course beyond Management 460  
**Marketing:** Any approved 400-level course beyond Marketing 470  
**Information Systems:** Any approved 400-level course beyond Management Science and Information Systems 480  
**Management Science:** Any approved 400-level course beyond Management Science and Information Systems 483

### Electives

The student must take a minimum of nine hours of elective courses. A maximum of six hours of electives may be taken at the 300 level. Nine elective hours may be taken outside the School of Business Administration if the student has approval in advance from a graduate adviser for the specific courses desired.

### Previous Education

Students may waive certain courses from the general and core requirements. Waiver depends on the applicability of prior course work and the student's performance in these courses. Regardless of the number of courses waived, all students must take at least 39 hours to earn the degree.

## Master of Science in Management Information Systems (MS in MIS)

The MS in MIS program is designed to provide students with a foundation in functional business areas and in managerial and analytical skill areas required in modern organizations. A specialized program in computer-based management information systems is then built on this foundation. The objective of the program is to offer students sufficient technical and managerial knowledge and skills to operate successfully in the rapidly changing careers associated with the design, development, and management of computer-based information and telecommunications systems. The program is designed for students who have bachelor's degrees from accredited institutions, but it is not restricted to any single undergraduate major.

### MS in MIS Program Degree Requirements

The curriculum involves a 60-hour or two-year program including a 30-hour core curriculum that is identical to that of the MBA program. Students with the appropriate academic background may waive some or all of this core curriculum. The second 30 hours involves a specialized

curriculum oriented around computer-based management information and telecommunications systems—their design, development, and management.

Students also are required to have successfully completed the equivalent of Econ 301, Quantitative Methods and Modeling in Economics, Business and the Social Sciences, by the end of their first year. While graduate credit is not given for this course, it will be included in grade point calculation.

Students who have not completed Econ 52, Principles of Macroeconomics, or its equivalent with a grade of B- or better, within five years preceding entry into the program, will be required to take Business Administration 411, Analysis of National Economic Environment. Graduate credit is awarded for this course.

### Required Basic Courses

The following courses, or their equivalents, are required of all degree candidates:

**BA 405**, Managerial Communication  
**BA 410**, Managerial Economic Analysis  
**BA 412**, Law, Ethics and Business  
**Accounting 440**, Financial and Managerial Accounting  
**Finance 450**, Financial Management  
**Management 460**, Organizational Behavior and Administrative Processes  
**Marketing 470**, Contemporary Marketing Concepts  
**MS/IS 480**, Management Information Systems  
**MS/IS 481**, Statistical Analysis for Management Decisions  
**MS/IS 482**, Management Science Methods

### Required Specialization Courses

The following courses are required:  
**MS/IS 484**, Business Programming and File Systems  
**MS/IS 485**, Theoretical Foundations of Management Information Systems  
**MS/IS 488**, Information Systems Analysis  
**MS/IS 489**, Database Management Systems  
**MS/IS 495**, Information Systems Design  
**BA 490**, Strategy Formulation and Implementation

At least two of the following courses are also required:

**MS/IS 491**, Computer Systems: Architecture and Programming  
**MS/IS 492**, Information Systems Management  
**MS/IS 493**, Simulation for Managerial Decision Making  
**MS/IS 496**, Telecommunications: Design and Management (or BA 305)  
**MS/IS 497**, Expert Systems (or BA 306)  
**MS/IS 498**, Fourth Generation Languages and End-User Computing (or BA 307)  
**MS/IS 424**, Seminar in Current MIS Topics  
**MS/IS 425**, Advanced MIS Applications

### Electives

Each student must take six hours in a "related discipline" from an approved list available in the Graduate Studies in Business Office. Both courses must be taken in the same related discipline area. The six hours may also be met by the completion of a thesis.

## Business Administration

### Master of Accounting Program (MAcc)

The MAcc program is intended for students preparing to enter the accounting profession or furthering existing accounting careers. Designed to accommodate both students with undergraduate accounting majors and students with other undergraduate backgrounds, the program permits students to take a generalized course of study or specialize in income taxation. It may require as few as 30 credit hours for students with undergraduate accounting degrees. Because of the need to attain general business and professional accounting core competencies as a foundation for the MAcc requirements, students with no academic business or accounting background will be required to take additional credit hours as outlined below.

#### General Requirements

All students must meet course requirements in mathematics, general business, and accounting. Students must complete a minimum of 30 credit hours beyond the general business core and the professional accounting core. At least 15 credit hours in accounting must be completed, including at least 12 credit hours at the 400-level. At least 9 credit hours of the student's 30 credit hour program must be in 400-level non-accounting courses. Of the 30 credit hours beyond the general business and professional accounting core, 21 credit hours must be earned in courses at the 400-level.

#### Mathematics Background Requirement

Students are required to have completed by the end of their first semester in the program the equivalent of Econ 301, Quantitative Methods and Modeling in Economics, Business, and the Social Sciences, with a grade of C or better. Graduate credit is not given for this course but it may be waived with appropriate undergraduate coursework.

#### General Business Core

Students must have credit for the equivalent of one three-credit-hour course in each of the following subject areas: macroeconomics, microeconomics, financial accounting, managerial accounting, marketing, financial management, organizational behavior, and business strategy. These requirements may be met with graduate-level coursework or may be waived with appropriate courses taken as an undergraduate.

#### Professional Accounting Core

Students must have credit for the equivalent of each of the following three-credit-hour courses. Some of these courses may be taken concurrently with MAcc degree requirements (listed below) or may be waived with appropriate courses taken as an undergraduate.

**BA 340A**, Financial Accounting and Reporting I  
**BA 340B**, Financial Accounting and Reporting II  
**BA 344**, Computer Applications in Accounting  
**BA 345**, Cost Accounting or  
**Accounting 441**, Concepts in Management Accounting  
**BA 347**, Income Taxes  
**BA 348**, Auditing

**MAcc Degree Requirements (minimum: 30 credit hours)**  
**Accounting Courses** (minimum: 15 credit hours, 12 credits at 400-level)

**BA 341**, Financial Accounting & Reporting III\*  
**BA 342**, Financial Accounting & Reporting IV\*

**Research course**—At least one of the following courses must be completed:

**Accounting 421**, Professional Accounting Research  
**Accounting 431**, Tax Research

**Seminar**—At least one of the following courses must be completed:

**Accounting 445**, Seminar in Financial Accounting Theory  
**Accounting 439**, Seminar in Taxation

**Accounting Electives**—to meet 15 credit-hour and 400-level requirements

**Non-Accounting Courses** (minimum: 9 credit hours at 400-level)

**BA 405**, Managerial Communication  
**BA 412**, Law, Ethics, and Business\*  
**MS/IS 480**, Management Information Systems\*  
**MS/IS 481**, Statistical Analysis for Management Decisions\*  
**MS/IS 482**, Management Science Methods\*

Electives may be necessary to meet 9 credit-hour 400-level non-accounting requirement or minimum 30 credit-hour requirement

(\*=May be waived with appropriate undergraduate courses)

#### Taxation Emphasis

Students desiring an emphasis in taxation must complete **Accounting 431**, Tax Research, **Accounting 439**, Seminar in Taxation, and at least two courses from the following list of electives:  
**Accounting 432**, Taxation of Estates, Gifts, and Trusts  
**Accounting 433**, Taxation of Corporations and Shareholders  
**Accounting 434**, Taxation of Partnerships and Partners  
**Accounting 435**, Tax Practice and Procedure  
**Accounting 436**, Advanced Topics in Taxation

### Graduate Certificate Programs in Business Studies

The School of Business Administration offers a number of 18-hour Graduate Certificates. To be admitted to a graduate certificate program, students must meet the same requirements as those needed for a graduate degree program in business (see "Admission Requirements" in the Graduate Studies in Business Administration section of this *Bulletin*).

Certificate programs allow qualified graduate students to pursue a defined course of study in a specialized business topic. Without requiring completion of a 30-72-hour graduate business degree program, certificate programs provide students with the opportunity to obtain the advanced knowledge available through a graduate course of study.



## Business Administration

In order to successfully complete a certificate program, students must have earned a 3.0 cumulative GPA in certificate classes. Unless otherwise specified, the certificate must be completed within six years. Students must also comply with all requirements related to matters such as prerequisites, academic probation, and other graduate business program policies.

### Graduate Certificate in Human Resources Management

The Graduate Certificate in Human Resources Management is an 18-hour course of study designed to focus on the multidimensional aspects of personnel operations within business organizations. The course of study emphasizes both the formal and informal sides of human resources management.

#### Requirements

Students must complete the following six courses or appropriate substitutes if course waivers are appropriate:

- Management 460**, Organizational Behavior and Administrative Processes
- Management 461**, Managing Human Resources
- Management 464**, Compensation and Benefits
- Management 465**, Union-Management Relations and Collective Bargaining
- Management 466**, Personnel Administration: Theory and Practice
- MS/IS 481**, Statistical Analysis for Management Decisions

Management 460, Management 461, and MS/IS 481 may be waived with equivalent undergraduate courses. If a student is able to waive any or all of these three courses, substitute courses (approved by both the Area Coordinator of Management and the Director of Graduate Studies in Business) will be provided. Substitute courses may include Management 462, Advanced Organizational Behavior and Administrative Processes or a course from outside the School of Business Administration. In all cases, 18 hours are needed to complete the Graduate Certificate in Human Resources Management.

### Graduate Certificate in Marketing Management

The Graduate Certificate in Marketing Management is an 18-hour program designed to provide a focused intensive study of the marketing management activity within organizations. This program is designed to serve a broad group of marketing managers, including those with interest in sales, brand management, promotion, and consumer behavior.

#### Requirements

Students must complete the following six courses or appropriate substitutes if course waivers are appropriate:

- Marketing 470**, Contemporary Marketing Concepts
- Marketing 475**, Consumer Motivation and Behavior
- Marketing 478**, Marketing and Business Research

#### Marketing Management:

- Marketing 471**, Marketing Planning and Strategy
- Marketing 476**, Marketing Communications
- Marketing 477**, Product Planning and Pricing

All course prerequisites and all course waivers are applicable.

Substitute courses must be approved by the Area Coordinator of Marketing and the Director of Graduate Studies in Business. In all cases, 18 hours (including at least 12 hours in marketing) are needed to complete the Graduate Certificate in Marketing Management.

### Graduate Certificate in Taxation

The Graduate Certificate in Taxation is an 18-hour course of study designed to focus on the theory and practice of taxation as a subfield of accounting. The course of study emphasizes both the legal, as well as the academic analysis of taxation.

#### Requirements

Besides the admission requirements needed by all graduate business students, students seeking a Graduate Certificate in Taxation must have the equivalent of an undergraduate degree in accounting from UM-St. Louis. An up-to-date tax course should be part of that degree although up-to-date tax knowledge may be evidenced through an "old" tax course combined with recent tax experience.

To earn the certificate, students must complete six courses as prescribed following:

#### Required Courses

- Accounting 431**, Tax Research
- Accounting 433**, Taxation of Corporations and shareholders
- Accounting 435**, Tax Practice and Procedure
- Three Additional Courses From:
  - Accounting 432**, Taxes of Estates, Gifts, and Trusts
  - Accounting 434**, Taxation of Partnerships and Partners
  - Accounting 436**, Advanced Topics in Taxation
  - BA 405**, Managerial Communications or **BA 412**, Public Policies Affecting Business

Students must complete the Graduate Certificate in Taxation within three years from the time they first enroll in the program.

### Special Interdisciplinary Degree

The School of Business Administration also cooperates with the Departments of Economics and Political Science in the College of Arts and Sciences in offering a master's degree in public policy administration (MPPA). For information on the MPPA degree program, see the Inter-School Studies section of this *Bulletin*.

## General Statement of Policy Applicable to All Students Taking Business Courses

### Academic Misconduct

The School of Business Administration views academic dishonesty as a serious offense. Unless instructed by their instructor to the contrary, students should assume that all class assignments are to be done independently. For independent assignments (e.g., a case analysis, take-home or in-class exams), giving or receiving aid, unless authorized by the instructor, is considered academic dishonesty. If the student is uncertain concerning the nature of an assignment, it is his/her responsibility to

## **Business Administration**

seek the instructor's guidance. For more information on academic misconduct, refer to the appendix of this *Bulletin* and the UM-St. Louis Student Handbook.

### **Career Outlook**

The current economic climate appears to favor students with business training. Business school graduates with the B.S.B.A. degree usually obtain entry-level positions in areas requiring accounting, finance, management, management information systems, marketing, and quantitative backgrounds. Recent graduates of the School of Business Administration hold positions with a variety of local and national firms as accountants; internal auditors; sales representatives; cost, budget, and systems analysts; executive trainees; merchandisers; systems programmers; and purchasing agents.

Many graduates of the University's graduate business programs are employed in staff-level positions in local and national businesses, and opportunities for managerial posts are promising for the graduate with a master's degree in business administration. Additionally, several graduates have chosen to pursue careers in college teaching.

## Business Administration

### Course Descriptions

Courses in this section are grouped as follows: all undergraduate courses are listed under Business Administration; 400-level graduate courses are listed under Business Administration, Accounting, Finance, Management, Management Science/Information Systems, and Marketing.

The School of Business Administration uses the University course numbering system (see p. 5) with the following clarifications:

100 to 199, sophomore, junior, or senior standing is required unless a specific exception is listed.  
200 to 299, junior or senior standing is required.  
300 to 399, junior, senior, or graduate standing is required unless a specific exception or restriction is listed.

A minimum grade of C- shall be required to meet the prerequisite requirement for any course. Prerequisites may be waived only by consent of both the instructor and the area coordinator. A minimum campus GPA of 2.0 is required for admittance to each 200- and 300-level Business Administration course.

### Business Administration

**93 Personal Finance for Nonbusiness Majors (3)**  
For future professionals who want to learn more about personal finance and how to better manage their resources. The topics include purchasing/leasing cars, home acquisitions, investing in stocks and bonds, mutual funds, retirement planning and health and life insurance. Special emphasis will be on the nontechnical aspects of these issues. Cannot be used for credit in BSBA program.

**95 Topics in Business Administration (1-3)**  
Study of selected special problems in business and administration. May be repeated for credit with different topics. Cannot be included in BSBA program.

**103 Computers and Information Systems (3)**  
The basic concepts of data processing and the fundamental principles of computer-based information systems are studied. The characteristics of computer hardware and software used in implementing business applications are considered. Students will develop skills in utilizing both mainframe and microcomputers.

**104 FORTRAN Programming (3)**  
Prerequisite: BA 103. A study of the principles of programming digital computers using the FORTRAN language. Credit will not be granted for both BA 104 and Computer Science 122.

**109 COBOL Programming (3)**  
Prerequisite: BA 103 or Computer Science 122. Structured COBOL programming techniques for business applications are presented. Included are report generation, control breaks, output editing, debugging, tables, and sort concepts.

**140 Fundamentals of Financial Accounting (3)**  
Prerequisites: Math 30 and completion of 27 credit hours. This is a one-semester course in financial accounting theory and practices, with primary emphasis upon the accounting cycle and the preparation and interpretation of corporate financial statements.

**145 Managerial Accounting (3)**  
Prerequisites: Math 30 and BA 140. This is an advanced course that goes beyond the scope of a second-semester course in fundamentals of accounting. The development, interpretation, and use of relevant cost behavior, control, and traceability concepts for management planning, controlling, and decision making are emphasized. Topics include: an introduction to product costing, the contribution concept, direct costing, performance standards and variance analysis, responsibility accounting, segment profitability, alternative choice decisions, and capital budgeting.

**156 Legal Environment of Business (3)**  
Prerequisites: Econ 51 and BA 140. An introduction to the nature and meaning of law, sources of law, legal process and institutions. The legal environment of business is defined as: the attitude of the government toward business, the historical development of this attitude; current trends of public control in taxation, regulation of commerce, and competition; freedom of contract, antitrust legislation and its relationship to marketing, mergers, and acquisitions; and labor management relations.

**195 Topics in Business Administration (1-3)**  
Prerequisites: Vary with topic; contact the School of Business Administration. Study of selected special problems in business and administration. May be repeated for credit with different topics.

**204 Financial Management (3)**  
Prerequisites: Econ 52, MT 105, and BA 140, and a 2.0 campus GPA. The study of a firm's need for funds; the institutions, instruments, and markets concerned with raising funds; and the techniques of analysis used to determine how effectively these funds, once raised, are invested within the firm.

**205 Contemporary Business Communication (3)**  
Prerequisites: English 10 or equivalent and a minimum campus GPA of 2.0 (Comm 40 recommended, but not required.) A forum wherein business writing and speaking skills are addressed. Communication unique to business organizations is critiqued. Emphasis is placed on writing and verbal communication skills necessary to succeed in the business environment.

**206 Basic Marketing (3)**  
Prerequisites: Econ 51, junior standing, and a 2.0 campus GPA. An examination of the character and importance of the marketing process, its essential functions, and the institutions performing them. Attention is focused on the major policies (such as distribution, product, price, and promotion) which underlie the multifarious activities of marketing institutions and the managerial, economic, and societal implications of such policies.

## Business Administration

### 207 Practicum In Investments (1)

Prerequisite: BA 204 and a 2.0 campus GPA. Students will apply their knowledge of stocks and bonds by managing a real dollar portfolio of securities. This course requires that students perform technical and fundamental analysis, prepare research reports, present proposals and participate in group investment decisions. The University's Student Investment Trust provides the money for students to invest. Course may be repeated for credit up to a maximum of 3 credit hours.

### 209 File Management (3)

Prerequisite: BA 109 and a 2.0 campus GPA. The course covers job control language, utilities, partitioned data sets, updating of sequential files, indexed files, direct and/or relative files. The topics are implemented in a COBOL environment. A database management system is used to illustrate design and implementation of business applications.

### 210 Management and Organizational Behavior (3)

Prerequisites: Junior standing and a 2.0 campus GPA. This course involves the study of the behavior of individuals and groups in an organizational setting. Specific topics examined include: motivation, leadership, organizational design, and conflict resolution, as well as basic coverage of management principles. In covering these topics, both "classic" and current perspectives are provided.

### 212 Database Management Systems (3)

Prerequisites: BA 209 or BA 225 and a minimum campus GPA of 2.0. This course provides an introduction to the design and use of databases in meeting business information needs. Topics include database planning, conceptual design, and data administration. The concepts are studied with projects involving the use of a current database management system.

### 215 Information Systems Analysis (3)

Prerequisites: BA 109, or BA 224, and a minimum campus GPA of 2.0. Techniques and philosophies of systems analysis are addressed. Included are: traditional versus structured design methods, computer-based tools for systems analysis, workbenches, design and analysis of database systems, maintenance of existing information systems, human/machine interfaces, and security and control.

### 224 Managerial Applications of Object-Oriented Programming I (3)

Prerequisites: (BA 103 or Computer Science 122 or 125) and a 2.0 campus GPA. The course provides a study of the UNIX operating system and the C++ programming language as they pertain to managerial applications. In addition, the course will introduce the use of object-oriented programming methodologies.

### 225 Managerial Applications of Object-Oriented Programming II (3)

Prerequisites: BA 224 and a minimum campus GPA of 2.0. This course expands object-oriented skills taught in BA 224. The emphasis in this course is on object-oriented development tools and development in a client-server environment. The data management tools will include the use of SQL to access server-based databases.

### 250 Business Statistics (3)

Prerequisites: Math 100 and 105, BA 103 and a 2.0 campus GPA. Construction and use of statistical models for business management. Students will learn techniques used for relational analysis and business forecasting and how to apply them in a business context. Tools include CHI-Square tests of statistical independence; analysis of variance; simple linear regression and correlation; multiple linear regression; and extrapolative techniques such as moving averages and exponential smoothing. Emphasis is placed on problem definition, construction of statistical models, analysis of data, and interpretation of results. Computers are used for extensive analyses of case data.

### 252 Introduction to Operations Management (3)

Prerequisites: Econ 51, BA 145, BA 250 and a 2.0 campus GPA. An examination of the concepts, processes, and institutions which are fundamental to an understanding of manufacturing and service operations within organizations. Emphasis is on the management and organization of operations and upon the application of quantitative methods to the solution of strategic, tactical and operational problems.

### 256 Business Law: Contracts, Sales, Secured Transactions, Bankruptcy (3)

Prerequisites: BA 140, Econ 51, and a 2.0 campus GPA, or junior standing and a 2.0 campus GPA. Introduction to the laws of contracts, sales, secured transactions, bankruptcy, and other selected topics.

### 257 Business Law: Negotiable Instruments, Business Organizations, Property (3)

Prerequisites: BA 140, Econ 51, and a 2.0 campus GPA, or junior standing and a 2.0 campus GPA. Introduction to the laws of negotiable instruments, the principal-agent relationship, partnerships, corporations, property, and other selected topics.

### 270 Management of Promotion (3)

Prerequisite: BA 206 and a 2.0 campus GPA. A study of the design, organization, and implementation of the marketing "communications mix." Various methods, such as advertising, personal selling, and publicity are analyzed as alternatives for use alone, or in combination, to stimulate demand, reseller support, and buyer preference. Particular topics considered include: media selection, sales promotional, packaging, and selling strategy, and their relationships in the promotion process.

### 275 Marketing Research (3)

Prerequisites: BA 103, BA 206, BA 250 and a 2.0 campus GPA. An investigation of the acquisition, presentation, and application of marketing information for management. Particular problems considered are defining information requirements, evaluating research findings, and utilizing information. Statistical methods, models, and/or cases are employed to illustrate approaches to marketing intelligence problems, such as sales forecasts, market delineation, buyer motives, store location, and performance of marketing functions.

## Business Administration

### 289 Career Planning (1)

Prerequisite: A minimum of junior standing and a 2.0 campus GPA. The emphasis of this course will be to assist business students to develop an understanding of themselves as related to employment, to develop an understanding of the world of work, and to integrate these so that effective career decisions can be made.

### 295 Business Administration Problems (1-10)

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 campus GPA. Study of selected special problems in business and administration. May be repeated for credit with different topics.

### 296 Independent Study (1-3)

Prerequisite: Permission of the professor, the dean, and a minimum campus GPA of 2.0. Occasional special individual study topics under the guidance of a specific professor.

### 301 Consumer Behavior (3)

Prerequisites: BA 206 and a minimum campus GPA of 2.0. A study of such consumer functions as decision making, attitude formation and change, cognition, perception, and learning. The marketing concepts of product positioning, segmentation, brand loyalty, shopping preference and diffusion of innovations are considered in context with the environmental, ethical, multicultural and social influences on an increasingly diverse American consumer.

### 302 Quantitative Marketing Methods (3)

Prerequisites: BA 103, BA 206, BA 250 and a 2.0 campus GPA. Applications of stochastic, deterministic, and simulation techniques to decision areas, such as market potential, product diversification, physical distribution alternatives, retail location, media selection, and market exposure. Quantitative and computerized methods are used heavily to enhance decision making in marketing, especially the selection, allocation, budgeting, and forecasting of marketing resources.

### 303 Business-to-Business Marketing (3)

Prerequisites: Senior Standing, MT 105, BA 206 and a 2.0 campus GPA. A study of the nature of the business-to-business (organizational) marketplace, concentrating on those aspects that differentiate it from consumer markets. The major focus of the course is marketing strategy, starting with analysis of the market wants and segments, concepts of pricing, the distribution arrangements, and buyer/seller relations. In this last area, consideration will be given to service, personal selling, sales promotion, and advertising, as found in the organizational marketplace. At all times emphasis is given to relating business-to-business marketing strategy to basic concepts in underlying business disciplines. Lectures and case discussions are used heavily in the course.

### 304 The Management of Information Systems (3)

Prerequisites: (BA 109 or BA 224) and a minimum campus GPA of 2.0. Aspects and methods for managing the computer and information resources of organizations. Topics include aligning IS plans with corporate plans, MIS organizational structures, demonstrating the value of MIS to senior management, facility management, purchase

decisions, software acquisition, software metrics, project management, security issues, and economic evaluation, as they relate to information resources.

### 305 Management of Telecommunications (3)

Prerequisite: BA 103 and a 2.0 campus GPA. The technical and managerial aspects of telecommunications as they apply to the business environment are discussed. Issues include: communications components and services, local area network architecture, managerial implementations, organizational issues, and cost/benefit analyses.

### 306 Decision Support and Expert Systems (3)

Prerequisites: BA 252 and a minimum campus GPA of 2.0. Applications of decision support systems and expert systems in a business environment are studied. Relationships between decision support systems, expert systems, and database management systems are explored.

### 307 Management of End-User Computing (3)

Prerequisite: (BA 109 or BA 224) and a minimum campus GPA of 2.0. Issues in the management and practice of end-user computing are presented. The topics include information centers, Micro/Mainframe links, fourth generation languages, and end-user software packages.

### 308A Production and Operations Management (3)

Prerequisites: A minimum of 2.0 campus GPA and either (BA 252 and Math 100) or (Math 250 and Statistics 132). Application of the tools and techniques of statistical decision theory and operations research to production and operating problems. Emphasis is on the use of mathematical modeling and simulation techniques to analyze complex and ill-structured problems in large scale systems.

### 308B Production and Operations Management-Logistics (3)

Prerequisites: A minimum of 2.0 campus GPA and either (BA 252 and Math 100) or (Math 250 and Statistics 132). Detailed study of the logistical management of organizations. Topics include transportation, routing, facility location, fleet design, and capacity planning.

### 308C Production and Operations Management-Manufacturing (3)

Prerequisites: A minimum of 2.0 campus GPA and either (BA 252 and Math 100) or (Math 250 and Statistics 132). Study of manufacturing processes, manufacturing management, and strategic aspects of manufacturing. Topics include facility design and location, production planning and scheduling, inventory control, quality control, and technological innovation.

### 308D Production and Operations Management-Service System (3)

Prerequisites: A minimum of 2.0 campus GPA and either (BA 252 and Math 100) or (Math 250 and Statistics 132). The methods for managing the operations of service delivery systems, such as hospitals, banks, public safety, airlines, etc. Topics include facility design and location, queuing, and personnel scheduling.

### 309 Human Resource Management (3)

Prerequisites: MT105 and BA 210, and a 2.0 campus GPA.

## Business Administration

In-depth examination of selected human resource management issues from a contemporary manager's viewpoint. Topics examined include: employee selection, performance appraisal, training and development, compensation, legal issues, and labor relations.

### 310 Information Systems Design (3)

Prerequisites: BA 212, BA 215 and a minimum campus GPA of 2.0. System design, implementation, and methods of systems installation and operation are presented. A system development project is required.

### 311 Advanced Management and Organizational Behavior (3)

Prerequisite: BA 210 and a 2.0 campus GPA. Building upon BA 210, this course provides a more detailed examination of motivation, leadership, group process, decision-making, job design, and organizational development. In addition to providing more detail in terms of content, this course provides the student with considerable practical experience through the use of class exercises, case studies, and small group discussions.

### 312 Industrial and Labor Relations (3)

Prerequisite: BA 210 and a 2.0 campus GPA. Emphasis is on the dynamic relationship between management, employees, unions, and government as determinants in the efficient and effective use of human resources. Current issues and case materials are used to supplement text and lecture.

### 315 Marketing Management (3)

Prerequisites: MT 105, BA 206, one other three-hour marketing course, senior standing and a 2.0 campus GPA. An intensive analysis of major marketing decisions facing the firm, such as level, mix, allocation, and strategy of marketing efforts. Specific decision areas investigated include market determination, pricing physical distribution, product policy, promotion, channel management, and buyer behavior. Competitive, political, legal, and social factors that may affect such areas of decision are discussed. Cases, models, and problems are used heavily.

### 316 International Marketing (3)

Prerequisite: BA 206 and a 2.0 campus GPA. Marketing management problems, techniques and strategies needed to apply the marketing concept to the world marketplace. Understanding a country's cultural and environmental impact on the marketing plan is emphasized, as well as competing in markets of various cultures. Worldwide consumerism, economic and social development, the spread of multinational corporations, business ethics, and current economic and marketing issues are examined.

### 317 International Management (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Econ 52 and BA 210; or permission of the area coordinator and the instructor. A study of international business and international management practices. Topics covered include an introduction to international management and the multinational enterprise, the cultural environment of international management, planning in an international setting, organizing for international operations, directing international operations, international staffing, preparing

employees for international assignments, and the control process in an international context.

### 318 Industrial and Organizational Psychology (3)

(Same as Psych 318.) Prerequisites: Psych 201 or (MT 105 and BA 210). This course introduces the student to psychological research and theories pertaining to human behavior in the work setting. Topics covered include: selection, performance appraisal, training, leadership, motivation, job satisfaction, and organizational design.

### 319 Employee Training and Development (3)

Prerequisite: A minimum 2.0 campus GPA. In addition, BA 210 or permission of instructor. An intensive study of training in organizations, including needs analysis, learning theory, management development, and development of training objectives and programs. Projects and exercises are used to supplement the readings.

### 329 Business Forecasting (3)

Prerequisites: A minimum of 2.0 campus GPA and either (BA 252 and Math 100) or (Math 250 and Statistics 132). Further study of statistical tools for forecasting in a decision-making context. Topics include explanatory models (multiple regression), classical time series decomposition, and extrapolative techniques (exponential smoothing and Box-Jenkins procedures). In addition, methods for considering problems of intervention effects, seasonality, and collinearity will be discussed. Students will perform extensive analyses of time series data using computer packages.

### 330 Quality Assurance in Business (3)

Prerequisites: A minimum of 2.0 campus GPA and either (BA 252 and Math 100) or (Math 250 and Statistics 132). A study of statistical quality control concepts and procedures applicable to management systems, administrative activities, service industries, and nonprofit organizations. Some successful quality assurance programs will be examined.

### 331 Multivariate Analysis (3)

Prerequisites: A minimum of 2.0 campus GPA and either (BA 252 and Math 100) or (Math 250 and Statistics 132). A study of statistical techniques applicable to multivariable relationships.

### 332 Principles of Insurance (3)

Prerequisites: BA 204 and 2.0 campus GPA. This is a survey course intended to introduce students to the basic concepts of insurance. Topics include the nature of risks, types of insurance carriers and markets, insurance contracts and policies, property and casualty coverages, life and health insurance, and government regulations. The functions of underwriting, setting premiums, risk analysis, loss prevention, and financial administration of carriers are emphasized.

### 333 Life Insurance and Employee Benefits (3)

Prerequisite: BA 204 or equivalent and a minimum campus GPA of 2.0. This course will examine life insurance and employee benefits from the perspective of both the consumer and provider. Coverage will include an examination of the various types of life insurance

## Business Administration

products, aspects of life insurance evaluation, uses of life insurance in financial planning, and the uses and evaluation of health insurance. The course will also include an analysis of both retirement programs and social insurance, along with their respective tax and legal requirements.

### 334 Investments (3)

Prerequisite: BA 204 and a 2.0 campus GPA. Financial analysis of debt and equity instruments available on organized exchanges and in less tangible over-the-counter markets. Techniques of such analysis are presented in context with economic and management circumstances within the company, industry, and economy.

### 335 Financial Risk Management (3)

Prerequisites: BA 204 and a 2.0 campus GPA. A study of derivative securities (forward contracts, futures, swaps and options) used in financial risk hedging. Emphasis will be placed on financial innovations and methods for tailoring a preferred risk/return trade-off. In addition, a project or a simulation will be utilized to emphasize the effects of risk management on portfolio development.

### 337 Principles of Real Estate (3)

Prerequisites: BA 204 and a 2.0 campus GPA. As an introduction to the real estate industry, the course broadly explores all phases of acquisition, development and disposal of real property. Topics include legal requirements of contracts, property rights, valuation and appraisal techniques, marketing, brokerage operations and practices, mortgage financing, leasing and property management.

### 340A Financial Accounting and Reporting I (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30, BA 140, and 57 credit hours. Accounting theory and practice related to the acquisition, use, and disposal of assets (excluding long-term investments in securities). The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

### 340B Financial Accounting and Reporting II (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30 and BA 340A. Accounting theory and practice related to topics such as current and long-term liabilities, stockholders' equity, investments, statement of cash flows, and financial statement analysis. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

### 341 Financial Accounting and Reporting III (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30 and BA 340B. Accounting theory and practice related to topics such as dilutive securities, earnings per share, accounting for income taxes, leases, pensions, and partnerships. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

### 342 Financial Accounting and Reporting IV (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30 and BA 340B. Accounting theory and practice related to topics such as business combinations, consolidated

financial statements, multinational operations, foreign exchange transactions, and governmental and nonprofit organizations. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

### 343 Accounting for Governmental and Nonprofit Entities (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30, BA 140, and 57 credit hours. Principles of fund accounting and financial reporting for governmental and nonprofit entities.

### 344 Computer Applications in Accounting (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30, BA 103, BA 145, and BA 340A. Managerial and financial accounting applications of computers—budgeting, financial planning and analysis, and accounting information processing systems. Emphasis on development of systems for micro- and mainframe computers using high-level applications development software and on associated internal control and auditing problems.

### 345 Cost Accounting (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30, BA 145, and 57 credit hours. The study of the basic principles of cost determination for, and control of, manufacturing and distribution activities. Topics include job-order costing, process costing, cost allocations, and the development and use of standard costs within a system of absorption costing.

### 347 Income Taxes (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, Math 30, BA 145, and 57 credit hours. Fundamentals of federal income taxation. Topics include taxable entities, income, deductions, tax accounting methods, tax basis, and property transactions at both the conceptual and operational levels.

### 348 Auditing (3)

Prerequisites: A minimum 2.0 campus GPA. In addition, MT 105 and BA 340B. Fundamental auditing standards, audit reports, professional ethics, and procedures employed by the independent public accountant in the verification and analysis of financial statements.

### 349 Business Income Taxation (3)

Prerequisite: A minimum 2.0 campus GPA. In addition, BA 347. A study of the federal income taxation of partnerships and shareholders and corporations, including subchapter S (small business) corporations with emphasis on problems encountered in their formation, operation, liquidation, and sale.

### 350 Financial Policies (3)

Prerequisites: BA 204 and a 2.0 campus GPA. The intensification and application of the concepts developed in BA 204. Special emphasis is given to the development of top management policies and their application toward complex problems of finance. Techniques for identifying and dealing with these problems before they become acute will be investigated. Cases will be integrated with appropriate outside reading.

## Business Administration

### 351 Computer Applications in Finance (3)

Prerequisites: BA 103, BA 204, one 300-level finance course, and a 2.0 campus GPA. Financial problem solving and applications on the microcomputer. A project-oriented course with an emphasis on micro-based finance projects: present value/IRR analysis, duration, immunization, portfolio optimization, leasing, capital budgeting, financial forecasting, options, and futures.

### 355 Financial Services Industry and Instruments (3)

Prerequisites: BA 204 and a 2.0 campus GPA. The theory of financial services, instruments, and markets is discussed. In this framework, the valuation consequences of money and capital markets, corporate control, complex contracting, and regulatory environment are developed. Topics also include hedging, interest rate risk, deposit insurance, and financial instruments.

### 356 Commercial Bank Management (3)

Prerequisites: Econ 52, BA 204, and a 2.0 campus GPA. Corporate finance and microeconomics are applied to matters of importance to commercial bankers. Among the subjects treated are bank-asset portfolio construction, lending policies, liabilities management, bank capital structure, short-run cash management, financial market rates and flows, and quantitative models for bank management. Commercial bank management is analyzed from an internal viewpoint in terms of what bank managers should look for in asset management and why; what market conditions they should be aware of; and what techniques they can use to meet changing economic and financial conditions.

### 375 Operations Research (3)

Prerequisites: Math 100, BA 252, and a 2.0 campus GPA, or Math 250 and a 2.0 campus GPA. Applications of the theories and techniques of operations research to problems of business, government, and industry, with emphasis on the construction and utilization of quantitative decision models.

### 380 International Finance (3)

Prerequisites: Econ 51, BA 204 and a 2.0 campus GPA. A study of the international financial markets, instruments, and portfolio strategies. Topics will include international risks, foreign diversification and hedging techniques for international exposure. The use of derivative instruments and special markets are evaluated in the international corporate/investment setting.

### 385 Operations Research II (3)

Prerequisites: A minimum of a 2.0 campus GPA, BA 375 and either BA 250 or Statistics 132. Topics of special interest including mathematical programming, stochastic decision making, digital simulation, game theory, and other selected techniques. (Formerly Mathematical Programming).

### 390 Business Assessment Testing (0)

Prerequisite: Concurrent enrollment in BA 391. A one-time lab during which a major field exam in business is administered. Course graded on a Satisfactory/Unsatisfactory basis. Satisfactory grade required for graduation.

### 391 Strategic Management (3)

Prerequisites: Senior standing and BA 204, 206, 210, a minimum campus GPA of 2.0; and concurrent enrollment in BA 390. This is a capstone course drawing on the subject matter covered in prerequisite courses. Emphasis is on the formulation and implementation of corporate, business and functional strategies designed to achieve organizational objectives. Topics include the role of top management, globalization of business and ethical perspectives. Case studies and research reports may be used extensively. (It is preferred that this course be taken during the student's final semester.)

### 392 Entrepreneurship/Small Business Management (3)

Prerequisites: BA 156, 204, 206, 210, and a 2.0 campus GPA. This integrative general management course is designed to communicate the academic principles of business management applicable to solving of problems of small- and medium-size businesses and assist in their development. This course will provide a background in the forms of business, the development of business plans and systems integration, venture capital, accounting, procurement, promotion, financing, distribution and negotiations for initial organization, and operation and expansion of the firm.

### 395 Business Administration Seminar (1-10)

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 campus GPA. May be repeated for credit.

### 396 Internship in International Business (3-6)

Prerequisites: Econ 51 and 52, BA 140 and 145, an additional 12 hours in BA, concurrent enrollment in a UM overseas program; also a 2.0 minimum campus GPA. The internship will be a supervised field experience in a business/international organization at a foreign site. Students will work for 10 weeks on projects directed by host organization supervisors in consultation with a UM-St. Louis faculty member. Prior to the field experience students will receive training that includes familiarization with the language and practices of the country's business, the background of the host firm, and international information sources. The student will complete a written report of his/her project. Course may not be repeated for more than 6 hours credit.

### 405 Managerial Communication (3)

An analysis of business writing and speaking, and the communication conventions common in organizations. Emphasis is placed on developing skills critical to career advancement and necessary for effective organizational functioning. A second goal is to prepare students for assignments in other business courses. This course must be taken within the first 12 credit hours of study, preferably in the student's first semester.

### 408 Economics for Managers (3)

The first portion of this course introduces microeconomic analysis of consumers, firms, and government. The concepts and tools of economic analysis are applied to the production and distribution functions of organizations. The last portion is devoted to the macroeconomic influence of capital markets, the influence of interest rates, inflation, and the business cycle.



## Business Administration

### 410 Managerial Economic Analysis (3)

Microeconomic analysis of consumers, firms, and government. The concepts and mathematical tools of economic analysis are applied to the production and distribution functions of organizations.

### 411 Analysis of National Economic Environment (3)

The character and functioning of the national economic system; analyzing and forecasting fluctuations in national income and product, employment, and prices; the influence of monetary and fiscal policies. Emphasis is on the acquisition of knowledge concerning forces affecting all business firms.

### 412 Law, Ethics, and Business (3)

Analysis of the relationship between law and business with emphasis on the ability of, and extent to which, governments regulate business activities. Topics covered include the employer-employee relationship, protection of consumers, antitrust regulation, and securities law. Also discussed are ethical issues confronting management of the modern business enterprises.

### 415 Societal, Environmental, and Management Decisions (3)

Prerequisites: BA 410 and 411. An examination of the external relationships of a business enterprise with the broad and diverse interests of society. These are government and social forces that sometimes operate counter to the potential dictates of theoretical internal economic policies for an individual organization. The primary objective is to examine the increasingly complex set of interrelationships among business, government, other economic groups, and "the public." A series of major current problems, chosen to raise some of the major issues involved in these interrelationships, and in particular to explore the development of public policy on such problems.

### 416 International Finance, Investment, and Commercial Relations (3)

Prerequisite: BA 450. The objectives of this course are to: provide a knowledge of the various international markets and securities; gain insight into the complexities of international risks when investing; and, study the use of international hedging vehicles to manage foreign exchange risk.

### 417 International Business Operations (3)

Prerequisite: BA 416. Functional management within multinational corporations; case studies of operations abroad; and focus on managerial decision making.

### 418 Governmental Budgeting and Financial Control (3)

(Same as Public Policy Administration 418.) Prerequisite: Accounting 440. A study of municipal and federal financial control and budgeting procedures with emphasis on public policy. The impact of financial control on top management decisions and the effect of budget strategies on the allocations of public funds.

### 420 Seminar in Business Administration (3)

An intensive study of a specific area of business administration of some specific business or economic phenomenon, or a specific problem or theory. Several

different courses may be offered under this course number.

### 428 Current Topics in Business Administration (1)

Examination of a Business Administration topic of current interest. Instruction by regular graduate faculty, frequently supplemented by outside authorities (practicing managers, government officials, consultants, visiting faculty, etc.). Course may be taken three times for credit.

### 430 Individual Research (1-10)

Prerequisite: Consent of instructor and graduate director. Special individual research topics under the guidance of a specific professor.

### 490 Strategy Formulation and Implementation (3)

Prerequisites: Finance 450, Management 460, Marketing 470, and Management Science/Information Systems 482. Graduate program capstone course examining concepts and methods that integrate functional areas of business. The perspective is that of general management charged with directing the total enterprise. Interactions between the environment, organization, strategy, policies and the implementation of plans are explored. Special emphasis is given to globalization of business and ethical perspectives. This course should be taken during the semester prior to graduation. In no case may it be taken sooner than two semesters prior to graduation.

## Accounting (400-level)

### 419 Management Accounting and Auditing in Governmental and Not-for-Profit Entities (3)

Prerequisites: BA 418 and Accounting 441 or consent of instructor. A study of accounting for use in the public sector and in not-for-profit organizations. Cost behavior controllability, and traceability concepts for management planning and control will be investigated, as well as auditing in the public sector.

### 421 Professional Accounting Research (3)

Prerequisite: BA 341. Discussion of the research tools and methods available to resolve questions concerning accounting standards and practices. Critical analysis of topics of current interest and importance in accounting practice.

### 422 Seminar in Governmental and Non-Profit Accounting (3)

Prerequisites: BA 418. Consideration of the positions of authoritative groups concerning accounting theory and practice for governmental and nonprofit entities. Evaluation and critical analysis of these positions in view of current accounting literature and research finding.

### 431 Tax Research (3)

Prerequisite: BA 347 or consent of instructor. A discussion of the research tools and methods available to resolve questions pertaining to the tax laws. Addresses techniques for locating, verifying, and evaluating authority. Students will be expected to complete a number of tax research and writing problems throughout the semester. A basic understanding of the federal income tax law is presumed.

## Business Administration

### 432 Taxation of Estates, Gifts, and Trusts (3)

Prerequisites: BA 347 and Accounting 431, or consent of instructor. Consideration of the transfer tax systems in general; the elements of the gross estate (includible versus nonincludible property), deductions (including the marital deduction) and credits; the gift tax and what it embraces; basic estate planning considerations; and income taxation of grantor and nongrantor trusts.

### 433 Taxation of Corporations and Shareholders (3)

Prerequisites: BA 347 and Accounting 431, or consent of the instructor. Addresses tax aspects of the formation, operation, and liquidation of a corporation, as well as changes in the corporate structure through division or reorganization. Topics include establishment of the corporate structure, distributions to shareholders, and stock dividends and redemptions.

### 434 Taxation of Partnerships and Partners (3)

Prerequisites: BA 347 and Accounting 431, or consent of instructor. Addresses tax aspects of the formation, operation, and termination of a partnership. Topics include special allocations and disposition of a partnership interest. Compares partnerships with Subchapter S corporations.

### 435 Tax Practice and Procedure (3)

Prerequisite: BA 347 or consent of the instructor. Addresses the audit process; practice before the Internal Revenue Service; administrative appeals; the notice of deficiency; waivers and extensions; amended returns and claims for refund; statute of limitations on deficiencies and overpayments; and taxpayer and tax return preparer penalties.

### 436 Advanced Topics in Taxation (3)

Prerequisites: BA 347 and Accounting 431, or consent of instructor. Addresses various topics selected by the instructor, such as property transactions, compensation plans, charitable contributions, the alternative minimum tax, and tax planning.

### 439 Seminar in Taxation (3)

Prerequisite: At least nine hours of 400-level tax courses including Accounting 431 or consent of the instructor. Addresses tax policy topics drawing on literature from accounting, economics, and public finance. Other topics of current interest will be selected by the instructor.

### 440 Financial and Managerial Accounting (3)

This course provides an introduction to accounting, with emphasis on preparation of financial statements for external parties (financial accounting) and accumulation of cost information to aid internal planning and control (managerial accounting). Topics covered include measurement of assets and liabilities, revenues and expenses, the accounting cycle, financial statements, cost terminology, cost behavior, product costing, and relevant costs for decision making. This course provides the necessary background for Accounting 442 (Accounting for Decision Makers).

### 441 Concepts in Management Accounting (3)

Prerequisites: Math 101 or Math 102 or Econ 351 with a minimum grade of "C" and Accounting 440. The development, interpretation, and uses of accounting reports and

supplementary information for management planning, control, and decision making. Emphasizes the application of relevant cost behavior, control, and traceability concepts in the preparation of internal accounting reports, with a secondary emphasis upon product costing techniques as appropriate to financial accounting needs. Topics include break-even analysis, operational budgeting, direct costing, absorption costing, standard costs and variance analysis, business segment analysis, responsibility accounting, distribution cost accounting, and gross profit analysis.

### 442 Accounting for Decision Makers (3)

Prerequisites: Accounting 440 or the equivalent. This course builds on the foundations covered in Accounting 440, emphasizing the use of accounting information for making operating, investment, and strategic business decisions. Topics covered include interpretation and analysis of financial statements, uses of accounting information by capital market participants, contribution margin analysis, tactical decision making, pricing and product decisions, budget analysis, and performance measurement.

### 443 International Accounting (3)

Prerequisite: BA 341. Accounting practices for multinational businesses. Discussion of comparative financial accounting practices, the development of international accounting standards, and managerial accounting practices related to multinational operations.

### 445 Seminar in Financial Accounting Theory (3)

Prerequisite: Accounting 421. A study of theoretical issues, such as the foundations of accounting standards and the usefulness of accounting information. Analysis of how elements of accounting theory relate to current issues facing the profession.

### 446 Topics in Professional Accounting (3)

Prerequisites: Accounting 440 and Management Science/Information Systems 481. An investigation of the impact of past, current, and prospective developments upon the role of the professional accountant. Topics include professional ethics, generally accepted auditing standards, types of auditor's opinions, internal control, and internal auditing; the use of probability theory and statistical sampling methods in the conduct of an audit; management advisory theory and statistical sampling methods in the conduct of an audit; management advisory services; auditing in mechanized and electronic data-processing systems; the requirements imposed by the S.E.C. and other regulatory agencies; and the legal responsibilities.

### 447 Accounting Systems for Management Planning and Control (3)

Prerequisites: Accounting 441 and Management Science/Information Systems 481, or permission of instructor. A study of advanced managerial accounting techniques useful in facilitating the planning and control process in modern organizations. Emphasis on the implementation and administration of these techniques, their integration with management information systems, and the organizational role of the corporate accountant.

## Business Administration

### **448 Seminar in Advanced Theory and Contemporary Issues in Accountancy (3)**

Prerequisite: Accounting 445 and Management Science/Information Systems 481. Examines the theory underlying accounting practice. The course includes an in-depth analysis of contemporary developments in financial accounting with a succinct overview of accounting research paradigms.

### **449 Systems Auditing (3)**

Prerequisites: Accounting 440, Management Science/Information Systems 480, or consent of instructor. Study of techniques involved in the control and audit of computer-based accounting information systems. Emphasis on the review of internal controls at operational and administrative levels and on computer-assisted audit techniques.

## Finance (400-level)

### **450 Financial Management (3)**

Prerequisites: Accounting 440, Management Science/Information Systems 481 (or BA 131), BA 410 (or Econ 51 equivalent), and BA 411 (or Econ 52 equivalent). A consideration of the methods used to determine the firm's need for short- and long-term capital, the possible means of securing such capital once a need has been determined, and the techniques for judicious use of the capital in terms of asset investment and asset management decisions. Topics include the finance function, operating and financial methods of capital budgeting decisions, cost of capital, dividend policy, long-term financing, management of current assets, intermediate and short-term financing, and corporate valuation in mergers and consolidation.

### **451 Advanced Financial Management (3)**

Prerequisites: Finance 450 and Management Science/Information Systems 481. Exposure to recent financial management theory through selected readings. Financial management problems are considered by the use of cases and simulation models. An original research project under the supervision of the instructor is required.

### **455 Security Analysis (3)**

Prerequisites: Finance 450 and Management Science/Information Systems 481. An in-depth study of techniques used in evaluating various financial assets as investment opportunities. Financial assets studied include common stock, preferred stock, and fixed income securities. Other related topics such as sources of investment information and current market trends are discussed.

### **456 Capital Markets and Financial Institutions (3)**

Prerequisite: Finance 450. The theory of financial intermediation is discussed in the context of banks, savings and loans, public and private insurance companies, and investment banking. In this framework, the relationship with money and capital markets, markets for corporate control, complex financial contracting, and regulatory environment is developed.

### **457 Introduction to Derivatives (3)**

Prerequisite: Finance 450. An in-depth study of advanced risk management techniques utilizing futures, forwards,

options, swaps and synthetic securities. A broad study of speculative market characteristics will be reviewed in conjunction with a variety of financial innovations. Portfolio management theories combined with mathematical models will be utilized to demonstrate the effects of hedging techniques and portfolio insurance.

### **458 Commercial Bank Management (3)**

Prerequisite: Finance 450. This course explores the various bank management techniques required to manage a modern commercial bank in a rapidly changing environment. Topics include asset and liability management, capital adequacy, bank holding companies, profitability, and bank market structure and regulation.

## Management (400-level)

### **460 Organizational Behavior and Administrative Processes (3)**

(Same as Public Policy Administration 460.) The theoretical and research contribution of the behavioral sciences to management and administration are examined and applied to selected organizational situations. Areas to be considered from the standpoint of both individual and organizational performance are communication, motivation, conflict, decision making, goal setting, leadership, organizational design, climate, development, and control. Utilizing a systems perspective, the course attempts to develop in each student an ability to analyze and solve organizational problems.

### **461 Managing Human Resources (3)**

Prerequisite: Management 460. In-depth examination of selected human resource management issues from a contemporary manager's viewpoint. Topics examined include: personnel planning; employee selection; performance appraisal, training, and development; compensation; legal issues; discipline; and labor relations. The course examines these topics as they relate primarily to operational activities in organizations.

### **462 Advanced Organizational Behavior and Administrative Processes (3)**

Prerequisite: Management 460. An in-depth examination of selected organizational and individual theories affecting behavior and operating performance. Organizational structure and design, formal and informal organization, decision making, communications, and motivation are analyzed for their organizational impact. The course seeks to develop further the ability to analyze and evaluate organizational processes and individual behavior.

### **463 Organizational Training (3)**

Prerequisite: Management 460 or Management 461 or permission of department. An intensive study of training and developmental methods/issues in organizations. Topics include needs analysis, learning theory, training techniques, evaluation, and management development. Other topics include memory, training objectives, and training facilities. Projects and exercises are used to supplement reading and lecture.

## Business Administration

### 464 Compensation and Benefits (3)

Prerequisites: Management 461 and Management Science and Information Systems 481. An in-depth study of compensation and benefit programs in organizations. Topics include job evaluation, incentive systems, performance appraisal, and employee benefits. Discussion of relevant laws, such as the Equal Pay Act, is also provided.

### 465 Union-Management Relations and Collective Bargaining (3)

Prerequisites: Management 460 and BA 412. Primary concern is with the setting and the dynamics of contract negotiation and administration. Emphasis is on the development of insight and understanding of the forces affecting the decisions of the parties to a labor contract within the context of the social, political, and economic environment of the organization. A dynamic approach is taken to examine difficulties that arise in attempting to administer a collectively established relationship between employer and employee.

### 466 Selected Topics in Human Resource Management (3)

Prerequisites: Management 461 and Management Science/Information Systems 481. This course provides an advanced treatment of selected human resource management topics. Primary focus is on topics such as job analysis, pre-employment screening devices, test validation, and civil rights laws. Other topics, such as performance appraisal, recruitment, promotions, and terminations may be covered. Various class projects may be assigned to supplement readings, lectures, and discussion.

### 467 Dynamics of Interpersonal Relations (3)

Prerequisite: Management 460 or academic background in general psychology. The self-concept, personality dynamics, and mechanisms of adjustment. Catalysts and barriers to effective communication. Examination of the functional relationship between ego-needs, perceptual distortion, and stereotypical thinking. Roleplaying, the resolution of role-conflict, and objective self-evaluation. The development of cooperation and trust as a prerequisite to effective human relations.

### 468 International Business Strategies (3)

Prerequisite: BA 411 and Accounting 440. This course focuses on those managerial issues which follow from the definition and implementation of corporate strategy for worldwide operations, as distinguished from purely domestic firms or those only marginally involved in international activities. It aims to develop an appreciation for the unique competitive, sociocultural and political environments in which international business takes place and the skills required to deal with these challenges.

## Management Science/Information Systems (400-level)

### 424 Seminar in Current Management Information System Topics (3)

Prerequisite: Management Science/Information Systems 488 or Management Science/Information Systems 491. Advanced topics of current interest in management information systems. Content to be determined each

time the course is offered. May be repeated for credit.

### 425 Advanced MIS Applications (3-6)

Prerequisite: Management Science/Information Systems 488 or permission of instructor. The course requires a project through which the student applies MIS concepts to a real problem; a written, professional quality report will be required. The course material must build upon, not duplicate, material in the MIS curriculum. The course may be repeated for credit with the permission of the MS/IS area. Consent of the MS/IS area for the topic and number of hours is required.

### 480 Management Information Systems (3)

(Same as Public Policy Administration 480.) Prerequisite: Econ 301. An overview of management information systems is presented, including various information systems concepts and technologies. Students are introduced to a main frame operating system, a microcomputer-based operating system, and a programming language. Students are also exposed to several common microcomputer-based software packages.

### 481 Statistical Analysis for Management Decisions (3)

Prerequisites: Management Science/Information Systems 480 (may be taken concurrently) and Econ 351 with a minimum grade of "C." The role of statistical evidence in the formation of inference and in the selection of strategies in solving business problems is developed. Probability and probability distributions are studied as a basis of statistical inference. An introduction to multivariate analysis is provided, which includes analysis of variance and regression methods.

### 482 Management Science Methods (3)

Prerequisite: Management Science/Information Systems 483. This course provides a working knowledge of management science techniques. It emphasizes analytical approaches to solving business problems, construction of mathematical models, and manipulation of model variables for managerial decision making. Topics include mathematical programming, including integer and network models, heuristics, and simulation models.

### 483 Production and Operations Management (3)

Prerequisite: Management Science/Information Systems 480 and 481. This course discusses issues related to the creation and delivery of goods and services. Topics include the design of production processes, the layout and location of facilities, forecasting, scheduling, inventory control, queuing, materials planning, and quality control. Analytical techniques such as linear programming are used in studying these problems.

### 484 Business Programming and File Systems (3)

Prerequisite: Management Science/Information Systems 480 (may be taken concurrently). The course provides a study of business-oriented programming. The programming language COBOL will be introduced and studied in detail. Emphasis will be on program definition and the use of file structures in business-oriented applications.

## Business Administration

### **485 Theoretical Foundations of Management Information Systems (3)**

Prerequisite: Management Science/Information Systems

480. Students are exposed to current Information Systems literature and major theoretical issues in Information Systems. Coverage stresses the fit between information systems and the organization. Topics include Management Information Systems development, end-user computing, systems architecture, decision support systems, and planning and control.

### **486 Advanced Statistical Methods for Management Decisions (3)**

Prerequisite: Management Science/Information Systems

481. A study of statistical methods applicable to specialized areas of statistical analysis. Topics include Markov processes, distribution-free tests, sampling theory and methods, experimental design, time series analysis, and spectral analysis.

### **487 Advanced Operations Research Applications (3)**

Prerequisite: Management Science/Information Systems

482. Application of operations research techniques to business problems. After a brief review of these techniques, followed by an examination of typical applications reported in the literature, the major portion of the term is spent in analyzing and solving an actual business operations research problem. A team approach is used, with groups of two or three students responsible for finding and solving an operations research problem in a local company. Primary emphasis is placed on the use of operations research techniques to solve management problems.

### **488 Information Systems Analysis (3)**

Prerequisite: Management Science/Information Systems

484. The theory and practice of structured analysis are presented. Topics may include: traditional vs. structured analysis methods, requirements analysis, user/analyst interaction, investigation of existing systems, human/machine interfaces, CASE tools, and workbenches.

### **489 Database Management Systems (3)**

Prerequisite: Management Science/Information Systems

484. The course introduces the concepts of Database Management Systems for business applications. Issues in database architecture, design, administration, and implementation are covered. Projects are assigned on a mainframe DBMS and a microcomputer-based DBMS to illustrate the concepts and applications.

### **491 Computer Systems: Architecture and Programming (3)**

Prerequisite: Management Science/Information Systems

484. This is an introduction to concepts of comparative computer architecture and its relationship to the operating system software which augments the architecture. An assembly language is studied.

### **492 Information Systems Management (3)**

Prerequisites: Accounting 440, Management 460, Marketing

470, and Management Science/Information Systems 485. The course covers the management of computer-based information. Issues relating the decisions of the chief information officer to the campus strategic planning of

the organization are discussed. Further topics may include: cost and value of information, hardware/software evaluation and acquisition, systems implementation, performance measurement and evaluation, and organizational and behavioral issues.

### **493 Simulation for Managerial Decision Making (3)**

Prerequisites: Management Science/Information Systems

481, 482, and 485. Introduction to simulation as a managerial decision-making aid. Application of simulation to a number of management science-oriented problems. The course introduces and requires use of a simulation language.

### **494 Advanced Operations Research Topics (3)**

Prerequisite: Management Science/Information Systems

482. Advanced topics from such areas as mathematical programming, stochastic processes, decision theory, or game theory are studied in depth.

### **495 Information Systems Design (3)**

Prerequisite: Management Science/Information Systems

488. This course builds upon the analysis techniques presented in Management Science/Information Systems 488. It requires the student, usually working in a group, to design and implement a system in a real-world environment. Advanced design concepts are presented to support the students in their project work.

### **496 Telecommunications: Design and Management (3)**

Prerequisite: Management Science/Information Systems

480. The topic of telecommunications is addressed from both a technical and managerial viewpoint. In particular, the course will address issues such as communications components and services, local area network architecture, managerial implementations, organizational issues, and cost/benefit analyses.

### **497 Expert Systems (3)**

Prerequisite: Management Science/Information Systems

485. The course introduces the application of expert systems in the business environment. Current applications in business and development tools are discussed. In addition, topics such as knowledge representation methods, inference engines, knowledge acquisition, neural networks and the handling of uncertainty are addressed. A (group) project is required.

### **498 Fourth Generation Languages and End User Computing (3)**

Prerequisite: Management Science/Information Systems

480. The course presents fourth generation languages and covers managerial issues of end-user computing. A specific fourth generation language will be introduced and programming applications will be assigned. In addition, the course will explore the problems of providing and managing micro-to-mainframe links, end-user software packages, and security/confidentiality issues.

### **499 Management Information Systems Thesis Research (1-6)**

Credit to be awarded only upon successful defense of thesis.

## Business Administration

### Marketing (400-level)

#### 470 Contemporary Marketing Concepts (3)

Prerequisites: Accounting 440 and BA 410. Designed for students with no prior course work in the field of marketing. A wide spectrum of marketing institutions and activities is covered. The impact of marketing on the total firm, the economy, and society in general is assessed. The course is intended to develop and organize the fundamental marketing concepts necessary to an analytical study of consumer behavior, the economic environment, and four managerial aspects of marketing. The acquisition and utilization of marketing research data for problem solving is stressed. Relation and integration of basic marketing knowledge to the successful development of sound marketing policy, planning, and strategy is developed.

#### 471 Marketing Planning and Strategy (3)

Prerequisite: Marketing 470. Emphasizes the development of a total marketing program through an analytical study of the marketing-mix, the diagnosis of the business situation, along with the influence of exogenous variables and the development of an effective campus marketing strategy. Stresses importance of an integrated marketing plan and utilizes modern decision-making tools. Supplementary readings, journal articles, and current periodicals are used to place the theoretical framework of the course into the contemporary environment of the market place.

#### 475 Consumer Motivation and Behavior (3)

Prerequisite: Marketing 470. An analysis of the socio-psychological foundations of consumer behavior including personality differences, needs and wants, status symbols, social change and mobility, and fads and fashions. Consumer spending and saving habits, product preferences, leisure-time patterns, shopping behavior, and motivation research also are examined for their impact on advertising, selling, and marketing management.

#### 476 Marketing Communications (3)

Prerequisite: Marketing 470. Deals with managerial decision making by placing particular emphasis on assimilating and integrating all forms of marketing

communication in the development of promotional policies, plans, and procedures. Course approach is analytical rather than descriptive in investigating the areas of advertising, public relations, sales management, packaging, and other forms of demand stimulation.

#### 477 Product Planning and Pricing (3)

Prerequisite: Marketing 470. A study of product management focusing on new product development. The steps of the new product development process are covered in detail. Current issues in new product research are discussed. Projects are emphasized and involve the application of several of the key techniques to the student's own new product ideas. Selected pricing topics are also covered, such as measuring consumer price sensitivity.

#### 478 Marketing and Business Research (3)

Prerequisites: Marketing 470 and Management Science/Information Systems 481. A broad approach to marketing research as a model for acquiring, retrieving, and analyzing decision-making information. Includes market measurement, evaluation of sales, and cost effectiveness, sales forecasting, and primary marketing research studies aimed at solving specific problems. Emphasis is placed also on building a theoretical and analytical framework to provide flexibility in the design of marketing experiments and in judging recent research innovations.

#### 479 Marketing Channel Strategy (3)

Prerequisites: Marketing 470 and Management Science/Information Systems 482. A study of the marketing institutions involved in the distribution of goods and services, industrial and consumer markets, as well as the establishment and integration of marketing channels. The planning and analysis of the macrodistribution and microdistribution systems which contribute to creation of optimal time and place utility. Some attention is paid to quantitative applications to marketing situations including simulation and logistics.

SCHOOL OF  
EDUCATION

UM-St. Louis 1996-97 Bulletin





## Teacher Education

### Accreditation

The University of Missouri-St. Louis, through the School of Education, is accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary and secondary school teachers and school service personnel.

## Teacher Education:

### Degrees and Areas of Concentration

The School of Education offers work leading to the B.S. in Education with specialization in any of the following: early childhood education, elementary education, special education, and secondary education. Courses are also available for those seeking certification for middle school. In cooperation with other Schools and Colleges of the University, the School provides a program for students pursuing other degrees but planning on a teaching career in secondary education. The School is divided into three departments: Behavioral Studies; Educational Studies; Elementary, Early Childhood Education, and Physical Education. Each offers course work toward one or more of the above areas.

### Course Designations in the School of Education

The following abbreviations are used to indicate instructional areas in the course listings and descriptions in the School of Education.

Adult Education Courses (ADU ED)  
 Counselor Education Courses (CNS ED)  
 Early Childhood Education Courses (ECH ED)  
 Educational Administration Courses (ED ADM)  
 Educational Foundations Courses (ED FND)  
 Educational Psychology Courses (ED PSY)  
 Educational Research and Evaluation Methods (ED REM)  
 Educational Technology Courses (ED TEC)  
 Elementary Education Courses (ELE ED)  
 Physical Education Courses (PHY ED)  
 School-Wide Education Courses (EDUC)  
 Secondary Education Courses (SEC ED)  
 Special Education Courses (SPC ED)

### General Education Requirements

Students in the School of Education must meet University and departmental general education requirements specified for their degrees.

### ACADEMIC RESIDENCE

Students must be in residence for 30 of the last 30 semester hours of graded credit. Courses graded on a satisfactory/unsatisfactory basis are not accepted within these last 30 semester credit hours. This residency requirement applies to students seeking degree or teacher certification.

## Admission Policies

**Types of Admission** Students who wish to become teachers must be aware of two types of admission that pertain to them. One is admission to the School of Education, the other is admission to the Teacher Education Program. These serve completely different purposes and are separate procedures handled by different offices.

**Admission to the School of Education** After completing two years of college work at an accredited institution, students intending to teach in elementary, early childhood, middle school/junior high, secondary, special education, business education, or physical education settings must apply for admission to the School of Education. However, Evening College students do not need to apply to the School of Education, but should declare their major as education in the Evening College office when they have accumulated 40 credit hours. Students intending to teach in secondary-school classrooms other than specified above may elect to pursue the B.S. in Education or to receive degrees from other University Colleges and Schools and also meet teacher certification requirements. Students admitted to the School must also be admitted to the Teacher Education Program.

### Application to the School of Education

Application to the School is processed through the Admissions Office. Eligibility is based upon the following criteria:

- 1) Satisfactory completion of two years of college work, with a minimum of 60 semester hours with a grade point average of 2.0 or above.
- 2) Having no more than nine hours of deficiencies in general education.
- 3) Completion of the specific prerequisites and/or other special requirements of the curriculum areas for which students are applying.

**Attention Education Majors:** Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

## Admission to the Teacher Education Program

All students (pre- and post-degree) who wish to become teachers must be admitted to the Teacher Education Program regardless of the College or School in which they are enrolled. The admission program requires student action at the following two levels.

### Level I Application to the Teacher Education Program

Applications to the Teacher Education Program are processed through the Office of Teacher Education. Eligibility is based upon fulfillment of the following requirements:

- 1) Students not previously admitted to the Teacher Education Program (acceptance of 60-hour form) must submit qualifying scores on the College Basic Academic Subjects Evaluation (C-BASE) in the areas of English, Writing, Mathematics, Science, and Social Studies as mandated by the Missouri Excellence in Education Act of 1985. Consult the Office of Teacher Education, School of Education, for test descriptions, cost, required scores, dates of administration, retest policies, etc. Acceptable C-BASE scores are required in addition to acceptable ACT or SAT scores. (C-BASE not applicable to students with a bachelor's degree.)

## Teacher Education

- 2) Scored either 20 on the ACT Composite (18, when taken prior to 11-1-89) or 800 on the SAT (verbal plus math)\*.
- 3) Completed 60 hours of college or university courses (at UM-St. Louis or another accredited school).
- 4) Accumulated a grade point average of 2.5.
- 5) Completed EDUC 101, Introduction to Classroom Teaching, or the equivalent, with a grade of C or better. (Not applicable for secondary education or early childhood education majors).
- 6) Completed ED FND 111, The School in Contemporary Society, or the equivalent, with a grade of C or better.
- 7) Received screening test in hearing (at nominal cost at the UM-St. Louis Health Center or off campus at personal expense).
- 8) Received screening test in vision (at no cost at UM-St. Louis Optometry Clinic or off campus at personal expense).
- 9) Agreed to adhere to ethical codes which have particular pertinence during clinical experiences. (These codes are available in the Office of Teacher Education, School of Education.)
- 10) Agreed to subscribe to a standard of preprofessional behavior which will enhance greater self-awareness if social or emotional difficulties arise which may affect future teacher effectiveness. (This standard is available in the Office of Teacher Education.)
- 11) Submitted an Affidavit of Moral Character, notarized by a Notary Public.

### \* Policy for Students Scoring Below ACT and SAT Qualifying Requirements

Students who do not achieve satisfactory scores of 20 on the ACT or 800 on the SAT may re-take the test(s) until the requirement is met. Students who initially score below the required ACT score of 20 or SAT score of 800 may petition the Dean of Education to attest that basic educational competencies are met if their grade point average from 60 hours of college or university courses is at least 2.50 and they have performed satisfactorily on a norm-referenced achievement test other than ACT or SAT. Students must produce evidence that the ACT or SAT was initially completed and a score recorded.

Students with a documented disabling condition, preventing valid test administration of the ACT or SAT, may be evaluated for basic educational competencies through appropriate testing instruments and/or procedures designated and approved by the Dean of the School of Education.

Students who do not meet the initial ACT or SAT qualifying scores may seek assistance in upgrading basic competencies through contact with one or more of the following University of Missouri services:  
 Center for Academic Development  
 Women's Center  
 Counseling Service  
 Veteran Affairs Office  
 Video Instructional Program  
 Horizons (Peer Counseling Center)  
 In addition, assistance may be available through correspondence courses, University of Missouri-Columbia. Copies of this policy are available in the Office of Teacher Education.

## Student Teaching

Application to the Student Teaching Program The application for student teaching is a two part process which begins two semesters prior to the semester in which the student plans to do student teaching.

Deadlines	Pre-application	Formal Application
Fall student teaching	1st week in December	Beginning of winter semester prior to student teaching
Winter student teaching	1st week in August	Beginning of fall semester prior to student teaching

**Step I Pre-application:** Students must submit both of the following items to the Office of Teacher Education, Room 155, Marillac Hall:

- 1) an autobiography and philosophy of education written according to guidelines on reserve (number 456) in the education Library; and
- 2) proof of formal acceptance to the Teacher Education Program (approved 60 hr. form), required both pre- and post-degree students.
- 3) Students will then sign an application list and receive a ticket to attend the formal application meetings which will be held at the beginning of the semester.

**Step II Formal application:** The Students:

- 1) must attend one of three formal application meetings offered at the beginning of each semester to receive application materials. Dates and times will be posted on the Student Teaching Bulletin Board in Marillac Hall;
- 2) will be admitted to the meetings by ticket only; autobiographies and philosophies will be returned at this time. (See Pre-application above);
- 3) will complete and return applications within two weeks after the meetings to the Office of Teacher Education, room 155 Marillac Hall. Applications will not be accepted after the deadline.

Upon receipt, formal applications for both pre- and post-degree students are checked to ensure they have met the following requirements:

- 1) Full admission to the teacher education program for both pre- and post-degree students.
- 2) Completion of 90 hours of approved course work at the time of application.
- 3) A cumulative grade point average of 2.5 or above by the semester prior to the one in which students plan to do their student teaching. The 2.5 cumulative grade point average must be maintained in order to graduate with a B.S. in education degree and/or be certified to teach in the state of Missouri.
- 4) Completion of English 210, Advanced Expository Writing, with a grade of C- or better.
- 5) Completion of Comm 40, Introduction to Public Speaking, with a grade of C- or better.
- 6) Completion of general education requirements and near completion of course requirements in the teaching major.

## Teacher Education

- 7) A grade of C or better in all professional education courses so designated. Lists of these courses are available in the Office of Teacher Education and from advisers.
- 8) Satisfactory recommendations by students' teaching area representatives in the teacher education program.
- 9) Completion at UM-St. Louis of no fewer than 12 hours of approved course work.
- 10) Grade point average of 2.5 in the teaching field (secondary education students only).
- 11) Completion of prerequisite courses in professional education and psychology.

The student teaching experience in the Early Childhood, Elementary Education, Middle School, Physical Education, and Special Education certification programs has been strengthened by providing assignments in two different school settings and appropriately increasing the amount of time devoted to it. Students will be expected to do student teaching on a full day basis for an entire semester.

Student teaching, which must be done in residence, is not offered during the summer except for people who hold a Missouri teaching certificate and want to add another Special Education area for certification. Secondary student teaching in science education, mathematics education, and foreign language education is offered only during the Winter Semester. Secondary education majors student teach for an entire semester, full days.

While enrolled in student teaching, students may not carry more than 15 credit hours. When students are admitted to student teaching, the Office of Teacher Education arranges assignments with appropriate school district officials. Students should not contact school officials or teachers about possible student teaching assignments. Failure to observe this request is a basis for removal from student teaching.

Upon special request student teachers may be placed in outlying areas provided there are three students located in approximately the same geographic area. Individual requests cannot be honored.

Students who withdraw from student teaching at any time after being admitted for a given semester must formally reapply during the designated application period for the subsequent semester in which they plan to do their student teaching. This must be done in person in the Office of Teacher Education. Students who withdraw in this way three times must wait a minimum of one calendar year after the third such withdrawal before they may re-apply for student teaching. At the time of re-application they must present evidence that the circumstances which prevented them from continuing in student teaching during their last admission no longer pertain. In all instances of re-application, students must meet the requirements in effect for the semester during which they plan to do their student teaching.

Student teachers who fail the course or are allowed to withdraw because they are failing to meet minimum requirements must wait at least one full semester and

fulfill the remedial requirements established at the time of the failure or withdrawal before they may re-apply for admission to student teaching. The remedial requirements will be determined by the Office of Teacher Education after consultation with the cooperating teachers, University supervisors, and student teachers involved. The students must provide appropriate evidence that the remedial requirements have been met at the time they re-apply for admission to student teaching. It is understood that meeting the remedial requirements does not guarantee success in the subsequent student teaching experience.

For further information regarding certification, contact the Office of Teacher Education, 155 Marillac Hall.

## Application for Degree and/or Certificate

### Bachelor of Science in Education

Candidates for the B.S.Ed. degree must complete degree and certificate application forms in the Office of Teacher Education when they apply for admission to student teaching or during the semester before the one in which they expect to finish degree requirements.

Evening College students should complete degree application forms in the Evening College Office and certification application forms in the Office of Teacher Education.

### Bachelor of Arts

Students seeking the B.A. degree with teacher certification must complete a state certification form with the Office of Teacher Education during the last month of the semester in which their requirements will be completed.

### Certification

In cooperation with the Missouri State Department of Elementary and Secondary Education, the School of Education is responsible for issuing teaching certificates to students completing B.S. in education degree requirements, recommending for certification students completing degrees in other UM-St. Louis Colleges and Schools, as well as all certification requirements, advising, and recommending for certification those postdegree students who meet requirements.

Beginning September 1, 1990, all individuals must pass the appropriate Praxis/National Teacher's Examination in order to meet graduation and/or certification requirements.

## Graduate Studies in Education

By completion of specified undergraduate courses at the University of Missouri-St. Louis, certification may be obtained in the following fields: elementary education; early childhood education; middle school/junior high; music education; physical education; special education: behavioral disorders (BD), educable mentally handicapped (EMH), learning disabilities (LD); as well as the secondary education areas of biology, business, chemistry, English, foreign languages (French, German, Spanish), mathematics, physics, social studies, and speech/theatre. Graduate programs leading to certification in counseling; reading; psychological examiner; school administration (elementary and secondary principal, school superintendent); and special education: behavioral disorders (BD), learning disabilities (LD), educable mentally handicapped (EMH), and early childhood special education ECSE) are also available; see Graduate Studies sections for each department of the School of Education.

## Graduate Studies

### Degrees and Areas of Emphasis

M.Ed. programs are offered in counseling, educational administration, elementary education, secondary education, and special education. Within the counseling program are the emphasis areas of elementary, secondary, and general counseling. Within the Educational Administration program are the emphasis areas of community education, elementary administration, and secondary administration. Within the Elementary Education program is the emphasis area of reading. Within the Secondary Education program are the emphasis areas of adult education, curriculum and instruction, and reading. Within the Special Education program are the emphasis areas of behavioral disorders, learning disabilities, mental retardation, and early childhood/special education. Courses are available for areas of specialization in early childhood education, physical education, and severe handicaps.

Advanced certification studies (60-hour concentrations) are offered in elementary and secondary educational administration.

Programs leading to the Ed.D. degree are offered in two broad interdisciplinary emphasis areas: learning-instructional processes and behavioral-developmental processes.

## Master of Education Degree

### Admission and General Requirements

The School of Education follows Graduate School policies relating to admissions, academic standards, residency, transfer credit, time limitations, and thesis options (see Graduate Study in this *Bulletin*). In addition to meeting the general requirements of the Graduate School, applicants for school or general counseling must complete a separate application (see graduate studies in the Behavioral Studies Department in this *Bulletin*). The minimum number of hours required for the M.Ed. degree is 32 except the elementary, secondary, and general counseling emphases require 48 hours. The school has

adopted a flexible policy on exit requirements which are determined departmentally.

### Advisement and Program Planning

After acceptance, each student completes an adviser form, sent by the School of Education's Office of Graduate Studies, 201 ED LIB. An adviser is then appointed who counsels the student in registration and program planning. A program for master's degree form must be submitted for approval during the first two-thirds of the student's program. This form includes all course work in the program and the exit requirement. Once approved, the degree program may be changed only by petition.

Students working toward teacher and/or school service personnel certification as graduate students should complete state certification forms in the Office of Teacher Education, 155 Marillac Hall, one year before those requirements will be completed.

## Doctor of Education Degree

The Ed.D. degree is designed primarily for the field practitioner, and is, therefore, a comparatively broad-based interdisciplinary degree. The two emphasis areas, learning instructional processes and behavioral-developmental processes, embrace two general categories of professional activities.

**Learning-instructional processes** place primary emphasis on the teaching-learning relationship, as well as on general planning and development of organizational programs to carry on this relationship successfully. Traditional programs that tend to fall under this heading are school administration, elementary and secondary teaching, supervision/curriculum, and reading instruction.

**Behavioral-developmental processes** place primary emphasis on the nature of individuals. Doctoral studies focus on such elements as learners' behavioral and developmental characteristics, typical and atypical development within varied environments, motivation, strategies of behavioral change, and counseling processes. Traditional programs that tend to fall under this heading are counseling, special education, educational psychology, and measurement. Students seeking the Ed.D. degree are expected to meet the doctoral degree requirements and procedures adopted by the Graduate School. (See Doctoral Degree Requirements for details.)

### Admission and General Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit three letters of recommendation, preferably from individuals with earned doctorates (two letters must be from individuals with an earned doctorate), along with a professional resume. Because enrollment is competitive, admission standards are comparatively high. Successful candidates must exhibit significantly above-average academic records and GRE scores. In exceptional cases, other criteria may outweigh these customary indicators of probable academic success.

## Graduate Studies in Education

At least two years of teaching or other school service experiences are required for admission. Exceptions may be made by substituting a supervised internship during the first year of the program.

### Admission Application

In order to ensure time for review and decision, complete applications and accompanying materials must reach the Office of Admissions by September 15 for the Winter Semester and February 15 for the Summer or Fall Semester. In addition, applicants are urged to request transcripts and letters of recommendation two weeks before submitting their papers. Consideration of applications cannot be undertaken until all materials are available.

### Degree Requirements

#### 1) Core Studies

##### General Foundations, 12 hours from:

Philosophical, historical, psychological, sociological, anthropological, and comparative foundations of education, as well as curriculum, instruction, and supervision.

##### Research Methods:

6 hours from:

Educational research methods

Multiple linear regression

Nonparametric statistics

6 hours from:

Qualitative research methodology

##### Common doctoral seminars, 6 hours

#### 2) Role Specialization, 48 hours from:

Emphasis area doctoral seminars (6-12)

Emphasis area electives (15-17)

Related area (12-18)

Internship (3-9)

#### 3) Dissertation, 12 hours

## Support Services

The School of Education maintains a number of offices and centers to directly assist students, faculty, and people in the metropolitan area and to support its instructional, research, and service activities.

### Office of Teacher Education—155 MH

This Office supplies advisement services for undergraduate teacher education and certification students. It coordinates the clinical experiences of the School of Education and directs the student teaching program.

### Office of Graduate Studies in Education—201 ED LIB

Information about admission to, and requirements of, graduate programs in education may be obtained in this Office. The Office also assists students with advisement, registration, and related topics, and maintains student records.

### Teacher Education Resource Center—G01

The Center is designed as an instructional media laboratory. The Instructional Technology Center located in Lucas Hall also has an office in the Center.

### Human Services Unit—B23A ED LIB

The Human Services Unit is a training facility for graduate students supervised by faculty in the Department of Behavioral Studies. Career counseling and assistance with vocational, adult, or adolescent developmental concerns are available to individuals in the community.

### Reading Clinic—B9 ED LIB

The Reading Clinic provides a laboratory setting for graduate level elementary and secondary teachers who are seeking certification as reading specialists. The Clinic has been providing services to the surrounding community in diagnosing and treating severe reading problems in children and adults since 1966. The Clinic also serves as a demonstration and materials center for pre-service and in-service teacher education, as well as a clinical research facility for the faculty.

### University Child Development Center—130 SCB

The Center provides University students with observation, participation, research, and similar educational and clinical opportunities; it also offers quality child care programs for children of student, faculty, staff, and community families.

## School Wide Courses

### Course Descriptions

#### Course Area Key

The following abbreviations are used to indicate instructional areas in the School of Education:

**ADU ED**

Adult Education

**CNS ED**

Counselor Education

**ECH ED**

Early Childhood Education

**ED ADM**

Educational Administration

**ED FND**

Educational Foundations

**ED PSY**

Educational Psychology

**ED REM**

Educational Research and Evaluation Methods

**ED TEC**

Educational Technology

**EDUC**

School-Wide Education

**ELE ED**

Elementary Education

**PHY ED**

Physical Education

**SEC ED**

Secondary Education

**SPC ED**

Special Education

## School-Wide Courses

### Education (EDUC)

Prerequisites may be waived by consent of the department.

**65 The University (3)**

A School of Education interdisciplinary course on the principles, development, and organized structure of the university. Special emphasis will be placed on the role of the university in modern society and upon forces affecting the direction of the university and its potential for change. Methods include outside speakers, discussion groups, and laboratory research on UM-St. Louis.

**101 Introduction to Classroom Teaching (3)**

An introduction to the study of teachers' behaviors and learners' responses in classroom settings. Students will be assigned to school sites for specified observations/analyses and limited participation. Students will have the opportunity to evaluate the teaching profession as an appropriate career choice. The course will consist of approximately one-third lecture/seminar and two-thirds clinical/field experiences.

**204 Special Topics in Education (1-3)**

Prerequisites: Completion of 75 hours and consent of instructor. Examination of a special area or topic within the field of education. Topics to be considered will be announced prior to registration and may vary. For elective credit only. This course may be repeated for different topics. Not to exceed a total of six hours credit.

**297 Independent Study (1-3)**

Prerequisites: Completion of 75 hours and consent of instructor. Independent study through readings, research, reports, and conferences designed to provide depth in areas of study previously introduced in education courses. For elective credit only. May be repeated. Not to exceed a total of three hours credit.

**301 Introduction to Microcomputers in Education (3)**

A course designed to introduce individuals to the microcomputer as an instructional medium. The course will emphasize (1) the history, role, and use of microcomputers in education; (2) learning the elements of programming for the microcomputer; and (3) beginning program construction and debugging operations.

**306 Graduate Workshop (1-10)**

Prerequisite: Consent of instructor.

**308 Graduate Institute (1-10)**

Prerequisite: Consent of instructor.

**375 Microcomputer Applications in Music Education (2)**

(Same as Music 375.) Prerequisites: Music 257 or Music 267 and EDUC 301 or consent of the instructor. An examination of the potential of microcomputers in the music education field. Experiences with available hardware and software suitable for applications that include inventory, budget, music library cataloging, digital music synthesis, and computer-assisted instruction at all levels.

**376 Microcomputer-Assisted Instruction Curriculum Development in Music (2)**

(Same as Music 376.) Prerequisites: EDUC 375 or Music 375, and a working knowledge of BASIC or PILOT or consent of instructor. Design and development of Computer-Assisted Instruction (CAI) lessons in music. Commercial courseware and various CAI models will serve as the basis for creating original programs that can be used effectively to implement objectives of the music curriculum for a specific school or school district. The design, refinement, and production of a major CAI program for use in an elementary, secondary, or postsecondary setting is required.

**377 Advanced Microcomputer Application in Music (2)**

(Same as Music 377.) Prerequisite: Music Education 375 or consent of the instructor. The study of complex microcomputer applications including music synthesis, MIDI, music-oriented graphics, voice and pitch recognition, administrative applications, and computer-assisted instruction.

## School-Wide Courses

### **393 Practicum in Individualized Instruction (3-6)**

Prerequisites: Completion of the course(s) to which assigned for instruction and consent of instructor. Supervised instruction in individualized programs. Seminar accompanies instructional experience. May be repeated.

### **408 Graduate Institute (1-10)**

Prerequisite: Consent of instructor.

### **414 Common Doctoral Seminar(s) (3)**

Prerequisite: Admission to the doctoral program. Two EDUC 414 seminars are required for all doctoral students, for a total of six hours of EDUC 414 seminar credit. One: "Elements of Educational Leadership" is to be taken early in the program. The other: "Research: Implementing Change in Educational Systems" is to be taken following completion of the research courses identified in the student's approved program.

### **415 Emphasis Area Seminar(s) (3)**

Prerequisite: Admission to the doctoral program. All doctoral students are required to take at least two emphasis area seminars consistent with their programs. Students may take additional emphasis area seminars. Obtain a list of emphasis area seminars from the Office of Graduate Studies in Education.

### **491 Staff Development and Professional Growth (1-10)**

Designed in conjunction with an individual school district or educational agency and related to problems of education confronting that specific district or agency.

### **497 Thesis Research (1-10)**

Prerequisite: Consent of instructor.

### **499 Dissertation Research (1-12)**

Prerequisite: Admission to the doctoral program. Credit awarded only upon successful defense of the dissertation.

## Behavioral Studies

### Faculty

**George J. Yard**, Associate Professor\*\*, Chairperson  
Ph.D., St. Louis University  
**R. Rocco Cottone**, Professor\*\*  
Ph.D., St. Louis University  
**William L. Franzen**, Professor\*; Dean Emeritus  
Ph.D., University of Wisconsin  
**Patricia A. Jakubowski**, Professor\*  
Ed.D., University of Illinois  
**Thomas E. Jordan**, Curators Professor\* of Child  
Development  
Ed.D., Indiana University  
**Thomas M. Shea**, Visiting Professor\*\*  
Ed.D., Boston University  
**Arthur E. Smith**, Professor\*  
Ed.D., St. Louis University  
**Margaret W. Cohen**, Associate Professor\*\*  
Ph.D., Washington University  
**Theresa A. Cristiani**, Associate Professor\*  
Ed.D., Indiana University  
**Donald R. Greer**, Associate Professor\*  
Ph.D., University of Missouri-Columbia  
**Lowe S. (Sandy) MacLean**, Adjunct Associate Professor\*;  
Vice Chancellor for Student Affairs  
Ed.D., Indiana University-Bloomington  
**Steven D. Spaner**, Associate Professor\*\*  
Ph.D., Southern Illinois University-Carbondale  
**W. Glenn White**, Associate Professor\*  
Ph.D., University of Missouri-Columbia  
**Scott Danforth**, Assistant Professor  
Ph.D., University of South Florida-Tampa  
**S. Simon Kim**, Assistant Professor\*\*  
Ph.D., University of Southern California  
**MaryAnn Lingg**, Assistant Professor\*\*  
Ph.D., University of North Texas  
**Vivian J.C. McCollum**, Assistant Professor\*  
Ph.D., St. Louis University  
**Dennis Moore**, Associate Professor  
Ed.D., Indiana University  
**Marshalita S. Peterson**, Assistant Professor\*  
Ph.D., St. Louis University  
**Tamara Timko**, Assistant Professor  
Ph.D., Ohio State University  
**Z. Maxine Christian**, Visiting Assistant Professor\*  
Ph.D., St. Louis University  
**Karen Keller**, Visiting Assistant Professor\*  
Ed.D., University of Texas  
**Virginia L. Navarro**, Visiting Assistant Professor  
Ph.D., Washington University

\* members of Graduate Faculty  
\*\*members of Doctoral Faculty

## General Information

The Department of Behavioral Studies is housed on the fourth floor of Marillac Hall. Information about offerings and related matters may be obtained in the departmental office, 469 Marillac Hall.

At the undergraduate level the department coordinates work in educational psychology, counseling, measurement, special education, and related areas. Offerings leading to

the B.S. in Education degree are available in special education.

The Special Education program prepares students to teach educable mentally retarded, early childhood special education, emotionally disturbed, or learning disabled children. Students also receive certification as regular elementary school teachers upon completion of the curriculum. New Missouri certification standards require a student teaching experience in each area of special education. It is possible for students to become certified as secondary special education teachers with appropriate advising, and additional course work.

At the graduate level the Department of Behavioral Studies offers work leading to the M.Ed. and requisite course work for state certification in Elementary and Secondary Guidance and Counseling, Special Education, School Psychological Examiner, and School Psychologist. Non-certification degree work is available in General Counseling and is designed to prepare students to take the state examination for Licensed Professional Counselor after they have completed the necessary hours of supervised counseling.

Areas of emphasis in the Counseling degree program are Elementary School, Secondary School, or General Counseling. Areas of emphasis in the Special Education program are Behavioral Disorders, Learning Disabilities, Educable Mentally Handicapped, and Early Childhood-Special Education. Courses concentrating in the areas of the Severe Developmentally Disabled and Gifted Education are also offered.

Students wishing to receive Missouri certification in Elementary School Counseling or Secondary School Counseling, School Psychological Examiner, and School Psychologist must complete all required courses in addition to holding teaching certificates valid in Missouri. Non-degree certification meeting the requirements for School Psychologist has been approved by the Missouri Department of Elementary and Secondary Education. Consult your adviser. The General Counseling area for which there are no certification requirements, is only appropriate for the practice of counseling in non-school settings.

All degree students should consult with their advisers about the requirement of a scholarly paper.

## Undergraduate Studies

### Bachelor of Science in Education: Special Education

**General Education Requirements** (46 hours required):  
**English and Communication** (6 hours)  
**English 10**, Composition  
**Communication**, 3 hours  
**English 210**, 3 hours

**Mathematics** (3 hours)  
**Math 50**, Structure of Mathematical Systems I  
No credit toward graduation is granted for **Math 15**, Mathematics: Ideas and Structures, unless **Math 50** is completed.



## Behavioral Studies

**Science** (8 hours)

**Biology** (3)

**Physical Science (Laboratory)** (4)

**Biology 130**, Global Ecology (includes laboratory)

**Humanities** (8 hours)

**Music 177**, An Introduction to Music for the Elementary School Teacher (Recommended) **plus two courses** from art, music, philosophy, or literature

**Social Science** (21 hours)

**History 3**, American Civilization, or

**History 4**, American Civilization

**PolSci 11**, Introduction to American Politics

**PolSci 85**, Global Ecology

**Psych 3**, General Psychology

**ED PSY 211**, Growth and Development

**Econ 306**, Microeconomics for the School Curriculum, or

**Econ 40**, Introduction to the American Economy

**Sociology 10**, Introduction to Sociology, or any

Anthropology course

**Related Area Requirements** (12 hours)

**PHY ED 130**, Elements of Health Education

**PHY ED 261**, Physical Activity of the Exceptional Learner

**Program Requirements** (24 hours)

**EDUC 101**, Introduction to Classroom Teaching

**ED FND 111**, The School in Contemporary Society

**ED PSY 312**, Psychology of Teaching and Learning

and these **Elementary Education (ELE ED)** courses:

**ELE ED 246**, Teaching Mathematics in the Elementary School

**ELE ED 330**, Children's Literature and Reading

**ELE ED 336**, Teaching Language Arts and Reading, N-9

**ELE ED 342**, Teaching Remedial Mathematics

**ELE ED 385**, Teaching Reading in the Elementary School

**Special Education Requirements** (36 hours)

The following courses are required:

**SPC ED 290** Student Teaching in Special Education I

**SPC ED 291** Student Teaching in Special Education II

**SPC ED 342** Career Education for the Special Needs Individual

**Note:** **SPC ED 290** and **SPC ED 291** must be taken during the same semester.

**ED REM 310**, Interpretation of Educational Tests and Measurements

**SPC ED 313**, The Psychology and Education of Exceptional Individuals

**SPC ED 315**, Speech and Language Problems of Exceptional Children

**SPC ED 320**, Behavior Management

**CNS ED 331**, Counseling Individuals with Special Needs

**ELE ED 389**, The Analysis and Correction of Reading

Problems in the Classroom and at least two of the following Special Education (SPC ED) courses. (It is important that an adviser be consulted.)

**ELE ED 330**, Introduction to Mental Retardation and Severe Handicaps

**ELE ED 332**, Education of the Mentally Retarded

**ELE ED 345**, Introduction to Emotional Disturbance and Learning Disabilities

**ELE ED 347**, Teaching in the Learning Disabilities Classroom

**ELE ED 350**, Instructional Techniques for the Emotionally Disturbed Student

**ELE ED 371**, Methods and Curricula for the Severely Handicapped

**ELE ED 372**, Screening and Diagnosis of the Developmentally Delayed

**Electives** may be taken from among the following (strongly recommended): **9 hours**

**SPC ED 322**, Teaching Mainstreamed Students

**ELE ED 241**, Teaching of Science in the Elementary School

**ELE ED 253**, Teaching of Social Studies in the Elementary School

**Attention Special Education Majors:** New requirements will come into effect September 1996. Consult with your advisor for more specific information.

**Attention Education Majors:** Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Studies in Education, 155 Marillac Hall.

**Total: 120 hours**

## Graduate Studies

### Admission

In addition to meeting the general admission requirements of the Graduate School, applicants to the Master's of Education with an emphasis in General or School Counseling must complete the Supplemental Application in addition to the Application to Graduate School, have three completed references on file, must have an undergraduate GPA of 3.0, and must take CNS ED 410 Personal and Professional Development in Counseling in their first semester. Admissions will be conducted twice a year. The datelines for admission are July 1 for the Fall semester and December 1 for the Winter semester. Applicants will be accepted on a provisional basis pending their completion of application materials, CNS ED 410, and review by the Counseling Faculty Review Board.

1. Since it is the objective of the Counselor Education faculty to identify students with low effectiveness potential as early as possible and to initiate the necessary procedures for dealing with such students, the faculty of the Counselor Education Program reserves the right to review students at any stage of their course work. Any grade less than a B in any core counseling course (CNS ED 410, Personal and Professional Development in Counseling; CNS ED 411, Theories of Counseling; CNS ED 493, Counseling Practicum I; CNS ED 494, Guidance Practicum II; and CNS ED 490, Internship) will automatically trigger

## Behavioral Studies

a review process which may result in the termination of the student's degree program.

- Students admitted to the Master's Degree Program in Counseling on restricted status must attain a 3.0 GPA for the first twelve hours of graduate course work at UM-St. Louis with no grades less than a B. Restricted students must include the following courses in the first twelve hours of course work:

CNS ED 410, Personal and Professional Development in Counseling; CNS ED 411, Theories of Counseling, and CNS ED 493, Counseling Practicum I. A student earning any grade less than a B in any of these three courses, but still maintaining a 3.0 GPA, will be allowed to repeat the course one time and must earn a grade of B or better to be admitted.

### Master of Education: Emphasis in Elementary School Counseling

The courses listed below meet the course work requirements for the M.Ed. degree, state certification, and licensing as a professional counselor:

#### Counselor Education (CNS ED)

CNS ED 410, Personal and Professional Development in Counseling  
 CNS ED 411, Theories of Counseling  
 CNS ED 413, Ethical and Professional Issues in Counseling  
 CNS ED 414, Individual Inventory  
 CNS ED 420, Group Procedures in Counseling  
 CNS ED 431, Foundations of School Guidance  
 CNS ED 443, Career Development  
 CNS ED 490, Internship (1-10)  
 CNS ED 493, Counseling Practicum I  
 CNS ED 495, Foundations for Multicultural Counseling

#### Psychological Foundations and Human Development

ED PSY 411, Psychology of Education  
 ED PSY 413, Personality Development and Adjustment  
 ED PSY 417, Psychology of the Elementary School Child

#### Educational Research and Evaluation Methods

ED REM 421, Educational and Psychological Measurement  
 ED REM 422, Individual Assessment of Cognitive Abilities  
 ED REM 431, Educational Research Methods I

### Master of Education: Emphasis in General Counseling

The General Counseling emphasis allows flexibility for developing programs appropriate to particular nonschool settings. Students must have their adviser's approval before taking other than required courses.

#### Core Curriculum

The courses listed below meet the course work requirements for the M.Ed. degree and license to practice as a professional counselor:

410, Personal and Professional Development in Counseling  
 411, Theories of Counseling

413, Ethical and Professional Issues Counseling  
 414, Individual Inventory  
 420, Group Procedures in Counseling  
 443, Career Development  
 490, Internship (1-10)  
 493, Counseling Practicum I  
 494, Guidance Practicum II  
 495, Foundations for Multicultural Counseling

#### Psychological Foundations and Human Development (ED PSY)

The following course is required:

413, Personality Development and Adjustment

#### Educational Research and Evaluation Methods

The following courses are required:

ED REM 421, Educational and Psychological Measurement  
 ED REM 431, Educational Research Methods I

#### Area of Specialization (9 hours)

Course work in the area of specialization is to be selected in consultation with the adviser.

### Master of Education: Emphasis in Secondary School Counseling

The courses listed below meet the course work requirements for the M.Ed. degree, state certification, and licensing as a professional counselor:

#### Counselor Education (CNS ED)

CNS ED 410, Personal and Professional Development in Counseling  
 CNS ED 411, Theories of Counseling  
 CNS ED 413, Ethical and Professional Issues in Counseling  
 CNS ED 414, Individual Inventory  
 CNS ED 420, Group Procedures in Counseling  
 CNS ED 431, Foundations of School Guidance  
 CNS ED 443, Career Development or CNS ED 442, Career Information  
 CNS ED 490, Internship (1-10)  
 CNS ED 493, Counseling Practicum I  
 CNS ED 495, Foundations for Multicultural Counseling

#### Psychological Foundations and Human Development (ED PSY)

ED PSY 411, Psychology of Education  
 ED PSY 413, Personality Development and Adjustment  
 ED PSY 418, The Psychology of Adolescence

#### Educational Research and Evaluation Methods (ED REM)

ED REM 421, Educational and Psychological Measurement  
 ED REM 422, Individual Assessment of Cognitive Abilities  
 ED REM 431, Educational Research Methods I

## Behavioral Studies

### Master of Education: Program in Special Education

Graduate students should understand that completion of the M.Ed. program in Special Education does not assure teaching certification. Students seeking the degree and certification should consult with their advisers.

Following is the recommended curriculum for students enrolled in the Learning Disabilities, Mental Retardation, Behavioral Disorders, or Early Childhood-Special Education options.

**Area of Specialization** Students are required to complete 9-18 hours from the following areas:

#### Knowledge Base (3-6 hours)

SPC ED 497, Problems  
 SPC ED 431, Problems in Mental Retardation  
 SPC ED 443, Learning Disabilities  
 SPC ED 450, Introduction to Behavioral Disorders  
 SPC ED 462, Introduction to Early Childhood-Special Education

#### Curriculum (3-6 hours)

SEC ED 415, The Secondary School Curriculum  
 SEC ED 416, Curriculum Construction for Secondary Schools  
 ELE ED 410, Current Research in the Elementary School Curriculum  
 SPC ED 413, Organizational Foundations for Special Education  
 SPC ED 421, Prescriptive Teaching of Exceptional Children  
 SPC ED 430, Education of the Mentally Retarded  
 SPC ED 444, Education of Children with Learning Disabilities  
 SPC ED 452, Education of Behaviorally Disordered Children  
 SPC ED 463, Curriculum, Methods and Materials for Early Childhood-Special Education

#### Practicum (3-6 hours)

At least three hours must be taken in SPC ED 492, Practicum in Special Education.

#### Psychological Foundations and Human Development (3-6 hours)

ED PSY 411, Psychology of Education  
 ED PSY 417, Psychology of the Elementary School Child  
 ED PSY 418, The Psychology of Adolescence  
 SPC ED 412, Psychology of Exceptional Children  
 SPC ED 416, Current Research in Psychology of Exceptional Children

#### Educational Research and Evaluation Methods (3-6 hours)

ED REM 330, Educational Statistics  
 ED REM 420, Classroom Measurement and Evaluation  
 ED REM 421, Educational and Psychological Measurement  
 ED REM 422, Individual Assessment of Cognitive Abilities

**Electives** may be chosen from the courses listed here and from other courses with approval of the adviser and department chairperson.

### Career Outlook

#### Elementary and Secondary School Counselors

Future growth in the employment of school counselors may depend on the amount of funds that the federal government provides to the states. The most recent survey in Missouri shows that the supply and demand for counselors is about average for educational personnel. Many teachers who do not intend to leave the classroom pursue this program in order to be better able to meet the needs of their students. Some graduates of the program have left the field of education and have obtained positions such as those cited under General Counseling. With little additional work the school counselor may qualify for certification as a school psychological examiner.

#### General Counselors

Graduates have been employed in a wide variety of settings: as counselors in community colleges, universities, employment agencies, vocational rehabilitation agencies, probation and parole work, juvenile detention, alcoholism and drug abuse clinics, career planning and placement centers, community mental health agencies, family and children services, and various federally-funded public service projects. Additionally, graduates are employed in career development, business and industry positions, especially in training and personnel areas. Others have moved into roles calling for research and evaluation skills.

**Note** It should be noted that in Missouri, persons who engage in "professional counseling" in many of these settings are required by law to be licensed as professional counselors.

#### Special Education

The employment outlook for special education teachers continues to be favorable, especially in certain positions. In addition to special classroom teaching, graduates of the area have been employed as resource-room teachers, clinical diagnostic personnel, itinerant teachers, educational resource teachers, consultants, educational therapists, sheltered workshop evaluators, and in various supervisory and administrative positions in agencies and schools.

In combination with counseling, educational psychology, physical education, or other areas, careers can be planned in such occupations as vocational evaluator, counselor for special-needs individuals, and special physical educators.

## Behavioral Studies

### Course Descriptions

Courses in this section are grouped as follows: Counselor Education (CNS ED), Educational Psychology (ED PSY), Educational Research and Evaluation Methods (ED REM), Special Education (SPC ED).

Prerequisites may be waived by consent of the department.

For information about certification and licensure, an adviser should be consulted.

### Counselor Education (CNS ED)

#### 310 Introduction to the Counseling Profession (3)

Prerequisite: Junior or senior level standing. This survey course will provide undergraduates and noncounselors with a broad overview of the counseling profession. Topics include a history of the profession, foundations of counseling, ethical, and legal considerations and the role of the counselor in various settings.

#### 314 Human Relations Skills (3)

Prerequisite: Consent of the instructor. A course emphasizing the development of specific skills in human relationships to help facilitate effective interaction among individuals and groups in the helping professions. Readings, discussion, and skill-building exercises will be used to develop various human relations skills.

#### 317 Advisory Programs in the Middle Level School (3)

Prerequisite: ED PSY 312 or graduate status. The role of the middle level educator in the adviser-advisee program is examined. Implications of varying developmental levels on early adolescent decision making is explored. Skills for effective student/teacher communication are highlighted.

#### 318 Counseling Gifted Students (3)

Prerequisites: SPC ED 313, ED PSY 312, or equivalent. This course emphasizes the social and emotional development of gifted and talented individuals. Subject areas will include current research, factors affecting the development of the gifted, and resources and strategies utilized in counseling these students and their parents.

#### 329 Counseling the Chemical Dependent (3)

This course is an introduction to the problems resulting from the abuse of alcohol and other chemicals, with an emphasis on the impact of chemical dependence on the individual, the family, the employer, and the community. The special problems resulting from chemical dependence as it affects various populations, e.g., women, individuals with disabilities, and the elderly, will be analyzed and linked to appropriate counseling strategies.

#### 330 Principles and Procedures for Student Personnel Work (3)

Student personnel work in educational institutions, objectives of student personnel work, and certain pertinent techniques.

#### 331 Counseling Individuals with Special Needs (3)

Prerequisite: SPC ED 313 or equivalent. A course emphasizing counseling skills for individuals who plan to work with the handicapped. Emphasis is placed on using counseling strategies with school-age handicapped children.

#### 332 Youth and Chemical Dependence (3)

Prerequisite: Junior standing. This course provides information about adolescent and preadolescent chemical dependency and its relationship to numerous other developmental and societal factors that place the adolescent "at risk" for the development of substance abuse problems. Skills in the identification, intervention, and referral of chemically-dependent adolescents are emphasized, along with preventive measures and family and school issues.

#### 342 Occupational and Educational Information (3)

Nature and use of occupational and educational information. Characteristics, requirements of occupations, and training opportunities.

#### 404 Seminar (3-10)

#### 410 Personal and Professional Development in Counseling (3)

Prerequisite: Graduate standing. This course provides an in-depth view of the professional counseling field. Attention is focused on the development of the helping relationship, including a review of research on factors which influence helping processes and rapport building, a development of skills used in the counseling process, and increased awareness of how students' values, beliefs, and behaviors are related to counselor effectiveness.

#### 411 Theories of Counseling (3)

Prerequisite: CNS ED 410. This course will explore the philosophical foundations of counseling theory. The major constructs of contemporary counseling approaches will be discussed, and the practical applications of these theories will be analyzed.

#### 412 Theories and Techniques of Counseling Children and Adolescents (3)

Prerequisite: CNS ED 411 (ED PSY 417 or ED PSY 413 or permission of the instructor). This course focuses on counseling theories and their applicability to the developmental special concerns of children and adolescents including abuse, suicide, divorce, and death and dying. Individual, group, and family intervention techniques and consultation skills will be emphasized, as well as legal and ethical considerations for counselors. Strategies presented can be utilized in a variety of settings. Multicultural considerations are also addressed.

#### 413 Ethical and Professional Issues in Individual and Relationship Counseling (3)

Prerequisite: CNS ED 410. Ethical, legal, and professional issues related to counseling are addressed. Ethical dilemmas in the provision of counseling services to individuals, couples, families, and groups are defined. Specific ethical codes of professional organizations are examined.

## Behavioral Studies

### Master of Education: Program in Special Education

Graduate students should understand that completion of the M.Ed. program in Special Education does not assure teaching certification. Students seeking the degree and certification should consult with their advisers.

Following is the recommended curriculum for students enrolled in the Learning Disabilities, Mental Retardation, Behavioral Disorders, or Early Childhood-Special Education options.

**Area of Specialization** Students are required to complete 9-18 hours from the following areas:

#### Knowledge Base (3-6 hours)

**SPC ED 497**, Problems  
**SPC ED 431**, Problems in Mental Retardation  
**SPC ED 443**, Learning Disabilities  
**SPC ED 450**, Introduction to Behavioral Disorders  
**SPC ED 462**, Introduction to Early Childhood-Special Education

#### Curriculum (3-6 hours)

**SEC ED 415**, The Secondary School Curriculum  
**SEC ED 416**, Curriculum Construction for Secondary Schools  
**ELE ED 410**, Current Research in the Elementary School Curriculum  
**SPC ED 413**, Organizational Foundations for Special Education  
**SPC ED 421**, Prescriptive Teaching of Exceptional Children  
**SPC ED 430**, Education of the Mentally Retarded  
**SPC ED 444**, Education of Children with Learning Disabilities  
**SPC ED 452**, Education of Behaviorally Disordered Children  
**SPC ED 463**, Curriculum, Methods and Materials for Early Childhood-Special Education

#### Practicum (3-6 hours)

At least three hours must be taken in SPC ED 492, Practicum in Special Education.

#### Psychological Foundations and Human Development (3-6 hours)

**ED PSY 411**, Psychology of Education  
**ED PSY 417**, Psychology of the Elementary School Child  
**ED PSY 418**, The Psychology of Adolescence  
**SPC ED 412**, Psychology of Exceptional Children  
**SPC ED 416**, Current Research in Psychology of Exceptional Children

#### Educational Research and Evaluation Methods (3-6 hours)

**ED REM 330**, Educational Statistics  
**ED REM 420**, Classroom Measurement and Evaluation  
**ED REM 421**, Educational and Psychological Measurement  
**ED REM 422**, Individual Assessment of Cognitive Abilities

**Electives** may be chosen from the courses listed here and from other courses with approval of the adviser and department chairperson.

### Career Outlook

#### Elementary and Secondary School Counselors

Future growth in the employment of school counselors may depend on the amount of funds that the federal government provides to the states. The most recent survey in Missouri shows that the supply and demand for counselors is about average for educational personnel. Many teachers who do not intend to leave the classroom pursue this program in order to be better able to meet the needs of their students. Some graduates of the program have left the field of education and have obtained positions such as those cited under General Counseling. With little additional work the school counselor may qualify for certification as a school psychological examiner.

#### General Counselors

Graduates have been employed in a wide variety of settings: as counselors in community colleges, universities, employment agencies, vocational rehabilitation agencies, probation and parole work, juvenile detention, alcoholism and drug abuse clinics, career planning and placement centers, community mental health agencies, family and children services, and various federally-funded public service projects. Additionally, graduates are employed in career development, business and industry positions, especially in training and personnel areas. Others have moved into roles calling for research and evaluation skills.

**Note** It should be noted that in Missouri, persons who engage in "professional counseling" in many of these settings are required by law to be licensed as professional counselors.

#### Special Education

The employment outlook for special education teachers continues to be favorable, especially in certain positions. In addition to special classroom teaching, graduates of the area have been employed as resource-room teachers, clinical diagnostic personnel, itinerant teachers, educational resource teachers, consultants, educational therapists, sheltered workshop evaluators, and in various supervisory and administrative positions in agencies and schools.

In combination with counseling, educational psychology, physical education, or other areas, careers can be planned in such occupations as vocational evaluator, counselor for special-needs individuals, and special physical educators.

## Behavioral Studies

### Course Descriptions

Courses in this section are grouped as follows: Counselor Education (CNS ED), Educational Psychology (ED PSY), Educational Research and Evaluation Methods (ED REM), Special Education (SPC ED).

Prerequisites may be waived by consent of the department.

For information about certification and licensure, an adviser should be consulted.

### Counselor Education (CNS ED)

#### 310 Introduction to the Counseling Profession (3)

Prerequisite: Junior or senior level standing. This survey course will provide undergraduates and noncounselors with a broad overview of the counseling profession. Topics include a history of the profession, foundations of counseling, ethical, and legal considerations and the role of the counselor in various settings.

#### 314 Human Relations Skills (3)

Prerequisite: Consent of the instructor. A course emphasizing the development of specific skills in human relationships to help facilitate effective interaction among individuals and groups in the helping professions. Readings, discussion, and skill-building exercises will be used to develop various human relations skills.

#### 317 Advisory Programs in the Middle Level School (3)

Prerequisite: ED PSY 312 or graduate status. The role of the middle level educator in the adviser-advisee program is examined. Implications of varying developmental levels on early adolescent decision making is explored. Skills for effective student/teacher communication are highlighted.

#### 318 Counseling Gifted Students (3)

Prerequisites: SPC ED 313, ED PSY 312, or equivalent. This course emphasizes the social and emotional development of gifted and talented individuals. Subject areas will include current research, factors affecting the development of the gifted, and resources and strategies utilized in counseling these students and their parents.

#### 329 Counseling the Chemical Dependent (3)

This course is an introduction to the problems resulting from the abuse of alcohol and other chemicals, with an emphasis on the impact of chemical dependence on the individual, the family, the employer, and the community. The special problems resulting from chemical dependence as it affects various populations, e.g., women, individuals with disabilities, and the elderly, will be analyzed and linked to appropriate counseling strategies.

#### 330 Principles and Procedures for Student Personnel Work (3)

Student personnel work in educational institutions, objectives of student personnel work, and certain pertinent techniques.

#### 331 Counseling Individuals with Special Needs (3)

Prerequisite: SPC ED 313 or equivalent. A course emphasizing counseling skills for individuals who plan to work with the handicapped. Emphasis is placed on using counseling strategies with school-age handicapped children.

#### 332 Youth and Chemical Dependence (3)

Prerequisite: Junior standing. This course provides information about adolescent and preadolescent chemical dependency and its relationship to numerous other developmental and societal factors that place the adolescent "at risk" for the development of substance abuse problems. Skills in the identification, intervention, and referral of chemically-dependent adolescents are emphasized, along with preventive measures and family and school issues.

#### 342 Occupational and Educational Information (3)

Nature and use of occupational and educational information. Characteristics, requirements of occupations, and training opportunities.

#### 404 Seminar (3-10)

#### 410 Personal and Professional Development in Counseling (3)

Prerequisite: Graduate standing. This course provides an in-depth view of the professional counseling field. Attention is focused on the development of the helping relationship, including a review of research on factors which influence helping processes and rapport building, a development of skills used in the counseling process, and increased awareness of how students' values, beliefs, and behaviors are related to counselor effectiveness.

#### 411 Theories of Counseling (3)

Prerequisite: CNS ED 410. This course will explore the philosophical foundations of counseling theory. The major constructs of contemporary counseling approaches will be discussed, and the practical applications of these theories will be analyzed.

#### 412 Theories and Techniques of Counseling Children and Adolescents (3)

Prerequisite: CNS ED 411 (ED PSY 417 or ED PSY 418 or permission of the instructor). This course focuses on counseling theories and their applicability to the developmental special concerns of children and adolescents including abuse, suicide, divorce, and death and dying. Individual, group, and family intervention techniques and consultation skills will be emphasized, as well as legal and ethical considerations for counselors. Strategies presented can be utilized in a variety of settings. Multicultural considerations are also addressed.

#### 413 Ethical and Professional Issues in Individual and Relationship Counseling (3)

Prerequisite: CNS ED 410. Ethical, legal, and professional issues related to counseling are addressed. Ethical dilemmas in the provision of counseling services to individuals, couples, families, and groups are defined. Specific ethical codes of professional organizations are examined.

## Behavioral Studies

### 414 Individual Inventory (3)

Prerequisites: ED REM 421. Uses of educational and psychological appraisal techniques in counseling. Develops counselors' abilities in assisting clients toward self-awareness through the use of test and nontest data. Ethical practices in the use of tests and the maintenance of personnel records are stressed.

### 420 Group Procedures in Counseling (3)

Prerequisites: CNS ED 411 and CNS ED 493. This course examines the process dynamics of groups including group development, leadership, norms and therapeutic factors. Group counseling theories and approaches used for other group work including skills, personal growth, support, vocational, and developmental guidance groups are included. Knowledge and skills of how to facilitate therapeutic groups are included. Students will be required to be participant-observers or facilitators of a group outside of class time.

### 423 Introduction to Systems Theory for Marriage and Family Counseling (3)

Prerequisite: CNS ED 411. This course is an introduction to general systems theory and application to marriage and family counseling. Students learn the theoretical basis for intervention and counseling strategies in the context of an ecology of human development. Developmental issues at individual, sibling, marital, family, and community levels and the ways in which various social systems interact with and mutually influence one another are presented.

### 424 Marriage Counseling and Enrichment (3)

Prerequisite: CNS ED 423 or consent of instructor. This course focuses on the theory and technique of marital or couples counseling and enrichment. Models and methods for prevention and treatment of relationship dysfunction are explored. Relationship developmental issues are addressed. Students are challenged to develop the critical skills necessary to be effective marriage counselors and marital life educators.

### 425 Family Counseling (3)

Prerequisites: CNS ED 423 and CNS ED 493, or consent of instructor. This course offers an in-depth analysis of strategic, structural, experiential, communications, behavioral, and psychodynamic approaches to systems change and family counseling. The range of techniques and applied practices evolving from each orientation are explored as are normal and dysfunctional family processes. Various counseling modalities, such as individual, concurrent, collaborative, conjoint, group, intergenerational, and networking are also considered.

### 426 Advanced Theories of Counseling and Family Therapy (3)

Prerequisites: CNS ED 411 and CNS ED 423, CNS ED 493 or consent of instructor. Contemporary and emergent theories in counseling and family therapy are presented and analyzed. Research issues are addressed.

### 428 Counseling the Co-Dependent (3)

Prerequisites: CNS ED 411 and CNS ED 329. This course offers an in-depth analysis of the nature and counseling of

co-dependency. Materials will include an examination of etiological factors, as well as specific counseling concepts and strategies.

### 429 Advanced Strategies in Chemical Dependence Counseling (3)

Prerequisite: CNS ED 329 or consent of instructor. This course introduces the student to advanced counseling skills and approaches that can be utilized to match substance abuse interventions to individual client need. Versatility and flexibility are emphasized as well as the use of research supported relapse prevention strategies

### 430 Counseling the Dual Diagnosed Substance Abuser (3)

Prerequisites: CNS ED 411 and CNS ED 329. This course introduces the student to the special needs, concerns, and problems encountered when counseling clients who are both mentally ill and chemically dependent. Subject areas include an overview of counseling methodologies, diagnosis, and psycho-pharmacology.

### 431 Foundations of School Guidance (3)

The purpose of this course is to give students a foundation for understanding the history, philosophy, and development of school guidance programs. The role functions of the school counselor within a developmental, comprehensive program are examined, along with communication skills necessary for consultation with students, parents, school support staff, and resource people in the community.

### 436 Student Personnel Work in Higher Education (3)

A survey course in student personnel administration with an emphasis on understanding the college student and on learning ways to meet both his/her academic and nonacademic needs.

### 442 Career Information (3)

Emphasis is on the nature of the changing labor market and the impact on personal, social, economic, career and educational aspects of individuals and society. Use of occupational and educational information systems and resources to assist with career decisions are examined. The needs of culturally diverse populations are discussed. Use of career and labor market information and programs such as computer technology to access up-to-date career and labor market information is explored. Various theories of career development and career choice will be examined.

### 443 Career Development (3)

Emphasis is on current theories of vocational/career development, career choice, and techniques and methods of career counseling. Issues concerning education and training, work, leisure, the family, life roles, and culturally diverse populations are studied. The role of career theory in planning, development, and delivery of a career development program is explored. Various printed resources and computer-assisted career information delivery systems will be discussed.

### 451 Counseling Parents of Exceptional Children (3)

The development of counseling skills to enable human service professionals to interact productively with families who have handicapped children.

## Behavioral Studies

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **493 Counseling Practicum I (3)**

Prerequisite: CE 410 and CE 411 and consent of the instructor. The purpose of this course is to provide supervised practice in counseling, and the opportunity for students to learn to facilitate personal change and problem solutions using some systematic framework, theoretical orientation, or research base.

### **494 Guidance Practicum II (3)**

Prerequisite: Grade of "B" or better in CNS ED 493 and/or consent of instructor. Supervised practice in counseling.

### **495 Foundations for Multicultural Counseling (3)**

Prerequisite: CNS ED 493. This course will focus on: (1) reviewing knowledge and research in the area of multicultural counseling, (2) developing and/or enhancing skills useful in counseling with individuals from minority populations, and (3) developing levels of personal awareness about stereotypes, and learning how feelings and attitudes about these may impact counseling with individuals from minority populations.

### **497 Problems (1-10)**

## Educational Psychology (ED PSY)

### **211 Growth and Development (3)**

Comprehensive study of chronological age norms and the process of growth and development throughout the entire life span. There will be special emphasis on childhood, adolescence, and senescence.

### **312 The Psychology of Teaching and Learning (3)**

Prerequisites: ED FND 111 and ED PSY 270 or Psych 270, or Psych 271, and admission to the School of Education. Application of the principles of psychology to an understanding of the dynamics of teaching behavior and learning behavior. Involves both theoretical and practical approaches to analysis of the learning environment of the school. Required of all who are preparing to teach.

### **325 Education and the Psychology of Human Sexuality (3)**

The course is designed to provide educators and other human services personnel with knowledge and understanding of various personal and social dimensions of human sexuality.

### **404 Seminar (1-10)**

### **411 Psychology of Education (3)**

Current psychological theories and research that guide inquiry and decision making in education. Topics surveyed include behavior, development, learning, instruction.

### **412 Psychology of Learning Processes (3)**

Prerequisite: ED PSY 411. Advanced study of learning and instructional theories. The historical and theoretical bases of instructional practice are examined.

### **413 Personality Development and Adjustment (3)**

A course in personality development, personality structure, and the dynamics of adjustment. Course materials are oriented to the applied problems of counselors, teachers, administrators, and others in the helping professions.

### **416 Psychology of Early Childhood Development (3)**

Prerequisite: ED PSY 411 or consent of instructor. A survey of the theories, concepts and research which inform the field of early childhood development and help caregivers and teachers understand the cognitive, social and emotional changes that take place from birth through the primary years of schooling.

### **417 Psychology of the Elementary School Child (3)**

Prerequisite: ED PSY 411 or consent of instructor. Current research on the psychological changes which occur during the school age years (ages 5-12) of childhood. Includes attention to how development proceeds and to the processes that may alter its progress.

### **418 The Psychology of Adolescence (3)**

Prerequisite: ED PSY 411 or consent of instructor. Current research on the psychological changes which occur during adolescence. Attention is paid to the family, school, peer groups, and contemporary settings that practitioners must understand to help young people meet the psychosocial challenges of adolescence.

### **420 Behavioral Analysis of Human Learning (3)**

Prerequisite: Graduate standing. A course in the principles of human learning and the technology of behavior modification, from the perspective of the teaching and counseling professions. Emphasis is placed on its application to school learning and behavior problems and to social behavioral patterns in a variety of appropriate counseling settings.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **497 Problems (1-10)**

## Educational Research and Evaluation Methods (ED REM)

### **310 Interpretation of Educational Tests and Measurements (3)**

A study of the principles of psychometrics with emphasis upon the classroom interpretation of group tests of cognitive abilities and achievement. Required of all majors in special education.



## Behavioral Studies

### 320 Classroom Testing and Measurement (3)

Basic measurement principles for the classroom teacher: test planning; construction and use of selection, supply, and performance type test items; item analysis for test improvement; methods of summarizing test scores; derived scores for interpretation of performance; development and use of norms in evaluation.

### 330 Educational Statistics (3)

Statistical methods for preservice educators and beginning graduate students: frequency distributions, measures of central tendency, variability, sampling, and correlation.

### 404 Seminar (1-10)

Prerequisite: Consent of instructor. Educational research and evaluation methods seminar addressing special issues and topics not normally included in the regular statistics, research methods, evaluation, and measurement courses.

### 412 Evaluation and Applications of Computers in Education (3)

Prerequisite: ER 431 or consent of instructor. Review of a computer language and evaluation of the various uses and capabilities of computers in the teaching, administration, and counseling areas of education. Familiarization with computing facilities and package programs.

### 420 Classroom Measurement and Evaluation (3)

An introductory graduate course to classroom testing and evaluation: comparison of criterion and norm referenced theory and technique; classical test theory, reliability, validity and associated descriptive statistics; derived and transformed scores; preparation of instructional objectives for use in developing the classroom test; evaluation of student achievement and instructional effectiveness through testing.

### 421 Educational and Psychological Measurement (3)

An introductory graduate course in testing and measurement theory in the affective behavior domain: reliability, validity, and associated descriptive statistics; correlation and simple regression; derived and transformed scores; interpretation of test scores based upon theory of psychological tests; measurement of aptitude, vocational interests, and personal-social adjustment.

### 422 Individual Assessment of Cognitive Abilities (3)

Prerequisite: ED REM 310, or 320, or 420, or 421, or consent of instructor. A course to develop administrative and interpretive skills in the use of individually administered tests such as the Wechsler scales, the Stanford-Binet, and similar instruments.

### 429 Advanced Test Theory in Education (3)

Prerequisite: ED REM 420, or ED REM 421, or consent of instructor. An advanced course in measurement theory and practice: issues of reliability, validity, and item analysis for both criterion and norm referenced tests; introduction to factor analysis theory and technique in the development and analysis of test structure and validity; introduction to item response theory and techniques for the improvement of educational testing and research.

### 431 Educational Research Methods I (3)

Prerequisites: At least one of the following: ED REM 310, 320, 330, 420, or 421, or consent of instructor. An introductory course in educational research methodology. Descriptive statistical concepts learned in the prerequisite course are extended to: inferential statistics and hypothesis testing; research design issues such as internal/external threats to validity; basic designs to minimize these threats; special issues associated with positivistic and nonpositivistic research paradigms; and the structure and content of the research proposal.

### 432 Educational Research Methods II (3)

Prerequisite: ED REM 431 or consent of instructor. A survey of advanced educational research methods: hypothesis testing using classical factorial analysis of variance; analysis of covariance; the general linear model; multiple and partial correlation; multiple linear regression; and advanced research designs for educational problems. Quantitative statistical methods associated with qualitative research situations are introduced.

### 433 Educational Research Methods III (3)

Prerequisite: ED REM 431 or consent of instructor. An advanced educational research methods course focusing on issues and techniques of multivariate analysis: multivariate analysis of variance (MANOVA); canonical correlation, discriminant function, factor, and cluster analysis; advanced topics in multiple linear regression analysis; and research designs and measurement techniques typically associated with these statistical methods.

### 435 Multiple Linear Regression in Education (3)

Prerequisite: ED REM 432 or ED REM 433. An advanced educational research methods course using MLR models and techniques to evaluate educational problems. Focus is on the theory, special issues, and techniques in the application of MLR to qualitative and quantitative educational research studies.

### 436 Nonparametric Statistics in Education (3)

Prerequisite: ED REM 431 or consent of instructor. An advanced educational research methods course in alternative analysis procedures to classical parametric statistics. Nonparametric methods are surveyed and their data requirements compared to their parametric counterparts. Educational research problems appropriate to or adaptable to these methods are studied.

### 437 Field Based Research Methods (3)

Prerequisite: ED REM 431 or consent of instructor. An advanced educational research methods course in the major paradigms of positivism and postpositivism. The principal traditions of qualitative research methods are reviewed. Alternative sampling strategies, observational measurement, individual and group interview techniques, and questionnaire construction are studied. Qualitative data analysis is addressed from two perspectives: nonquantitative and statistical. Quality control to establish the trustworthiness and authenticity of field studies is reviewed.

## Behavioral Studies

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **497 Problems (1-10)**

Prerequisites: At least one previous ED REM course AND consent of course supervisor. Individual study on topics pertaining to educational measurement, evaluation, statistics, and research design.

## Special Education (SPC ED)

### **192 Field Experience in Special Education (3)**

Intensive early field experience involving on-site observation and limited participation with exceptional individuals in schools and/or other educational agencies. This course is open to all students.

### **242 Characteristics of Learning Disabilities (3)**

A study of the divergent characteristics of children with perceptual impairments. This course consists of fifteen half-hour tapes, designed to offer instruction at an undergraduate level on the nature of children with learning disabilities, and the roles of educators, parents, and auxiliary personnel in diagnosis and remediation. Historical perspectives and future trends will be explored. The tapes are followed by student contact with the instructor, for discussion, work evaluation, and testing.

### **290 Student Teaching in Special Education I (5)**

Prerequisites: SPC ED 313, SPC ED 320, SPC ED 332 and admission to student teaching. Must be taken with SPC ED 291 and must immediately precede SPC ED 291 in the semester. Clinical teaching experience in special education classrooms in schools under University and school supervision. Required of all majors in special education.

### **291 Student Teaching in Special Education II (5)**

Prerequisite: SPC ED 290. Must be taken with SPC ED 290, and must immediately follow SPC ED 290 in the semester. Clinical teaching in special education classrooms in schools under University and school supervision. Assignments will be in different school districts, buildings, serving families of different socioeconomic and cultural backgrounds, and at different grade levels from those of the SPC ED 290 assignments. Required of all majors in special education.

### **311 Sex Education for Exceptional Individuals (3)**

Prerequisite: Consent of instructor. Course is designed to give teachers a thorough knowledge and understanding of the issues, problems, teaching techniques, and the current curricular resources of teaching sex education to handicapped individuals.

### **313 The Psychology and Education of Exceptional Individuals (3)**

Prerequisite: Psychology 270 or Psychology 271 or equivalent. The psychology and education of individuals

with special problems and/or abilities. Survey of theories and strategies for the learning-teaching process and of sources of assistance to educators and parents. Required in certification programs.

### **315 Speech and Language Problems of Exceptional Children (3)**

Prerequisites: ED FND 111, SPC ED 313, and admission to the School of Education. Study of the problems associated with speech and language development and the techniques employed by classroom teachers to lessen these problems for children. Required for all majors in special education.

### **320 Behavior Management (3)**

Prerequisites: SPC ED 313 and an appropriate introductory course in the special education area of concentration. An in-depth exploration of various behavior control techniques that are particularly applicable to exceptional children. Students will be required to conduct at least one behavior modification project with exceptional children.

### **322 Teaching Mainstreamed Students (3)**

Prerequisite: SPC ED 313 or SPC ED 412, or equivalent. The course is designed to assist regular classroom teachers to better understand the nature and needs of handicapped students who are likely to receive much of their daily instruction in the regular classroom. Regular teachers' roles and responsibilities, teaching strategies, and adjustment options in integrating handicapped students will be considered.

### **330 Introduction to Mental Retardation and Severe Handicapped (3)**

Prerequisite: SPC ED 313. An introductory course describing characteristics, classification, and causes of mental retardation and severe handicapped.

### **332 Education of the Mentally Retarded (3)**

Prerequisites: ED FND 111, SPC ED 313, and SPC ED 330. Methods and techniques of use in the education of mentally retarded children. Required of all who are preparing for certification in special education for the mentally retarded.

### **342 Career Education for the Special Needs Individual (3)**

Prerequisite: Consent of instructor. This course is intended to provide information to teachers and other personnel charged with the responsibility of delivering career development services to special needs clientele. Topics including designing a K-12 career education curricula, techniques of improving job readiness for the unemployed and underemployed, and ways to utilize community employment resources for the handicapped.

### **345 Introduction to Emotional Disturbances and Learning Disabilities (3)**

Prerequisite: SPC ED 313. A comparative approach to these two areas of specialization regarding their history, etiologies, definition, prevalence, and service delivery systems.

## Behavioral Studies

### **347 Teaching in the Learning Disabilities Classroom (3)**

Prerequisites: SPC ED 313 and SPC ED 320. An application of the instructional techniques to be utilized with learning disabled students. Instructional techniques, appraisal for instruction, interdisciplinary team work, parental involvement, individualized education plans, and classroom techniques will be presented in this class.

### **350 Instructional Techniques for the Emotionally Disturbed Student (3)**

Prerequisites: SPC ED 313, SPC ED 320, and SPC ED 345. A course designed to instruct students in the management and instructional strategies necessary to educate children with emotional disturbances.

### **370 Sensory-Motor Development of the Severely Handicapped (3)**

Prerequisite: SPC ED 330 or equivalent or consent of instructor. An examination of basic sensory-motor development and associated disorders to enable teachers to work more effectively with occupational and physical therapists. Basic techniques used by therapists are presented together with an exploration of the teacher's role regarding sensory-motor programming. Required for certification for teaching individuals with severe handicaps.

### **371 Methods and Curricula for Severely Handicapped (3)**

Prerequisite: SPC ED 370 or consent of instructor. This course begins with the application of the clinical teaching model to the severely handicapped population regarding objectives, training methods, and program process monitoring. It also includes critical analysis of existing curricula and methods of classroom or living unit organization. Required for certification in Severe Handicapped.

### **372 Screening and Diagnosis of the Developmentally Delayed (3)**

Prerequisites: ED REM 310 or equivalent and SPC ED 313. This course addresses the content, techniques, and special problems related to the assessment of handicapped individuals in the birth-to-five developmental range. Students gain experience in construction, administration, and interpretation of assessment tools used with low functioning handicapped individuals. Required for certification in Severe Handicapped and Early Childhood-Special Education.

### **382 An Introduction to Gifted Children (3)**

Prerequisite: SPC ED 313. This course provides an introduction to gifted children. Their characteristics, cognitive abilities, special abilities, and creativity will be reviewed. Current problems, research, and issues concerning the gifted are covered.

### **384 The Education of Gifted Children (3)**

Prerequisite: SPC ED 313. This course deals with methods, techniques, and curricular modifications necessary for the effective education of gifted children.

### **390 Student Teaching in Special Education III (5)**

Prerequisites: SPC ED 291 or equivalent and admission to student teaching. Clinical teaching experience in special

education classrooms in schools under University and school supervision with seminar included. For students who wish an additional student teaching experience.

### **412 Psychology of Exceptional Children (3)**

An in-depth analysis of the unique psychological problems of exceptional children and youth. Current psychological theories and research emphasized.

### **413 Organizational Foundations for Special Education (3)**

Prerequisite: SPC ED 313 or SPC ED 412. A study of organizational issues in special education and their implications for practices and procedures. Specific attention will be given to special education delivery systems, compliance standards, funding sources, and regulatory standards.

### **416 Current Research in Psychology of Exceptional Children (3)**

Prerequisite: Permission of instructor/adviser. A study of current issues, trends, and major research in special education. Areas of investigation shall center around major developments in exceptionalities, situations relative to programming projected needs, and considerations and utilization of investigation of the exceptional individual. Graduate students should have experience or an undergraduate background in exceptionalities prior to admission to this course.

### **421 Prescriptive Teaching of Exceptional Children (3)**

Prerequisite: SPC ED 412. Course will instruct teachers on how to develop and implement prescriptive educational programs for exceptional children and adolescents based upon available information. Students will become familiar with prescriptive systems which will enable them to utilize sources of information for remedial and developmental needs.

### **430 Theories and Practice in Mental Retardation (3)**

Prerequisite: Permission of instructor. An advanced study of the pedagogical and theoretical problems germane to the area of mental retardation with particular emphasis on the application of current research findings to the solution of these problems.

### **431 Education of Individuals with Mental Retardation (3)**

Prerequisite: SPC ED 430. A systematic study of modern educational procedures for students with mental retardation. Methods and materials for educating students with mental retardation are stressed.

### **443 Learning Disabilities (3)**

Prerequisite: SPC ED 412. An advanced study of the pedagogical and theoretical problems germane to the area of learning disabilities with particular emphasis on the application of current research findings to the solutions of these problems.

### **444 Education of Children with Learning Disabilities (3)**

Prerequisite: SPC ED 443. A systematic study of modern educational procedures for children with learning disabilities. Methods and materials for educating children with learning disabilities are stressed.

## Behavioral Studies

### **450 Introduction to Behavioral Disorders (3)**

Prerequisite: SPC ED 412. An advanced study of the pedagogical and sociological problems germane to behavioral disorders with particular emphasis on the application of current research findings to the solutions of these problems.

### **452 Education of Behaviorally Disordered Children (3)**

Prerequisite: SPC ED 450. A systematic study of modern educational practices for behaviorally disordered children. Methods and materials for educating behaviorally disordered children are stressed.

### **462 Introduction to Early Childhood Special Education (3)**

Prerequisite: SPC ED 412. A study of issues and concepts central to special education for the young handicapped child. Focus will be placed upon program models, screening and assessment procedures, and curriculum concepts. An ecological approach to special education will be emphasized.

### **463 Curriculum, Methods, and Materials for Early Childhood Special Education (3)**

Prerequisites: SPC ED 412 and SPC ED 462. In-depth study of integrated assessment-based curriculum development for preschool handicapped children. Emphasis will be on individualized educational planning and implementation.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **492 Practicum in Special Education (3-6)**

Prerequisite: Two courses in area of concentration. A supervised internship in educating exceptional children in a school setting or other appropriate site.

### **497 Problems (1-10)**

Prerequisite: SPC ED 412 or equivalent. Selected problems on student-learner exceptionalities for individuals at the postbaccalaureate level.

## Educational Studies

### Faculty

**Edith M. Young**, Chairperson; Associate Professor\*  
Ed.D., University of Missouri-Columbia

**James E. Walter**, Associate Professor\*  
Ph.D., University of Wisconsin-Madison

**Charles Granger**, Professor\*  
Ph.D., University of Iowa

**Arthur H. Shaffer**, Professor\*  
Ph.D., University of California-Los Angeles

**Blanche Touhill**, Professor\*; Chancellor  
Ph.D., St. Louis University

**Paul D. Travers**, Director, Teacher Education, Professor\*  
Ed.D., George Peabody College

**Harold E. Turner**, Professor Emeritus\*  
Ed.D., George Peabody College

**Henry R. Weinstock**, Professor\*  
Ed.D., University of Georgia

**Joy E. Whitener**, Dean Emeritus; Professor Emeritus\*  
Ed.D., Washington University

**Charles J. Fazzaro**, Associate Professor\*  
Ed.D., West Virginia University

**Richard J. Friedlander**, Associate Professor\*  
Ph.D., University of California-Los Angeles

**John A. Henschke**, Associate Professor\*; Continuing Education Specialist, University Extension-East Central Region  
Ed.D., Boston University

**Everette E. Nance**, Associate Professor\*; Dean, Evening College; Director, Midwest Community Education Development Center  
Ed.D., Western Michigan University

**Angelo H. Puricelli**, Associate Professor\*; Associate Dean for Continuing Education-Extension  
Ph.D., St. Louis University

**Jane Zeni**, Associate Professor\*  
Ed.D., University of Missouri-St. Louis

**Jim Mansfield**, Assistant Professor  
Ph.D., University of Missouri-Columbia

**Cathy Vatterott**, Assistant Professor\*  
Ph.D., St. Louis University

**Wendell L. Smith**, Assistant Professor\*; Associate Vice Chancellor for Academic Affairs; Dean of Continuing Education-Extension  
Ph.D., Ohio State University

**Fred E. Bradley**, Assistant Professor\*  
Ph.D., Southern Illinois University-Carbondale

**Beth Pike**, Visiting Assistant Professor\*  
Ed.D., University of Missouri-St. Louis

**Gayle Wilkinson**, Assistant Professor\*  
Ed.D., University of Illinois

**Robert H. Clapp**, Lecturer; Director, Instructional Technology Center  
Ed.S., University of Connecticut

**Mimi J. LaMarca**, Lecturer; Director of Admissions and Registrar  
M.Ed., University of Missouri-St. Louis

**Harold Harris**, Associate Professor\*  
Ph.D., Michigan State University

**Timothy O'Rourke**, Professor\*  
Ph.D., Duke University

\*members of Graduate Faculty

## General Information

The faculty of the Department of Educational Studies are housed on the second floor of Marillac Hall. Answers to questions about the department and its offerings may be obtained from the department office, 269 Marillac Hall.

The department coordinates programs that prepare students for teaching these subjects in secondary schools (grades 7-12) and middle schools: biology, chemistry, English, French, German, history, mathematics, music, physics, psychology, social studies, speech, and Spanish. A special feature of these programs is the close interdisciplinary cooperation between the professional School and other University departments. The business education major is offered within the School of Education.

Students may choose to pursue the bachelor's degree in the College of Arts and Sciences plus certification, or the Bachelor of Science in Education degree (B.S.Ed.) which includes Missouri certification. Business education students have only the latter option.

**Note** The General Assembly enacted a law during 1984 eliminating Life Teaching Certificates after September 1, 1988. The State Board of Education is authorized to develop new standards for one or more renewable professional certificates, based on specific requirements for training and experience. Details regarding these standards are available in the Office of Teacher Education.

At the graduate level the department provides a program leading to the M.Ed. in secondary education, secondary education with emphasis in adult education, certification studies with Adult Basic Education, secondary education with emphasis in reading, and secondary education and certification. It offers master's degree work and advanced certification studies in elementary and secondary school administration, special education administration, and the school superintendency.

Community education is an additional emphasis offered in the educational administration program. Work in educational technology is also available.

## Undergraduate Studies

### Degree Requirements

**Interdisciplinary Program: Bachelor of Science in Education in Secondary Education or Bachelor's Degree in the College of Arts and Sciences**

### General Education Requirements

Bachelor's degree candidates in secondary education must complete the University General Education Requirements and must meet the Missouri secondary teacher certification general education standards as follows.

### Humanities

Three courses required from the following fields: music (excluding applied music), art, foreign language, Western

## Educational Studies

and non-Western cultures, philosophy, literature, classical studies, and theatre and drama.

### Communication Skills

At least **two** courses in English composition and **one** in oral communications.

### Social Studies

Courses in American history and American government, and one additional course selected from the following areas: geography, sociology, economics, anthropology, psychology.

### Natural Science

One course in a physical or earth science; one course in a biological science. At least one of these courses must have a laboratory component.

### Mathematics

One college-level mathematics course.

**Note** All of the courses above must be a minimum of two semester hours.

### Program Requirements (28 hours required)

The following education and psychology courses meet the state professional education standards:

**ED FND 111**, The School in Contemporary Society

**PSY 271**, Adolescent Psychology

**ED PSY 312**, Psychology of Teaching and Learning

**SEC ED 213**, Techniques of Secondary School Teaching and Field Experience

**SEC ED 290**, Secondary School Student Teaching

**SPC ED 313**, The Psychology and Education of Exceptional Individuals

**SEC ED 386**, Teaching Reading in Secondary School Content Area

and the appropriate course titled Curriculum and Methods of Teaching \_\_\_\_\_.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

**Note** Music education students take the following courses instead of SEC ED 290: SEC ED 293, Student Teaching in Music Education K-6, and SEC ED 294, Student Teaching in Music Education 7-12. These two courses must be taken during the same semester.

### Area of Concentration: Teaching Fields

Degree candidates must complete 30 to 40 hours of specific subject requirements in one of the following fields: English, foreign language (French, German, or Spanish), mathematics, music, science (biology, chemistry, physics), or social studies education.

Social studies students must complete a major in one of the following disciplines: anthropology, economics, geography, history, political science, psychology, or sociology; and meet these minimum social science requirements: American history, 12 hours; European or world history,

9 hours; United States and/or state government, 6 hours; economics, 3 hours; behavioral science (sociology, anthropology, or psychology), 6 hours; geography, 3 hours; and 2 hours of elective social studies credit

**Total: 120 hours**

### Bachelor of Science in Education: Secondary Education with Emphasis in Business Education

**General Education Requirements** Business education majors must complete the University General Education Requirements, Missouri certification requirements, and the following education and psychology courses:

### Program Requirements (32 hours required)

**ED FND 111**, The School in Contemporary Society

**PSY 271**, Adolescent Psychology

**ED PSY 312**, Psychology of Teaching and Learning

**SEC ED 213**, Techniques of Secondary School Teaching and Field Experience

**SEC ED 290**, Secondary School Student Teaching

**SEC ED 204**, Seminar: Business Education Student Teaching

**SPC ED 313**, The Psychology and Education of Exceptional Individuals

**SEC ED 386**, Teaching Reading in Secondary School Content Areas

### Academic Major (36 hours required)

These Secondary Education (SEC ED) courses:

**162**, Computer Keyboarding and Formatting

**261**, Methods of Teaching Keyboarding and Formatting

**263**, Methods of Teaching Accounting

**264**, Methods of Teaching Basic Business Subjects

**\*265**, Secretarial Practice

**267**, The Secondary Business Curriculum

**\*362**, Shorthand/Alpha Systems: Theory and Application

**361**, Information Processing: Applications and Techniques of Teaching

**367**, Methods of Teaching Desktop Publishing Concepts and Procedures

plus these **Business Administration** courses

**103**, Computers and Information Systems

**140**, Fundamentals of Financial Accounting

**145**, Managerial Accounting

**156**, Legal Environment of Business

**256**, Business Law I

**206**, Basic Marketing

and

**Econ 51**, Principles of Microeconomics

**Note** Grades of C or better are required in all courses in the academic major. This long standing policy will be rigorously enforced.

\*Majors working toward shorthand certification must take these additional courses, and are not required to take BA 206.

## Educational Studies

### Electives

Electives are to be selected only after consulting with a faculty adviser.

**Total: 120 hours**

## Graduate Studies

### Master of Education: Secondary Education

The M.Ed. program in secondary education is flexibly designed to allow for the special interests of teachers, department chairpersons, curriculum workers, instructional supervisors, reading specialists, and those working in adult education. Programs must be planned with advisers and meet the approval of the Department, School, and Graduate School.

#### Degree Requirements for All Secondary Education Majors

The minimum 32-hour program for all secondary education majors includes the following requirements:

#### Core Requirements (9 hours)

**ED FND 421**, Philosophy of Education  
**SEC ED 415**, The Secondary School Curriculum  
**SEC ED 420**, The Improvement of Secondary School Teaching

#### Exit Requirement (3 hours)

One of the following courses must be taken as part of the last nine hours in the M.Ed. program in secondary education:

**ED FND 422**, Analysis of Educational Issues  
**SEC ED 416**, Curriculum Construction for Secondary Schools

In addition to the above courses, the following is a third exit course option, limited solely to those in the Adult Education Emphasis or Business Education teaching field:

**ADU ED 490**, Internship (in Adult Education)

Any of the above courses, when not used to meet the exit requirement, may be included as an elective in the program.

### Master of Education: Secondary Education with Emphasis in Curriculum and Instruction

The M.Ed. with an emphasis in curriculum and instruction is designed to enable candidates to further their competencies as teachers or curriculum/instructional leaders.

#### Degree Requirements (32 hours)

1) **Core Requirements** (9 hours as specified above)

2) **Curriculum/Instruction Core** (8 hours) Courses are to be selected in consultation with an adviser in the curriculum/instruction field from among the following:

**SEC ED 315**, The Middle Level School  
**SEC ED 386**, Teaching Reading in Secondary School Content Areas  
**SEC ED 414**, Teaching the Gifted and Talented in Secondary Schools  
**SEC ED 416**, Curriculum Construction for Secondary Schools  
**SEC ED 422**, Individualizing Instruction in Secondary Schools  
**PHY ED 462**, The Physical Education Curriculum

3) **Teaching Field Core** (8 hours)  
 Courses approved by the Graduate School for M.Ed. programs are to be selected in consultation with an adviser in secondary education.

4) **Electives**  
 Additional courses may be taken in the School of Education and/or curriculum and instruction areas to provide a consistent program upon the recommendation of the adviser.

### Master of Education: Secondary Education with Emphasis in Adult Education

The M.Ed. with an emphasis in adult education is designed to enable candidates to further their competencies as teachers, administrators, and program planners in various adult education settings through the study of core courses in adult education, plus a minimum of eight hours of elective work appropriate to the candidates' particular needs. Adult Basic Education (ABE) practitioners can complete course requirements for certification within the scope of or independent from the master's degree program.

#### Degree Requirements (32 hours)

1) **Core Requirements** (9 hours as specified above)

2) **Adult Education Core** (8 hours)  
 Courses are to be selected in consultation with an adviser in the adult education teaching field from among the following courses:

\***ADU ED 412**, Foundations of Adult Education  
 \***ADU ED 413**, Improvement of Instruction in Adult Education  
 \***ADU ED 414**, Curriculum Theory and Development in Adult Education  
 \***ED ADM 480**, Administration of Adult and Community Education  
**ADU ED 490**, Internship, or **ADU ED 497**, Problems in Adult Education

3) **Electives**  
 Additional courses may be taken in the School of

## Educational Studies

Education and/or teaching field to provide a consistent program upon the recommendation of the adviser.

### Adult Basic Education Certification

\***ADU ED 311**, Teaching Basic Reading Skills to Adults  
 \***ELE ED 445**, Problems of Teaching Arithmetic in the Elementary School, or **ELE ED 346**, Advanced Methods in Elementary School Mathematics

\*Eight semester hours from these six courses, and three hours of Adult Education electives, in addition to SPC ED 313, Psychology and Education of Exceptional Individuals, are required for five-year certification from the Missouri Department of Elementary and Secondary Education. New requirements will be implemented in 1994 and are currently required for all new ABE teachers.

### Adult Basic Education (ABE) Certification

- 1) Requirements for two-year teacher's certificate in ABE:
  - a. A holder of a bachelor's degree from a four-year college or university.
  - b. Annual attendance at Department of Elementary and Secondary Education (DESE) approved Adult Basic Education teacher certification workshops.

(The two-year ABE certificate may be renewed twice. Requirements for a five-year certificate must be completed by the end of the sixth year.)

- 2) Requirements for a five-year teacher's certificate in ABE:
  - a. A holder of a bachelor's degree from a four-year college or university.
  - b. Earn eight semester hours in DESE approved Adult Education classes, institutes, or workshops.

(The five-year ABE certificate may be renewed an unlimited number of times by repeating the requirements during the previous five years.)

**Note** This would provide certification for (1) ABE teachers who are teaching less than half-time and/or without a contract and/or not in a public school or an accredited private school; and for (2) ABE teachers with bachelor's degrees and experience teaching adults who do not have regular teacher certification. Information is available for Professional Certificates for full-time ABE teachers.

## Master of Education: Secondary Education with Emphasis in Reading

The M.Ed. with an emphasis in secondary reading is designed to enable candidates to further their competencies as teachers of reading and to prepare for positions as reading specialists, reading consultants, and/or further graduate study.

### Degree requirements (32 hours)

- 1) **Core Requirements** (9 hours as specified above)
- 2) **Reading Core**  
 Required courses in reading should be taken in the following sequence:

**SEC ED 386**, Teaching Reading in Secondary School  
 Content Areas  
**ELE ED 486**, Clinical Diagnosis and Treatment of Reading Disabilities  
**ED REM 422**, Individual Assessment of Cognitive Abilities  
**ELE ED 493**, Clinical Methods in Child Study I  
**ELE ED 494**, Clinical Methods in Child Study II  
**ELE ED 482**, Problems and Research in Teaching Elementary School Reading

To complete Missouri reading certification for grades K-12, the following must be taken or have been completed at the undergraduate level. Students should see an adviser.

**SPC ED 315**, Speech and Language Problems of Exceptional Children, or **ECH ED 331**, Language Acquisition and Development in Early Childhood  
**SPC ED 320**, Behavior Management  
**CNS ED 327**, Personal and Professional Development in Counseling  
**ED PSY 417**, Psychology of the Elementary School Child  
**ED PSY 418**, The Psychology of Adolescence

- 3) The same exit requirement exists as outlined above for all students in the Master of Education degree program in Secondary Education.

## Master of Education: Secondary Education and Certification

The M.Ed. in secondary education requires a minimum of 32 hours of graduate credit. Depending upon the area of secondary school specialization, certification may require from 28 to 36 semester hours of undergraduate course work, making a total of over 60 semester hours of graduate and undergraduate work. Under the combined program up to 15 hours of graduate courses may be substituted for the same number of undergraduate courses. Students seeking such certification must obtain advisement from the office of Teacher Education, the Department of Educational Studies, and from the appropriate faculty joint appointee in the Department of Educational Studies and respective Arts and Sciences department.

## Degree Requirements

### Required and Recommended Courses

- 1) **Professional Requirements**  
**SEC ED 2XX**, Curriculum and Methods of Teaching \_\_\_\_\_  
**SEC ED 213**, Techniques of Secondary School Teaching and Field Experience  
**SEC ED 290**, Secondary School Student Teaching  
**SEC ED/A&S Dept., 2XX or 3XX** Teaching Intern Seminar (1-3)

- 2) **Certification and M.Ed. Requirements**  
**ED PSY 312**, The Psychology of Teaching and Learning  
**SEC ED 386**, Teaching Reading in Secondary School  
 Content Areas  
**ED PSY 418**, The Psychology of Adolescence  
**SPC ED 412**, Psychology of Exceptional Children  
**ED FND 421**, Philosophy of Education  
**SEC ED 415**, The Secondary School Curriculum



## Educational Studies

### Electives

Selected graduate courses, including at least eight hours in the teaching specialty or in curriculum/instruction.

### Educational Administration Options

The options in educational administration include elementary and secondary school administration and certification for school district administration. They are part of a continuous two-phase, NCATE- and DESE-approved program. In the first phase, students earn the M.Ed. The second phase leads to the completion of a two-year course of study in educational administration and is designated the Advanced Certification Studies (ACS) program. Both phases are correlated with current Missouri requirements for certification as either a principal or director of elementary or secondary education or school superintendent in Missouri schools.

The options in educational administration are more than simply lists of courses. Each is an organized curricular offering.

Responsibility for developing appropriate individual programs rests primarily with students. They are, therefore, encouraged to take full advantage of the program planning assistance provided by advisers, especially during the early phase of the program(s).

## Master of Education and Advanced Certification Studies (ACS): Educational Administration

The recommended curriculum for the M.Ed. in Educational Administration is 33 credit hours. The curriculum for Advanced Certification Studies is 60 credit hours.

### Requirements

#### 1) Educational Core (Required for M.Ed. and ACS)

ED FND 421, Philosophy of Education  
ED FND 435, History of Western Education, or ED FND 330, History of American Education  
ED ADM 411, Organizational Theory & Analysis in Education  
ED ADM 416, Policymaking in Education

#### 2) Research Core (Required for both M.Ed. and ACS)

\*ED ADM 435, Education Administration Policy Research  
ED REM 330, Educational Statistics

#### 3) Educational Administration Core (Required for both M.Ed. and ACS)

ED ADM 414, Foundations of Educational Administration  
ED ADM 460, School Law  
ED ADM 471, School Staff Development & Supervision

#### 4) School Administration Specialization

(Required for both M.Ed. and ACS)\*\*

#### For Elementary School Administration

ED ADM 441, Elementary School Administration  
ELE ED 411, Curricular Issues in the Elementary School, or  
ELE ED 411, Curriculum Issues in the Elementary Schools.

#### For Secondary School Administration

ED ADM 451, Secondary School Administration  
SEC ED 415, Secondary School Curriculum, or SEC ED 416, Curriculum Construction for Secondary Schools

#### 5) Internship

(Required for state certification, but not for M.Ed.)  
ED ADM 490, Internship

#### 6) Technical Aspects of Educational Administration

(Electives, 12 hours for ACS. This list is suggestive; other approved courses may be used to meet the 12-hour requirement.)

ED ADM 425, Organizational Change in Education  
ED ADM 429, The Department Head  
ED ADM 430, School District Administration  
ED ADM 465, State and Federal Financing of Public Education  
ED ADM 466, Principles of Public School Finance in Missouri  
ED ADM 475, School Buildings and Sites  
ED ADM 480, Administration of Adult and Community Education  
ED ADM 481, Programming in Community Education and Adult Education  
ED ADM 485, Financing of Community Education  
ELE ED 410, Current Research in the Elementary School Curriculum  
ELE ED 411, Curricular Issues in the Elementary School  
ELE ED 422, Curriculum Construction in the Elementary School  
ELE ED 423, Curricular Implementation in the Elementary School  
SEC ED 315, The Middle Level School  
SEC ED 316, The Middle Level School Curriculum  
SEC ED 416, Curriculum Construction for Secondary Schools  
SEC ED 420, The Improvement of Secondary School Teaching  
SEC ED 422, Individualizing Instruction in Secondary Schools  
ED TEC 433, Educational Technology Systems Management  
ED REM 420, Classroom Measurement and Evaluation

#### 7) Human Aspects of Educational Administration

(Electives, 12 hours for ACS. This list is suggestive; other approved courses may be used to meet 12-hour requirement.)

ED ADM 422, Leadership in Educational Administration  
ED ADM 432, Problems in School Public Relations  
ED ADM 456, Extracurricular Activities  
ED ADM 470, School Personnel Administration  
ED ADM 473, Collective Negotiations in Educational Organizations  
ED FND 422, Analysis of Educational Issues  
ELE ED 425, Elementary School Supervision  
SEC ED 425, Secondary School Supervision  
ED PSY 418, The Psychology of Adolescence  
SPC ED 313, The Psychology and Education of the Exceptional Individual  
CNS ED 431, Foundations of School Guidance  
CNS ED 317, The Advisory Program in Middle Schools

## Educational Studies

- \* Exit Requirement for M.Ed. and ACS. This course must be taken within the last nine (9) semester hours of either M.Ed. or ACS.
- \*\* Students choose either the sequence for elementary school administration or the sequence for secondary school administration.

### Master of Education: Educational Administration with Emphasis in Community Education

This is a 32-credit hour program for those students interested in community education.

#### Degree Requirements

##### 1) Common Educational Foundations (9 hours required)

ED FND 421, Philosophy of Education  
\*SPEC ED 313, The Psychology and Education of Exceptional Individuals  
ED REM 420, Classroom Measurement and Evaluation or  
ED REM 330, Educational Statistics

\*Students who have already had an undergraduate course related to Psychology of Exceptional Children need not take SPC ED 313.

##### 2) Administrative Foundations (12 hours required)

ED ADM 411, Organizational Theory and Analyses in Education

For elementary administration community education  
ED ADM 441, Elementary School Administration  
ELE ED 425, Elementary School Supervision  
ELE ED 410, Current Research in the Elementary School Curriculum

For secondary administration community education  
ED ADM 451, Secondary School Administration  
SEC ED 425, Secondary School Supervision  
SEC ED 415, The Secondary School Curriculum, or SEC ED 416, Curriculum Construction for Secondary Schools

##### 3) Community Education Emphasis Area (9 hours required)

ED ADM 480, Administration of Community and Adult Education  
ED ADM 481, Programming in Community and Adult Education  
ED ADM 490, Internship

##### 4) Recommended Electives

ED ADM 485, Financing of Community Education  
ED ADM 432, Problems in School Public Relations  
ED ADM 460, School Law  
ED ADM 485, State and Federal Financing of Public Education  
ED ADM 414, Foundations of School Administration

##### 5) Minor Area of Concentration

(6 hours required for ACS)

Students are expected to demonstrate competence in at least one other field. Other fields may include sociology, political science, business administration (industrial-labor relations or other area), economics, educational research, and other approved fields. Competence may be shown by successful completion of at least six hours in one of these fields.

6) Internship or Field Study (Required ACS only)  
ED ADM 490, Internship

## Career Outlook

Secondary school teaching positions are more plentiful than in the recent past. Most certificated teachers can find jobs if they are willing to go where there are openings.

Teachers of mathematics and the sciences are in extremely high demand. The fields of humanities and social sciences have somewhat better immediate prospects than in the past. The preparation that teacher education graduates receive enables them to do well in service and sales positions. Job opportunities in the educational and training facets of these fields are good.

People with preparation in secondary education, educational technology, adult education, and educational administration find positions in education/training units in businesses, industries, health care organizations, governmental units, community agencies, and service institutions.

School administration opportunities are available to qualified individuals, particularly those who have completed advanced graduate programs. Community education is an expanding field and will need increasing numbers of people with preparation in that specialty.

## Educational Studies

### Course Descriptions

Courses in this section are grouped as follows:  
Adult Education (ADU ED) Educational Administration (ED ADM) Educational Foundations (ED FND) Educational Technology (ED TEC) and Secondary Education (SEC ED).

Prerequisites may be waived by consent of the department.

### Adult Education (ADU ED)

#### 311 Teaching Basic Reading Skills to Adults (3)

A study of the reading process and of the characteristics of adult learners with a focus on instructional techniques and materials useful in upgrading the performance of adults with deficient reading skills.

#### 412 Foundations of Adult Education (3)

A comprehensive, systematic foundation for adult education. It will relate (a) the pragmatic philosophy and objectives of adult education in America to (b) the continuing education of the adult in a progressive social context.

#### 413 Improvement of Instruction in Adult Education (3)

Prerequisite: ADU ED 412 or consent of instructor. A study of selected methods and instructional techniques appropriate for the teaching of adults. An examination of current research will be made as it relates to the problems of instructing adults.

#### 414 Curriculum Theory and Development in Adult Education (3)

Prerequisites: ADU ED 412 and ADU ED 413 or consent of instructor. A study of curriculum theory and its application to adult education. Particular emphasis will be placed on the development of model curricula for various programs in adult education.

#### 425 Principles of Business Education (3)

Prerequisites: Business education certification and consent of instructor. Designed for the business education teacher, this course examines in depth the principles, practices, and problems of business education programs. It emphasizes research into historical and philosophical implications, the influence of contemporary attitudes on business education, evaluation of current programs, and development of innovative approaches. It may be applied toward Missouri Vocational Business Education certification.

#### 426 Coordination of Cooperative Vocational Programs (3)

This course deals with student selection procedures. Coordinating vocational instruction and planned employment experiences; research techniques for collecting and analyzing data for process and product evaluation; procedures for implementing new ideas and innovations in cooperative vocational education programs. The course is designed for vocational teachers and for teachers who wish to qualify as coordinators of cooperative vocational programs. This course may be applied toward Missouri Vocational Certification.

#### 427 Improvement of Instruction in Teaching Business Subjects (3)

Prerequisites: Business education certification and consent of instructor. Designed for business education teachers, this course examines current trends in planning, organizing, developing, and evaluating instructional materials relevant to business education classes. Emphasis is placed on research techniques and strategies for selecting and utilizing appropriate curriculum materials, resources, and media to match learning needs. This course may be applied toward Missouri Vocational Certification.

#### 432 Teaching in the Community College (3)

This course is designed for students considering a teaching career in the community college. The main emphasis of the course will be to expose students to the unique features of the community college with respect to the special goals of the institution, variety of degree and nondegree programs, and diversity of community college students. A second objective will be to offer a brief review of teaching techniques that will be useful in the community college classroom.

#### 435 Problems in Teaching College Biology (3)

(Same as Biology 485.) Prerequisites: Teaching experience, 30 semester hours in biology, and consent of the instructor. Basic philosophies underlying undergraduate biology education at the college level will be presented and examined with concern for establishment of an individual philosophy in the prospective college teacher. Teaching techniques suitable for college-level instruction will be considered, practiced, and evaluated. Advantages and limitations of various methods of instruction will be considered with respect to current research findings.

#### 490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

#### 497 Problems in Adult Education (1-10)

Prerequisite: ADU ED 412 or consent of instructor. Independent study on topics in adult education.

### Educational Administration (ED ADM)

#### 411 Organizational Theory and Analysis in Education (3)

Prerequisite: ED ADM 414 or equivalent. The purpose of this course is to examine organizational theory and its implications for the field of education. A comprehensive survey of the work of scholars in the field of organizational theory will provide students with appropriate conceptual tools necessary to analyze problems in educational organizations.

#### 414 Foundations of School Administration (3)

Emphasis on processes common to all phases of educational administration. Conceptual framework for administration of education, decision making, and organizational theory.

## Educational Studies

### **416 Policymaking in Education (3)**

Prerequisites: ED FND 421 and ED ADM 411 or equivalent. The purpose of this course is to provide the student with a comprehensive and systematic approach to understanding the nature and function of policy making in education.

### **422 Leadership in Educational Administration (3)**

This course is designed to acquaint the administrator with the factors of groups and interpersonal relationships directly affecting job performance. The consequences of various types of group relationships upon the institution will be studied in detail. The administrator will study various rationales for and methods of improving interpersonal relationships within the institution.

### **425 Organizational Change in Education (3)**

Prerequisite: ED ADM 411 or equivalent. This course deals with (1) developing strategies for assessing educational needs, (2) methods of assessing the school's "organizational health," (3) the designing of educational change strategies involving theory-based models, (4) using systems-analysis techniques to implement educational change, and (5) methods of involving students and staff in incorporating meaningful organizational change strategies in educational institutions.

### **430 School District Administration (3)**

Prerequisite: ED ADM 414 or consent of instructor. Course focuses on current research about school district administration; also deals with major central office issues including: board/superintendent relations, central office organization, the function and authority of assistant superintendents and program directors, and the administrative team approach to school district administration.

### **432 Problems in School Public Relations (3)**

Principles of good school public relations, unique public functions of various school and community groups. Techniques for conducting school public relations.

### **435 Education Administration Policy Research (3)**

Prerequisites: ED ADM 411, ED ADM 414, and ED ADM 416. A study of issues and trends in basic, applied, and action research in educational policy making.

### **441 Elementary School Administration (3)**

Prerequisite: ED ADM 411 or equivalent. This course is a comprehensive, systematic study of the elementary school principalship. Emphasis is placed on relating theories of learning, teaching, and organization to effective administration of elementary schools.

### **451 Secondary School Administration (3)**

Prerequisite: ED ADM 411 or equivalent. This course is a comprehensive, systematic study of the secondary school principalship. Emphasis is placed on relating theories of learning, teaching, and organization to effective administration of secondary schools.

### **456 Extracurricular Activities (3)**

Activities related to the extracurricular program of secondary schools will be studied in depth. Analysis of appropriate activities will include the nature and purposes of these activities.

### **460 School Law (3)**

Principles of law as derived from court decisions; statutory and constitutional provisions affecting education. Legal status (power and responsibilities) of school board members, superintendents, principals, teachers, and pupils.

### **465 State and Federal Financing of Public Education (3)**

Economic implications of public education. Determination of policy and practice in financing of public schools by local, state, and federal agencies. Developing principles of adequate tax programs and designing systems of state support of public education.

### **466 Principles of Public School Finance in Missouri (3)**

Course is designed to analyze and study critical areas of public school finance at the local and state levels, highlighting the role of such factors as legislative procedures, principles of local and state support, budgeting and accounting procedures, assessment of property, etc.

### **470 School Personnel Administration (3)**

Prerequisite: ED ADM 411 or equivalent. This course is a comprehensive, systematic study of problems in planning, recruitment selection, induction, and retention relative to school personnel.

### **471 School Staff Development and Supervision (3)**

Prerequisite: ED ADM 411 or equivalent. This course provides a systematic examination of the conceptual bases and practical applications of the administration of staff development and supervision programs in a broad spectrum of educational settings. The course explores organizations of several relevant theories and conceptual models including Social Systems Theory and Organizational Development (OD). Students will be introduced to a variety of administrative techniques used to assess needs: plan, deliver, and evaluate staff development; and supervision programs in education.

### **473 Collective Negotiations in Educational Organizations (3)**

This course focuses on the concepts, issues, and processes involved with collective negotiations (bargaining) in American educational organizations. The major issues addressed in the course include recognition procedures, bargaining unit determination, the scope of negotiations, the proposal and counterproposal, compromise, impasse procedures, and master contract management.

### **475 School Buildings and Sites (3)**

Course is designed to acquaint the administrator with methods and procedures for projecting the future building and facility needs of a public school district and for supervising actual planning of facility construction. Maximizing utilization of current facilities will be studied in detail.

### **480 Administration of Adult and Community Education (3)**

A course designed to familiarize the student with the structure, purpose, and processes of community education with particular emphasis being placed on the administrative theories and functions of adult education.

## Educational Studies

### **481 Programming in Community and Adult Education (3)**

Prerequisite: ED ADM 480. Study and analysis of basic situations in which community and adult educational programming take place. Within this framework, application will be made of a fundamental series of steps essential to sound educational programming.

### **485 Financing of Community Education (3)**

The student will develop the necessary skills needed to construct an operational budget for the administration of community education programs. Emphasis will be placed on developing a support base from federal, state, and local funding resources. The student will be exposed to proposal writing and funding procedures.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **497 Problems (1-10)**

## Educational Foundations (ED FND)

### **111 The School in Contemporary Society (3)**

The introductory course in teacher education. An examination of the organization and purpose of the school in its social setting. Selected representative educational themes and issues will be studied. Required of students admitted to the School of Education. Prerequisite to other professional courses.

### **251 Black Americans in Education (3)**

An examination and analysis of conditions affecting the education of black Americans and their schools, with emphasis on relationships between schools and the black community, and needed changes in education.

### **330 History of American Education (3)**

Prerequisite: A course in American history or consent of instructor. An overview of the evolutionary development of American educational theory and practice from the early colonial period to the present. Attention is also given to selected issues in professional education.

### **332 Progressivism and Modern American Education (3)**

Relationship between American progressive school theory and contemporary classroom practices, including the open classroom, the community school, the alternate school, open admissions, and learning by individual contract. Trends will be interpreted in the light of various roles of the classroom teacher in the modern school.

### **340 Comparative Education (3)**

A study of selected Western and non-Western educational themes and issues viewed in the context of their respective cultures.

### **410 Development and Organization of Urban School Systems (3)**

An examination and analysis of the development and existing conditions affecting urban education, with emphasis on current efforts to bring about quality education in urban areas. A review of current projects and research, as well as the effect of these projects upon the school systems, would be included.

### **421 Philosophy of Education (3)**

A study of the fundamentals of education in the light of modern science and philosophy.

### **422 Analysis of Educational Issues (3)**

Prerequisite: A course in philosophy of education or a course in history of education, or consent of instructor. A critical examination of issues about the elementary and secondary schools. This is done through the analysis of the procedures, resources, and goals that guide school policies and practices.

### **435 History of Western Education (3)**

A course designed to survey the educational development of Western civilization from approximately the eighth century BC until the present. Salient educational theory and practice will be considered in their appropriate social context.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **497 Problems (1-10)**

## Educational Technology (ED TEC)

### **245 Audiovisual Equipment Operation for Classroom Teachers (1)**

An entry-level course for all teacher education students. May be taken concurrently with ED TEC 246. A self-paced, modularized, and criterion referenced course. Students will demonstrate competence in operating standard audiovisual equipment normally found in the schools.

### **246 Preparation of Inexpensive Materials for the Classroom (1)**

An entry-level course for teacher education students. May be taken concurrently with ED TEC 245. A lecture-demonstration laboratory course in material preparation for classroom use.

### **247 Integration of Media and Materials in Instructional Planning (1)**

Prerequisites: ED TEC 246, and for secondary education students, SEC ED 213. Course concentrates on the integration of media and materials in lesson planning. Through lecture, demonstration, and individualized instruction, the student designs an instructional unit and

## Educational Studies

prepares appropriate material for that unit. ED TEC 246 must be taken prior to, or concurrently with, this course.

### **248 Utilization of Computer-Based Materials in Instruction (1)**

Utilizing a series of computer-based education modules, the instructional uses of the computer are explained and demonstrated. Students develop practical experience in using and evaluating computer materials for classroom use.

### **340 Selection and Utilization of Educational Media (3)**

Introduction to the selection, use, and evaluation of audiovisual materials and equipment including films, slides, transparencies, projectors, globes, charts, maps, bulletin boards, plus programmed materials, information retrieval systems, and instructional television.

### **345 Preparation of Graphic Materials for Audiovisual Education (3)**

Prerequisite: ED TEC 340 or consent of instructor. Not open to lower division students. A lecture-demonstration-laboratory course that emphasizes the graphic arts component of audiovisual material production. Theories of learning and communication are used in the design and production of materials used for classroom settings.

### **346 Instructional Television (3)**

Prerequisite: ED TEC 340 or consent of instructor. Not open to lower division students. A lecture-demonstration laboratory course designed to concentrate on the use of instructional television in formal and informal learning situations. Basic script writing, management of ITV systems, and design and production of low-budget programs will be emphasized.

### **353 Principles of Photographic Production for Education (3)**

Prerequisite: ED TEC 340 or consent of instructor. A lecture-demonstration-laboratory course which stresses the application of theories of learning, perception, and retention to the visual medium of still photography. Emphasis on designing and producing photographic material that enhances the teaching/learning process.

### **354 Principles of Motion Picture Production for Education (3)**

Prerequisite: ED TEC 340 or consent of instructor. A lecture-demonstration laboratory course. Emphasis on application of theories of learning, perception, and retention as they relate to motion picture production. Special attention will be given to the design and production of motion picture material that enhances the learning process.

### **404 Seminar in Educational Technology Research (3)**

Prerequisites: ED TEC 340 and twelve hours of graduate work in educational technology. A review of research in educational technology with individual in-depth study. The student selects a research problem in conjunction with the instructor and completes a review project. Open to graduate students who have completed twelve hours of work in educational technology.

### **410 Computer-Based Graphics and Text Design and Production (3)**

Prerequisite: Education 301 or permission of the instructor. A lecture-demonstration-laboratory course that emphasizes the theoretical and practical design of graphic and textual material through the use of computer-based graphics programs. Emphasis will be placed on the utilization of commercial software to produce graphic designs and desktop publishing projects such as newsletters, workbooks, and other textual materials.

### **412 Applications of Computers in Education (3)**

Prerequisite: EDUC 301 or permission of instructor. Uses and capabilities of computers in the teaching, administration, and counseling areas of education. Familiarization with computing facilities and package programs.

### **415 Computer-Based Education: Authoring Software I (3)**

Prerequisite: Education 301 or permission of the instructor. A lecture-demonstration-laboratory course that emphasizes the theoretical and practical design of computer-based educational materials. Students will develop practical experience in utilizing programming shells and authoring languages in the development of curricular-based CBE programs.

### **432 Educational Technology Systems Design (3)**

Prerequisite: ED TEC 340. A lecture-demonstration course in the application of learning theory to the design of audiovisual materials. Emphasis on educational technology systems design, objectives, constraints, limitations, and evaluation. Methods of analyzing target populations and instructional demands along with decision-making models will be reviewed.

### **433 Educational Technology Systems Management (3)**

Prerequisite: ED TEC 340. Basic principles of management in design and operation of media programs and systems in various educational settings. Emphasis on strategies and alternative structures for achieving and evaluating functions of media centers.

### **435 Diffusion and Adoption of Innovations in Educational Technology (3)**

Prerequisite: ED TEC 340. A lecture course designed to provide an overview of the diffusion and adoption of technical innovations in the educational system. This course will include the technological, sociological, psychological, and political aspects of the process of diffusion and adoption. Various models, techniques, and applications of the diffusion and adoption process are emphasized.

### **446 Advanced Instructional Television Production (3)**

Prerequisite: ED TEC 340 and ED TEC 346. Advanced management, script writing, and production of ITV programs. Laboratory activities in production of systematically designed instruction. Each student will produce ITV programs involving writing, production of graphics, directing, editing, and validating the programs.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised

## Educational Studies

experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **493 Practicum in Educational Technology (3)**

Prerequisite: ED TEC 340 or consent of instructor. Focus is on the application of principles of instructional development to teaching problems in educational technology. Selecting, developing, adapting, and using instructional technology appropriate to the specific teaching problems is an integral part of this course.

### **497 Problems (1-10)**

Prerequisite: ED TEC 340 or consent of instructor. Individual study on topics pertaining to educational technology.

## Secondary Education (SEC ED)

### **162 Computer Keyboarding and Formatting (3)**

Prerequisite: Intermediate typewriting or equivalent. Review of keyboarding techniques and skills; development of speed and accuracy; instruction in the preparation of business and professional papers and forms with emphasis on formatting and information processing skills.

### **204 Seminar: Business Education Student Teaching (1)**

Prerequisites: Completion of all required courses in major and/or certification emphasis area. To be taken concurrently with student teaching. Application of theory, methods, and techniques to the teaching of business subjects in grades 7-12.

### **208 Mathematics Teaching Intern Seminar (1)**

Prerequisite: Concurrent enrollment in SEC ED 290. A seminar in the integration of mathematics curricula, educational philosophy, teaching strategies, and instructional technology in the classroom setting. To be taken concurrently with Secondary Student Teaching, SEC ED 290.

### **213 Techniques of Secondary School Teaching and Field Experience (4)**

Prerequisites: ED FND 111 and admission to the Teacher Education Program. Activities and interaction of teachers and students in secondary schools. Included also is an analysis of teaching, learning, and field observations in secondary classrooms. Recommended that SEC ED 213 be taken during the first semester of the junior year prior to special methods courses.

### **232 The Curriculum and Methods of Teaching English (3)**

(Same as English 262.) Prerequisites: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of the English courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Includes field experiences. The course prepares students for reflective teaching by relating course readings to field experiences and theory to practice. To be taken prior to student teaching.

### **240 The Curriculum and Methods of Teaching Physical Sciences (3)**

(Same as Chemistry 280 and Physics 280.) Prerequisite: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of the physical science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of science. To be taken prior to student teaching.

### **246 The Curriculum and Methods of Teaching Mathematics (3)**

Prerequisites: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of the mathematics courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of mathematics. To be taken prior to student teaching.

### **255 The Curriculum and Methods of Teaching History and Social Studies (3)**

(Same as History 255.) Prerequisite: At least junior standing. A study of the scope and sequence of the history and social studies courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is directed also toward learning the techniques and research tools of the scholar in the fields of history and social studies. May not count toward history hours required for history major. Must be completed prior to student teaching.

### **256 Social Studies Teaching Intern Seminar (1)**

(Same as History 256.) Prerequisite: Must be enrolled concurrently in student teaching. Addresses the application of educational philosophy, social studies curriculum, teaching strategies, and instructional technology in the classroom setting. Offered concurrently with Secondary School Student Teaching, SEC ED 290.

### **261 Methods of Teaching Keyboarding and Formatting (3)**

Prerequisite: Intermediate Typewriting or equivalent. Instruction in the methods and techniques used to teach keyboarding and document formatting.

### **263 Methods of Teaching Accounting (3)**

Prerequisites: BA 140, BA 145, or equivalent. Methods and techniques of teaching data processing and accounting in the secondary schools.

### **264 Methods of Teaching Basic Business Subjects (3)**

Prerequisites: Econ 51 or equivalent, BA 206 and/or BA 256. Methods and techniques of teaching basic business, business law, economics, consumer economics, and business principles and management in the secondary school curriculum.

### **265 Secretarial Practice (3)**

Prerequisites: SEC ED 162 and consent of instructor. Study of secretarial office procedures; office-style dictation for

## Educational Studies

transcription; word processing; office machines; records management.

### 267 The Secondary Business Curriculum (3)

Prerequisite: ED FND 111 or equivalent or consent of instructor. Study of the scope and sequence of business education courses in the high school curriculum. Attention is directed toward the history of business education, curricular change, standards, evaluation, and research in the field of business education.

### 270 English Teaching Intern Seminar (1)

(Same as English 270.) Prerequisite: Concurrent enrollment in SEC ED 290. A seminar in the integration of English curricula, educational philosophy, teaching strategies, and instructional technology in the classroom setting. To be taken concurrently with Secondary School Student Teaching, SEC ED 290.

### 273 The Curriculum and Methods of Teaching Art (3)

Prerequisites: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of art courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of art. To be taken concurrently with student teaching.

### 274 The Curriculum and Methods of Teaching Foreign Language (3)

(Same as French 264, German 264, and Spanish 264.) Prerequisites: SEC ED 213 and a near major in the subject matter and passing the departmental language skill test. A study of the scope and sequence of the foreign language courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of foreign language. To be taken prior to student teaching.

### 275 Philosophic and Practical Foundation of the Secondary Music Education Curriculum (1)

(Same as Music 267.) Prerequisites: Music 131, Music 257/ELE ED 277, and ED FND 111; concurrent registration in Music 261, Music 268/SEC ED 276 or Music 269/SEC ED 277 and Music 270/SEC ED 278 or Music 271/SEC ED 279. For music education majors. A study of the secondary school music program: curricular objectives, philosophy, and general administrative procedures common to all secondary music classes.

### 276 Curriculum and Methods of Teaching Instrumental Music I (2)

(Same as Music 268.) Prerequisites: Music 131, 145, 151, 161, ED FND 111, two of the following: Music 25, 26, 27, 28. Concurrent registration in Music 257/ELE ED 277. A study of the teaching techniques, materials, curriculum, and organization of the instrumental music education program. Topics include student recruitment, the elementary band/orchestra, small group instruction, jazz ensemble, and marching band.

### 277 Curriculum and Methods of Teaching Middle School/Junior High School General Music (2)

(Same as Music 269.) Prerequisites: Music 131, Music 257/ELE ED 277, and ED FND 111; concurrent registration in Music 261, Music 267/SEC ED 275 and Music 271/SEC ED 279. For the music education major. A study of the middle school/junior high school general music program emphasizing a conceptually based curriculum, objectives, methodologies, materials, innovations, classroom organization, and management.

### 278 Curriculum and Methods of Teaching Instrumental Music II (2)

(Same as Music 270.) Prerequisites: Music 131, 152a, 162, Music 257/ELE ED 277, Music 268/SEC ED 276, ED FND 111, three of the following: Music 25, 26, 27, 28. Concurrent registration in Music 267/SEC ED 275. A continuation of Music 268/SEC ED 276. Topics include large group rehearsal techniques, program development, administrative procedures, and evaluation.

### 279 Curriculum and Methods of Teaching Secondary Choral Music (2)

(Same as Music 271.) Prerequisites: Music 131, Music 257/ELE ED 277, and ED FND 111; concurrent registration in Music 261, Music 267/SEC ED 275, Music 269/SEC ED 277. For the music education major. Study of secondary school choral music program; curriculum, methods, teaching techniques, organization, and administrative procedures for choral performance classes.

### 285 Curriculum and Methods of Teaching Life Sciences (4)

(Same as Biology 285.) Prerequisites: SEC ED 213 and a near major in biology. A study of the scope and sequence of the life science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. The analysis of teaching/learning and field experience observations in secondary school classrooms will be integrated into classroom activities and discussions.

### 286 Laboratory in Teaching Life Sciences (2)

(Same as Biology 286.) Prerequisite: SEC ED 213. Discussion, development, utilization, and evaluation of equipment, materials, and techniques applicable to instruction in the life sciences. Must be taken concurrently with Biology 285/SEC ED 285.

### 290 Secondary School Student Teaching (12)

Prerequisites: SEC ED 213 and admission to student teaching. Clinical teaching experience in secondary school classrooms under University and school supervision. To be taken after appropriate curriculum and methods course.

### 293 Student Teaching in Music Education, K-6 (5)

Prerequisites: ELE ED 210, SEC ED 213, Music 257/ELE ED 277, Music 267/SEC ED 275, Music 118, Music 268/SEC ED 276, Music 270/SEC ED 278 (instrumental emphasis majors); Music 120, Music 269/SEC ED 277, Music 271/SEC ED 279 (Choral/vocal emphasis majors); and admission to student teaching. Must be taken "in block" with SEC ED 294 and must immediately precede it in the semester. Clinical teaching experience in music education settings in



## Educational Studies

the schools under University and school supervision with seminar included. Required of all majors in music education.

**294 Student Teaching in Music Education, 7-12 (5)**  
Prerequisite: SEC ED 293. Must be taken "in block" with SEC ED 293 and must immediately follow it in the semester. Clinical teaching experience in music education settings in the schools under University and school supervision with seminar included. Assignments will be in different settings from those of SEC ED 293. Required of all majors in music education.

**305 Writing for Teachers (3)**  
(Same as English 305.) Prerequisite: English 210 or a comparable course in advanced composition. Designed for prospective as well as in-service teachers, the course includes: (1) writing—short papers to be shared in workshop groups; (2) reading—current theory and research on writing and the implications for teachers; (3) teaching—classroom activities that foster growth in writing.

**312 Secondary School Curriculum (3)**  
Prerequisite: SEC ED 213. Sources, scope, and organization of the curriculum, modern trends, and methods of investigation.

**315 The Middle Level School (3)**  
Prerequisites: ED FND 111 or equivalent and admission to Teacher Education Program. An in-depth study of the philosophical and historical bases of the goals and organization of middle level schools, including a review of research as the bases for current trends and practices.

**360 Administration and Supervision of Office Personnel (3)**  
Prerequisite: Consent of instructor. An advanced course in office administration and supervision designed to meet the needs of business personnel involved in administrative office management work; emphasis on updating leadership and human relations skills, organizing, planning, controlling office services, and business data processing systems

**361 Information Processing: Applications and Techniques of Teaching (3)**  
Prerequisite: SEC ED 162, SEC ED 261, or equivalent, or consent of instructor. The course will focus on the needs of preservice and in-service teachers who instruct courses in information processing. Special emphasis placed on organizing and managing an information processing lab, software applications, integration of information processing concepts into existing courses, teaching strategies, and current information processing research.

**362 Teaching Alpha Writing Systems: Theory and Application (3)**  
Prerequisite: Consent of instructor. A study of alphabetic shorthand writing systems. Instruction in the theory and application of alpha writing systems. Emphasis on teaching techniques, learning activities, evaluation, testing, and current research.

**367 Methods of Teaching Desktop Publishing Concepts and Procedures (3)**  
Prerequisite: SEC ED 162; SEC ED 261 or consent of instructor. This course will focus on the integration of text and graphics using graphic design and electronic page assembly with a microcomputer-based system. Special emphasis placed on Desktop Publishing concepts, methods, and techniques. Attention is directed toward teaching techniques, learning activities, evaluation and current research.

**374 Foreign Language Teaching Seminar (2)**  
(Same as French 364, German 364, Spanish 364.) Prerequisite: Concurrent enrollment in SEC ED 290 or consent of instructor. A practicum course in the teaching of foreign languages. Review and explanation of drills, dialogues, and a variety of classroom techniques, oral and written. A continuation of SEC ED 274, Curriculum and Methods, with emphasis on specific practical skills. To be taken concurrently with SEC ED 290, Student Teaching.

**386 Teaching Reading in Secondary School Content Areas (3)**  
Prerequisite: ED FND 111 or equivalent. Methods and materials for improving reading and study strategies in content area classes in upper grades.

**391 Field Study in Secondary Education (1-10)**  
Identification of specific problems in the area of secondary education. Course is conducted as a field study in the public schools. A maximum of eight credit hours may be applied toward an advanced degree contingent upon adviser approval.

**393 Student Teaching in Music Education, K-12 (5)**  
Prerequisite: SEC ED 294 or equivalent and admission to student teaching. Clinical teaching experience in music education settings in the schools under University and school supervision with seminar included. For students who wish an additional student teaching experience.

**399 Science Teaching Intern Seminar (3)**  
(Same as Biology 399.) Prerequisites: SEC ED 285 and SEC ED 286. Addresses the application of educational philosophy, science curriculum, teaching strategies, and instructional technology in the classroom setting. Offered concurrently with Secondary School Student Teaching, SEC ED 290.

**404 Seminar (1-10)**

**413 Secondary Teaching with Microcomputers (3)**  
Prerequisite: EDUC 301 or consent of instructor. A course designed for teachers, department heads, and school administrators. Research and theory on microcomputer-assisted instruction as a teaching method in the secondary schools will be presented. Both hardware and software suitable for microcomputers will be used and analyzed.

**414 Teaching the Gifted/Talented Student in Secondary School (3)**  
A survey of research and theory on teaching the gifted/talented student in secondary school. Ways to

## Educational Studies

identify the gifted/talented with emphasis on teaching the gifted/talented in both heterogenous and homogenous secondary classrooms. Models of gifted/talented programs in a school setting.

### **415 The Secondary School Curriculum (3)**

For secondary school principals, teachers, and superintendents. Present methods in curricular change and methods of curricular investigation.

### **416 Curriculum Construction for Secondary Schools (3)**

Prerequisite: SEC ED 415 or consent of instructor. Designed for those engaged in curriculum revision work and construction of new secondary school courses.

### **420 The Improvement of Secondary School Teaching (3)**

For secondary school teachers, principals, and superintendents with considerable training in education and experience in teaching. Recent developments in secondary school teaching.

### **422 Individualizing Instruction in Secondary Schools (3)**

This course surveys a variety of theoretical models and research findings related to individualized instruction in the secondary school and is designed for teaching and administrative personnel.

### **425 Secondary School Supervision (3)**

Methods of improving instruction in junior and senior high schools.

### **427 Supervision of Clinical Experiences in Teacher Education (3)**

Prerequisites: Teaching experience and consent of instructor. A consideration of the clinical phase of the teacher education program, with special emphasis on student teaching. Examination of role responsibilities and supervisory practices. Study of professional literature for research findings, theoretical formulations, and recent developments in the field.

### **429 The Department Head (3)**

This course emphasizes the role of the department chairperson as an educational leader. Theoretical concepts are related to sound practice. The potential for the job is discussed, as well as the roadblocks to successful execution. Appropriate for practicing department chairpersons, school administrators, or classroom teachers interested in acquainting themselves with this position.

### **430 Problems of Teaching English in the Secondary School (3)**

A review of recent developments in the teaching of secondary English. Special attention is given to research involving instructional problems in urban and suburban schools. The course is designed for teachers, department heads, and supervisors in secondary English programs.

### **436 Gateway Writing Project (1-6)**

(Same as English 490.) An intensive course in the writing process and the writing curriculum, designed for experienced teachers. Readings of current theory and research will be related to participants' experience as

writers and as teachers. Topics may vary. May be repeated for credit. No more than six hours may be applied toward the M.Ed. Counts toward the Certificate in Writing.

### **452 Problems of Teaching Social Studies in the Secondary Schools (3)**

A review of recent developments in the teaching of secondary school social studies. Special attention is given to research and scholarship involving instructional and curricular problems, especially in the metropolitan St. Louis area. Emphasis is placed upon development of effective materials, techniques, and resources. The course is designed primarily for teachers and supervisors in secondary school social studies programs.

### **486 Techniques in Teaching Biology for Graduate Students (2)**

(Same as Biology 486.) Prerequisites: Graduate standing and teaching assignment. Discussion and practice of techniques specific to instruction in the life sciences. Consideration will be given to teaching strategies, curriculum design, evaluation, instrumentation, and student teacher interactions. Recommended for all graduate students with teaching assistantships.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **497 Problems (1-10)**

## Elementary and Early Childhood Education

### Faculty

**Helene J. Sherman**, Chairperson; Associate Professor\*

Ed.D., University of Missouri-St. Louis

**Richard W. Burnett**, Professor\*; Director of Reading Clinic

Ed.D., Indiana University

**Donna M. Bagley**, Assistant Professor\*

Ph.D., University of Oregon

**Joan Gilley**, Lecturer

M.Ed., University of Missouri-St. Louis

**Allison K. Hoewisch**, Assistant Professor

Ph.D., University of Southern Mississippi

**Carole A. Murphy**, Assistant Professor\*

Ed.D., Texas A & M University

**Richard Pontius**, Assistant Professor

Ph.D., Ohio State University

**Wallace Z. Ramsey**, Professor Emeritus

Ed.D., University of Missouri-Columbia

**Lloyd I. Richardson, Jr.**, Associate Professor\*

Ph.D., George Peabody College

**Cyrus Rodgers**, Assistant Professor

Ed.D., University of Missouri-St. Louis

**Thomas R. Schnell**, Associate Professor\*

Ph.D., Southern Illinois University-Carbondale

**Doris A. Trojcek**, Professor\*

Ed.D., Indiana University

**Gwendolyn Turner**, Associate Professor\*

Ed.D., University of Arkansas

**Huber M. Walsh**, Professor Emeritus

Ed.D., University of California-Los Angeles

\*members of Graduate Faculty

## General Information

The faculty of the Department of Elementary and Early Childhood Education have their offices on the third floor of Marillac Hall. Questions about departmental matters should be directed to 369 Marillac Hall.

The department coordinates programs leading to the B.S. in Education degree in early childhood education and elementary education. The B.S.Ed. in elementary education may also be tailored to the middle school/junior high teaching certificate. A special feature of these programs is the many opportunities to work with children in schools as part of the professional course work.

**Note** The State Board of Education developed standards for renewable professional certificates, based on specific requirements for training and experience. Details regarding these standards are available in the Office of Undergraduate Studies in Education.

For graduate students, the Department of Elementary and Early Childhood Education offers three programs leading to the M.Ed. in elementary education: generalized or specialized elementary education; elementary education with certification in reading; and elementary education with teaching certification.

## Undergraduate Studies

### General Education Requirements

#### Elementary Education (1-8)

**English and Communication (9 hours)**

**English 10**, Composition

**English 210**, Advanced Expository Writing

**Communication: 3 hours**

**Mathematics (6 hours)**

**Math 50**, Structure of Mathematical Systems I

and

**Math 151**, Structure of Mathematical Systems II

**Science**

**Biological Science:** includes lab (5 hours)

**Biology 130:** 3 hours

**Physical Science:** includes lab (4 hours)

**Humanities (8 hours)**

**Three** courses from **two** of the following fields:

art, music, philosophy, and literature.

**Social Science (21 hours)**

**Psych 3**, General Psychology

**Psych 270**, Child Psychology

**PolSci 11**, Introduction to American Politics

or equivalent

and **one** of the following **history** courses:

**History 3**, American Civilization

**History 4**, American Civilization

and the following courses:

**PolSci 11**, Introduction to American Politics

**PolSci 85**, Global Ecology

**Econ 40**, Introduction to the American Economy or

**Econ 305**, Macroeconomics for the School Curriculum

or

**Econ 306**, Microeconomics for the School Curriculum

**Sociology 10**, Introduction to Sociology, or any

anthropology course

**Early Childhood Education (P-3)**

General education requirements are the same as for Elementary Education except that Mathematics 151, and economics are not required.

**Middle School/Junior High (5-9)**

General education requirements are the same as for Elementary Education except that Psychology 271, Adolescent Psychology, is taken in lieu of Psychology 270, Child Psychology.

# Elementary and Early Childhood Education

## Degree Requirements

### Bachelor of Science in Education: Early Childhood Education

The early childhood program is designed for students wishing to teach and direct programs for children from pre-kindergarten through grade three. Students electing this program will work directly with young children as a part of their professional courses.

### General Education Requirements

Students are required to take the general education requirements as indicated for Early Childhood Education above.

### Program Requirements

**ED FND 111**, The School in Contemporary Society  
**ED PSY 312**, Psychology of Teaching and Learning  
**SPC ED 313**, The Psychology and Education of Exceptional Individuals

and these **Elementary Education (ELE ED)** courses:

**330**, Children's Literature and Reading  
**336**, Teaching Language Arts and Reading, N-9  
**385**, Teaching Reading in the Elementary School

plus these **Early Childhood Education (ECH ED)** courses:

**290**, Student Teaching in Early Childhood Education I  
**291**, Student Teaching in Early Childhood Education II

**Note** ECH ED 290 and ECH ED 291 must be taken during the same semester.

**312**, Introduction to Early Childhood Education  
**317**, Assessing Individual Needs for Early Childhood  
**331**, Language Acquisition and Development in Early Childhood  
**332**, Early Literacy  
**346**, The Acquisition of Mathematical Concepts  
**313**, Curriculum and Practice: Infant/Toddler  
**314**, Curriculum and Practice: Preschool  
**315**, Curriculum and Practice: Primary  
**303**, Curriculum and Practice Laboratory: Infant/Toddler  
**304**, Curriculum and Practice Laboratory: Preschool  
**305**, Curriculum and Practice Laboratory: Primary

### Related Area Requirement

**PHY ED 130**, Elements of Health Education  
**PHY ED 282**, Physical Growth and Motor Development

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Post-degree certification students may take ED FND 330, History of American Education, or ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

**Total: 120 hours**

### Bachelor of Science in Education: Elementary Education

The elementary education program prepares students to teach in grades one through six.

### Related Area Requirements

**PHY ED 130**, Elements of Health Education  
**PHY ED 165**, Physical Education Activities for the Elementary School  
**ELE ED 177**, Elementary School Music  
**ELE ED 179**, (Art 139), Art Activities for Elementary School

### Program Requirements

**EDUC 101**, Introduction to Classroom Teaching  
**ED FND 111**, The School in Contemporary Society  
**ED PSY 312**, Psychology of Teaching and Learning  
**SPC ED 313**, The Psychology and Education of Exceptional Individuals

and these **Elementary Education (ELE ED)** courses

**246**, Teaching Mathematics in the Elementary School  
**253**, Teaching of Social Studies in the Elementary School  
**\*290**, Elementary School Student Teaching I  
**\*291**, Elementary School Student Teaching II  
**330**, Children's Literature and Reading  
**336**, Teaching Language Arts and Reading, N-9  
**341**, Teaching of Science in the Elementary School  
**385**, Teaching Reading in the Elementary School  
**389**, The Analysis and Correction of Reading Problems in the Classroom

**\*Note** ELE ED 290 and ELE ED 291 must be taken during the same semester.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Post-degree certification students may take ED FND 330, History of American Education, or ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

**Total: 120 hours**

### Bachelor of Science in Education: Elementary Education (Middle School/Junior High Certification)

This area of specialization in elementary education prepares students to teach in grades 5-9.

### General Education Requirements

Students are required to take the general education requirements as indicated for Middle School/Junior High above.

# Elementary and Early Childhood Education

**Related Area Requirement**  
PHY ED 132, Personal Health

**Program Requirements**

ELE ED 101, Introduction to Classroom Teaching  
ED FND 111, The School in Contemporary Society  
ED PSY 312, Psychology of Teaching and Learning  
SPC ED 313, The Psychology and Education of Exceptional Individuals

and these education courses:

ELE ED 389, The Analysis and Correction of Reading Problems in the Classroom  
ELE ED 316, Middle Level Curriculum and Instruction  
SEC ED 315, The Middle Level School  
SEC ED 386, Teaching Reading in Secondary School Content Areas  
SEC ED 305, Writing for Teachers  
CNS ED 317, The Advisor-Advisee Program in Middle School  
SPC ED 320, Behavior Management  
ELE ED 290, Elementary School Student Teaching I  
ELE ED 291, Elementary School Student Teaching II

**Area of Concentration for State Certification**

Middle School 5-9 requires a minimum of 21 hours for certification in the specific content of social studies and a minimum of 21 hours in another selected area with the appropriate methods course for each area. Students may elect, however, to do one area with a minimum of 30 hours plus the methods course.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Post-degree certification students may take ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

**Total: 120 hours**

## Graduate Studies

### Master of Education: Elementary Education

**General Curricular Program or Specialization in Selected Curricular Areas**

The M.Ed. student in elementary education may elect either of these programs. Please note, however, that in either case the degree is the Master of Education in Elementary Education. Diplomas and transcripts do not show areas of specialization nor are special certificates awarded.

**1) Core Competencies (12 hours)**

To include ELE ED 410, Current Research in the Elementary School Curriculum; ELE ED 411, Curricular Issues in the Elementary School; and six hours selected, in consultation with advisers, from among cognate fields or professional education.

**2) Content Competencies (12 hours)**

Students desiring to specialize through a sequence of courses should select at least nine hours in one of the following areas: Children's Literature, Early Childhood, Language Arts, Mathematics Education, Reading, Science Education, Social Studies Education, or Special Education. Students who elect a general sequence should take no more than six hours in any one area.

**3) Curricular Applications Competencies (9 hours)**

Students must select, in consultation with their advisers, a measurement course, and complete the following: ELE ED 422, Curriculum Construction in Elementary Schools, and ELE ED 423, Curriculum Implementation in the Elementary School.

Upon completion of ELE ED 410 and ELE ED 411 in phase one, each candidate selects a curricular area or areas, identifies an adviser from the elementary and early childhood education faculty, and plans appropriate course sequences. A candidate enrolling in the specialist program should select an adviser in the area of specialization.

The sequence of courses, ELE ED 410 and ELE ED 411 should be taken at the beginning of the program; ELE ED 422 and ELE ED 423 constitute the final two program courses. Students should note that ELE ED 411 is typically offered only during the Winter and Summer Semesters, ELE ED 422 is offered only during the Fall Semester and ELE ED 423 only during the Winter Semester.

Electives should be selected according to candidates' needs and/or interests.

**Emphasis in Reading**

The M.Ed. program with emphasis in reading is designed to enable candidates to further their competencies as reading teachers and prepares them for positions as remedial reading specialists, reading consultants, and/or for further graduate study. The minimum required and recommended courses are as follows:

**1) Core Requirements**

At least one graduate-level course in each of the following areas: learning psychology; research, statistics, and measurements; and elementary curriculum.

**2) Courses in Reading**

The following required courses in reading should be taken in sequence. Courses denoted by asterisks are required for certification in remedial reading by Missouri teacher certification regulations. Students, with their advisers' permission, may substitute other courses for any requirement if they have had a recent upper-class undergraduate course covering the same material.

## Elementary and Early Childhood Education

### Required are:

\***ELE ED 385**, Teaching Reading in the Elementary School

\***SEC ED 386**, Teaching Reading in Secondary School Content Areas

these Elementary Education (ELE ED) courses:

\***486**, Clinical Diagnosis and Treatment of Reading Disabilities

\***493**, Clinical Methods in Child Study I

\***494**, Clinical Methods in Child Study II

**Note** **ELE ED 493** is offered in Fall and Summer Semesters;

**ELE ED 494** is offered in the Winter and Summer.

and also:

**ELE ED 482**, Problems and Research in Teaching Elementary School Reading (offered only in the Winter Semester).

\***ED REM 420**, Classroom Measurement and Evaluation

\***SPC ED 315**, Speech and Language Problems, or

\***ECH ED 331**, Language Acquisition and Development

\***SPC ED 320**, Behavioral Management

\***CNS ED 310**, Introduction to the Counseling Profession

\***ED PSY 417**, Psychology of the Elementary School Child

\***ED PSY 418**, Psychology of Adolescence

**Note** **SPC ED 412**, Psychology of Exceptional Children, is required for certification if it has not been taken previously at the undergraduate or graduate level. It is not a degree requirement.

### 3) Electives

Following is a list of possible elective courses. Other courses may be selected from cognate fields after conferring with an adviser in reading.

**English 220**, Development of the English Language

**ED FND 421**, Philosophy of Education

**ADU ED 311**, Teaching Basic Reading Skills to Adults

**ELE ED 484**, Developmental Reading (K-13)

**ELE ED 488**, Supervision of School Reading Programs

### Certification Options

A combined M.Ed. and certification option exists. Options include Elementary Education (1-8), Early Childhood Education (P-3), and Middle School/Junior High (4-9). Students should consult certification advisers. Graduate credit will not be given for courses at the 100 or 200 level.

## Career Outlook

Undergraduate and graduate degrees in Early Childhood Education and Elementary Education are most directly applicable to teaching at the level appropriate to the program emphasis. Increasing specialization of teaching assignments and downward extensions of "ages of schooling" continue to open employment opportunities. As in the past, early childhood and elementary education graduates at all degree levels also continue to be attractive candidates for employment in many positions which require (or are well suited to) training in social and behavioral sciences. Positions in constant contact with and service to the general public such as sales, service, public relations, and general business are most common examples. Future expansions of opportunities in schools are tied to population growth, increased specialization of services, and reduction in ratios between professional staff and children served. Many presently employed teachers will retire within the next 5-10 years; consequently, a shortage of teachers is anticipated.

# Elementary and Early Childhood Education

## Course Descriptions

Courses in this section are grouped as follows: Early Childhood Education (ECH ED) and Elementary Education (ELE ED).

Prerequisites may be waived by consent of the department.

### Early Childhood Education (ECH ED)

**290 Student Teaching in Early Childhood Education I (5)**  
Prerequisites: ED FND 111, Psychology 270, ECH ED 312, ECH ED 333, ELE ED 385, ELE ED 336, Communication 40, English 210, ED PSY 312, ELE ED 230, ELE ED 389, ECH ED 321, ECH ED 331, ECH ED 317, ECH ED 346, and ECH ED 314; and admission to student teaching. Must be taken with ECH ED 291, and must immediately precede ECH ED 291 in the semester. Clinical teaching experience in early childhood education classrooms in the schools under University and school supervision. Required for all majors in early childhood education.

**291 Student Teaching in Early Childhood Education II (5)**  
Prerequisite: ECH ED 290. Must be taken "in block" with ECH ED 205 and ECH ED 290 and must follow ECH ED 290 in the semester. Clinical teaching experience in early childhood education classrooms in the schools under University and school supervision. Assignments will be in different school districts, buildings serving families of different socio-economic and cultural backgrounds, and at different age/grade levels from those of the ECH ED 290 assignments. Required of all majors in early childhood education.

**303 Curriculum and Practice Laboratory: Infant/Toddler (1)**  
Classroom experience in infant or toddler classrooms under direction of university personnel. Must be taken concurrently with ECH ED 313, Curriculum and Practice: Infant/Toddler.

**304 Curriculum and Practice Laboratory: Preschool (1)**  
Classroom experience in preschool classrooms under direction of university personnel. Must be taken concurrently with ECH ED 314, Curriculum and Practice: Preschool.

**305 Curriculum and Practice Laboratory: Primary (1)**  
Classroom experience in primary classrooms under direction of university personnel. Must be taken concurrently with ECH ED 315, Curriculum and Practice: Primary.

**312 Introduction to Early Childhood Education (3)**  
Prerequisites: ED FND 111 and ED PSY 312. Study of basic principles underlying good schools for young children. Students will use theoretical base as well as on-site observations to develop an awareness of teaching-learning strategies appropriate for the developmental needs of children from birth through age eight. Scheduling, classroom arrangement, and child management practices will be considered. Throughout the course, students will be expected to begin developing their own philosophy of early childhood education.

**313 Curriculum and Practice: Infant/Toddler (2)**  
Prerequisite: ECH ED 312. Focuses on planning integrated curriculum for child from birth to 30 months. Includes working with parents and community resources. Lab required.

**314 Curriculum and Practice: Preschool Education (2)**  
Prerequisite: ECH ED 312. Focuses on planning integrated curriculum for the preschool classroom with emphasis on science, social studies, creative activities and technology. Working with parents and parent education emphasized. Lab required.

**315 Curriculum and Practice: Primary Education (2)**  
Prerequisite: ECH ED 312. Focuses on planning integrated curriculum for the primary classroom with emphasis on science, social studies, creative activities and technology. Working with parents and parent education emphasized. Lab required.

**317 Assessing Individual Needs for Early Childhood Instruction (3)**  
Prerequisites: ECH ED 312. Techniques of observing children and using assessment instruments to plan an individualized program for early childhood. Practicum experience required.

**321 Parent and Community Resources in Early Childhood Education (3)**  
Prerequisite: Admission to the School of Education or graduate status. Competencies for working with parents and community agencies will be developed through a study of community and community resources. Procedures for parent participation and use of service agencies in the education of all young children, including those with special needs, will be examined.

**331 Language Acquisition and Development in Early Childhood (3)**  
Prerequisite: ED PSY 312. Development of language and the effects environmental and cultural factors have on the acquisition process. Identification of language problems for purpose of referral. Includes preschool classroom practices to support language development. Practicum experiences included.

**332 Early Literacy (3)**  
Prerequisites: ECH ED 312 and ECH ED 331. Study of children as they construct literacy knowledge from birth to early elementary. Development of meaningful and developmentally appropriate activities in which reading and writing are used to support children's skills. Criteria for choosing and assessing literature as a vehicle for literacy for children from birth to eight will be addressed.

**341 Exploring the Physical World with Young Children (3)**  
Prerequisites: ECH ED 312 and completion of science requirements in general education. A study of and experiences with materials, techniques, and resources for broadening the child's awareness and understanding of science.

**346 The Acquisition of Mathematical Concepts (3)**  
Prerequisites: ELE ED 246 or equivalent and consent of instructor. Applications of the major theorists (Bruner,

## Elementary and Early Childhood Education

Piaget, Gagne, etc.) to mathematics for children of mental ages 3-8. Considerations suggested by research and implications in the areas of logical thinking, pre-number ideas, geometry, topology, problem solving, and arithmetical operations.

### 351 Exploring the Social World With Young Child (3)

Prerequisites: ECH ED 312 and completion of social science requirements in general education. A study of and experience with materials, techniques, and resources for furthering the child's mastery of the skills of communication; understanding of people, social roles, society, and various cultures; and ability to develop satisfying relationships with peers and adults.

### 390 Student Teaching in Early Childhood Education III (5)

Prerequisites: ECH ED 291 or equivalent and admission to student teaching. Clinical teaching experience in early childhood education classrooms in the schools under University and school supervision with seminar included. For students who wish an additional student teaching experience.

### 412 Foundations of Early Childhood Education (3)

Prerequisite: A course in child psychology or equivalent. A study of the various types of early childhood programs and the philosophy upon which they are based. Attention will also be directed to the implementation of such programs, problems of parent involvement, and the social environment of the children.

### 413 The Educational Role of Play (3)

Prerequisite: ECH ED 312 or equivalent. Emphasizes play as a constructive process with applications to cognitive and social development. Special attention to facilitating play in early childhood classrooms.

### 490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### 497 Problems (1-10)

Prerequisite: Graduate standing. Individual study on topics pertaining to early childhood education.

## Elementary Education (ELE ED)

### 82 Effective Reading and Study Skills (2)

Designed to increase reading rate and comprehension and to develop study techniques appropriate to the purpose and difficulty of materials. Use is made of mechanical pacer, comprehension tests, vocabulary materials, and lecture demonstrations. No credit toward a degree.

### 177 Elementary School Music (2)

Prerequisite: Consent of department. The role of the classroom teacher in the development of the elementary school general music program; selection of music,

demonstration and practice of methods, and study of resources. This course will not apply toward requirements for a music major.

### 179 Art Activities for Elementary Schools (3)

(Same as Art 134.) A study of art principles; provides laboratory experiences with various media and materials. Stresses curriculum planning and developments of the elementary school program in art.

### 192 Educational Laboratory/Field Experience (1-3)

A laboratory/field experience requiring systematic observation and/or participation in appropriate educational settings. To precede student teaching. May be repeated to maximum of three hours.

### 246 Teaching Mathematics in the Elementary School (3)

Prerequisites: ED FND 111, junior standing, and completion of mathematics requirements in general education. Organization and implementation of a modern elementary school mathematics program. A field experience involving several visits to local elementary schools is a required assignment of the course.

### 253 Teaching of Social Studies in the Elementary School (3)

Prerequisites: ED FND 111, junior standing, and completion of social science requirements in general education. Study of elementary school social studies emphasizing the current social studies curricular content, methods of teaching, and instructional materials. Analysis of forces affecting objectives, materials, and teaching techniques.

### 277 Teaching Music in the Elementary School (3)

(Same as Music 257.) Prerequisites: Music 131 and ED FND 111. For the music education major. A study of the elementary school music curriculum emphasizing the objectives, methods of teaching and staffing music classes, and analysis of instructional materials and resources.

### 290 Elementary School Student Teaching I (5)

Prerequisites: ED FND 111, ELE ED 101, Psych 270, ELE ED 336, ELE ED 385, Comm 40, English 210, ED PSY 312, ELE ED 230, ELE ED 341, ELE ED 253, ELE ED 246, ELE ED 389, and admission to student teaching. Must be taken with ELE ED 291, and must immediately precede ELE ED 291 in the semester. Clinical teaching experience in elementary school classrooms under University and school supervision. Required for all majors in elementary education.

### 291 Elementary School Student Teaching II (5)

Prerequisite: ELE ED 290. Must be taken "in block" with ELE ED 205 and ELE ED 290, and must immediately follow ELE ED 290 in the semester. Clinical teaching experience in elementary school classrooms under University and school supervision. Assignments will be in different school districts, buildings serving families of different socio-economic and cultural backgrounds, and at different grade levels from those of the ELE ED 290 assignments. Required for all majors in elementary education.

### 310 Elementary School Curriculum (3)

Prerequisites: ED FND 111 and junior standing. Study of modern education with regard to objectives, content, and



# Elementary and Early Childhood Education

methods in elementary school curriculum.

## **316 Middle Level Curriculum and Instruction (3)**

Prerequisites: ED PSY 312 and admission to Teacher Education Program. Preparation for teaching and learning in a middle school, grades 5–9. Content focuses on curriculum development, methods, techniques, materials, planning, organization, and assessment in middle level education for early adolescents.

## **330 Children's Literature and Reading (3)**

Prerequisite: Junior standing. A course designed to provide a knowledge of the various types of literature for young people, including books, magazines, comics, television, and films; criteria for evaluating and selecting material; uses of material in the classroom and home; and motivating reading for enjoyment and information, bibliotherapy, and communication.

## **336 Teaching Language Arts and Reading N-9 (3)**

Prerequisites: Six hours of English/Communication; ED PSY 312. Involves study of methods and materials for implementing a total language arts program, including reading in the elementary school. Emphasis is placed on using the language experience approach in teaching listening, reading, spelling, handwriting, grammar, and spoken or written composition as basic skills.

## **341 Teaching Science in the Elementary School (3)**

Prerequisites: Completion of science requirements in general education, ED FND 111, and upper-level standing. An analysis of teaching science to elementary school children with emphasis on current science education trends, science curricular materials, and strategies of instruction.

## **342 Teaching Remedial Mathematics (3)**

Prerequisite: ELE ED 246. Methods for diagnosing and remediating mathematical skills and concepts of the special needs learner. Course requires testing and tutoring assignments in area school districts outside of scheduled University class time.

## **346 Advanced Methods in Elementary School Mathematics (3)**

Prerequisites: ELE ED 246 and consent of instructor. Review, evaluate, develop, and provide classroom trial of instructional components prepared for teaching mathematics. Course will develop greater depth of preparation in: elementary program content; programs for exceptional children; and curricular extensions such as transformational geometry, rational numbers, and intuitive algebra.

## **385 Teaching Reading in the Elementary School (3)**

Prerequisites: ED PSY 312 and junior standing. Systematic study of methods for teaching elementary school reading with greatest emphasis on teaching word recognition, vocabulary, and comprehension. Ten hours of observation-participation is required.

## **387 Teaching Reading and Language Arts to Culturally Diverse Children (3)**

Prerequisites: ED FND 111 and senior standing. Systematic study of the problems of teaching reading and related

language arts in ghetto schools. Attention is given to the ways in which the selection of materials and methodology of teaching relating to inner-city children is influenced by their physical and psychological needs, their experience backgrounds, their spoken language patterns, their cultural heritage, and the sociology of their environment.

## **389 The Analysis and Correction of Reading Problems in the Classroom (3)**

Prerequisites: ELE ED 385 or SEC ED 386, or equivalent. Study of causes of reading difficulties and procedures that may be used to analyze and correct them in the group setting. Ten hours of diagnostic tutoring is required.

## **390 Elementary School Student Teaching III (5)**

Prerequisites: ELE ED 291 or equivalent and admission to student teaching. Clinical teaching experience in elementary school classrooms under University and school supervision with seminar included. For students who wish an additional student teaching experience.

## **405 Seminar (1-10)**

## **410 Current Research in the Elementary School Curriculum (3)**

A systematic examination of research related to elementary school curriculum. Students will be expected to become effective consumers of educational research and to utilize appropriate research findings in their decision-making processes when planning instruction.

## **411 Curricular Issues in the Elementary School (3)**

Prerequisite: ELE ED 410. Selected contemporary problems which affect elementary classroom decisions. Computer literacy values, meeting individual needs, and dealing with discipline are studied through investigative discussions, reading, and a research paper.

## **412 Microcomputers in Elementary Education (3)**

Focuses on principles and procedures for using microcomputers for instructional and classroom management activities in the elementary classroom.

## **422 Curriculum Construction in Elementary Schools (3)**

Prerequisite: ELE ED 410. A study of the elementary curriculum with regard to selection of objectives and content and to provisions for curricular change.

## **423 Curricular Implementation in the Elementary School (3)**

Prerequisite: ELE ED 422. Culminating experience for curricular project in ELE ED 422. Course will include procedures and techniques for curricular design implementation in the field.

## **425 Elementary School Supervision (3)**

Organized to study such problems in field of supervision as will meet needs of superintendents, principals, and special supervisors.

## **427 Supervision of Clinical Experiences in Teacher Education (3)**

Prerequisite: Teaching experience and consent of instructor. A consideration of the clinical phase of the

## Elementary and Early Childhood Education

teacher education program, with special emphasis on student teaching. Examination of role responsibilities and supervisory practices. Study of professional literature for research findings, theoretical formulation, and recent developments in the field.

### **430 Problems of Teaching the Language Arts (3)**

Procedures used in teaching integrated language arts in elementary schools.

### **432 Problems and Research in Elementary School Language Arts (3)**

Prerequisites: ELE ED 430, ED REM 431, and six hours of English. A systematic study of research in teaching speaking, listening, written composition, handwriting, spelling, and linguistics as it focuses on the problems of teaching these skills in the elementary school. Attention is given to innovations in the field.

### **436 Children's Literature I: Survey and Analysis (3)**

Prerequisite: ELE ED 330 or equivalent. A survey of children's literature published in the last ten years. Special emphasis will be placed on the relationship between children's literature and contemporary issues of society. Students will experience the materials themselves rather than reading about books. In addition, students will begin to study the literary elements that make literature interesting and meaningful for children.

### **437 Children's Literature II: Selection and Functions (3)**

Prerequisite: ELE ED 330 or equivalent. A study of literary elements that make literature interesting and meaningful for children will be completed. Further emphasis will focus on the application of trade books for children as resources in school curriculum planning. Children's Literature II may be taken either before or after Children's Literature I.

### **441 Problems and Research in Teaching Elementary School Science (3)**

Prerequisites: Eight hours of science, ELE ED 341, and ED PSY 411. A thorough examination of research related to elementary school science instruction with particular emphasis on innovative programs. Includes methods of investigation and techniques for interpreting the professional literature.

### **443 Teaching Physical Science in the Elementary School (3)**

Activity-oriented experiences with basic physical science concepts, laboratory skills, and techniques that are appropriate for elementary school teachers. The physical science concepts in elementary school curricula will be analyzed in depth.

### **444 Environmental Studies for Elementary Teachers (3)**

Activity-oriented training in developing environmental awareness, field and/or laboratory skills and techniques, and the use of elementary environmental curricula. Materials and activities appropriate for one's students and locale will be developed.

### **445 Problems of Teaching Mathematics in the Elementary School (3)**

A study of the mathematics program in the elementary

school from the viewpoint of goals, content, techniques, and evaluation.

### **446 Curriculum and Methods of Teaching Measurement in Mathematics: Metric and Standard Systems (3)**

Prerequisite: ECH ED 346 or ELE ED 246. Curricular development and implementation on reflecting recent research findings. Content, materials, methods of teaching the general topic: measurement. Applications in both the metric and standard systems.

### **447 Problems and Research in Teaching Elementary School Mathematics (3)**

Prerequisite: ELE ED 445. A thorough examination of research related to recurrent problems in elementary school mathematics instruction, as well as current problems arising within modern programs. Includes methodology appropriate to investigation of such problems and techniques for assessment of the literature.

### **448 Diagnosis and Remediation of Disabilities in Learning Mathematics (3)**

Prerequisite: ELE ED 445. Causes of mathematical disabilities. Materials and techniques for diagnoses and corrective programs for children and youth.

### **450 Problems of Teaching Social Studies in the Elementary School (3)**

A classroom-oriented study of curricular and instructional problems encountered in social studies. Emphasis is placed upon development of materials, techniques, and resources.

### **452 Problems and Research in Teaching Elementary School Social Studies (3)**

Prerequisite: ELE ED 450. An advanced study of pedagogical problems germane to social studies education with particular emphasis on application of research findings to the solution of classroom problems.

### **482 Problems and Research in Teaching Elementary School Reading (3)**

Prerequisite: ELE ED 385 or equivalent. Systematic study of research as it focuses on the problems of teaching reading in the elementary school. Attention is given to innovations in the field.

### **484 Developmental Reading (K-13) (3)**

Prerequisite: ELE ED 385 or SEC ED 386, or equivalent. Designed to update classroom teachers' skills in reading instruction. Study of basic reading instruction at all grade levels with special emphasis on current instruction programs, innovative approaches to reading instruction, basic techniques, commercial reading materials, and recent research findings which have a bearing on methodology.

### **486 Clinical Diagnosis and Treatment of Reading Disabilities (3)**

Prerequisites: A graduate course in reading and in measurement or statistics. Etiology of specific reading disability; procedures that are used to diagnose and treat in the clinical setting.

## **Elementary and Early Childhood Education**

### **488 Supervision of School Reading Programs (3)**

Prerequisite: ELE ED 385 or SEC ED 386. Processes and techniques of developing, evaluating, and/or modifying the reading program in a school or district. The course would enable those seeking positions as consultants, coordinators, and directors of reading to conform with standards specified by the International Reading Association.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

### **493 Clinical Methods in Child Study I (3)**

Prerequisites: ELE ED 486 and ED REM 422. Clinical experience in diagnosing learning problems, especially reading disability, in school children.

### **494 Clinical Methods in Child Study II (3)**

Prerequisite: ELE ED 493. Clinical experience in applying remedial procedures to school children with learning problems, especially reading disability.

### **495 Supervision of Practicum in Clinical Reading (3)**

Prerequisites: ELE ED 385 or SEC ED 385; ELE ED 486, ELE ED 493, ELE ED 494; and ED REM 422. Supervising graduate students in diagnosis and remedial process within the reading clinic.

### **497 Problems (1-10)**

Selected problems to meet the needs of individual students.

## Physical Education

### Faculty

**Bruce A. Clark**, Associate Professor\*

Ph.D., University of Illinois

**Linda Gagen**, Lecturer

M.Ed., Kent State University

**Kathleen M. Haywood**, Associate Dean of Instruction:

Director of Graduate Studies, Professor\*

Ph.D., University of Illinois-Urbana-Champaign

**Thomas J. Loughrey**, Associate Professor\*

Ph.D., University of Iowa

**Charles G. Smith**, Associate Professor\*; Athletic Director Emeritus

M.S., Washington University

\*members of Graduate Faculty

### General Information

The Physical Education Program is housed on the second floor of the Mark Twain Building. Information about offerings and related matters may be obtained in the program office, 234 Mark Twain.

The program coordinates work in physical education. At the undergraduate level this work leads to the B.S. in Education degree with emphasis in either elementary or secondary physical education.

**Note:** The State Board of Education developed standards for renewable professional certificates, based on specific requirements for training and experience. Details regarding these standards are available in the Office of Undergraduate Studies in Education.

The master of education degree in elementary and secondary education provides courses for graduate students who choose physical education as their teaching field. Graduate students should consult their advisers about the requirements.

## Undergraduate Studies

### Bachelor of Science in Education: Physical Education

**General Education Requirements (42 hours required):**

#### Humanities

At least one course from two of the following fields: music (excluding applied music), art, foreign language, Western and non-Western cultures, philosophy, literature, classical studies, and theatre and drama.

#### Communication Skills

At least two courses in English composition and one in oral communications.

#### Social Studies

Courses in American history and American government, and one additional course selected from the following areas: geography, sociology, economics, anthropology, and psychology.

### Natural Science

One course in a physical or earth science; one course in a biological science. At least one of these courses must have a laboratory component.

### Mathematics

One college-level mathematics course.

**Note:** All of the courses above must be a minimum of two semester hours.

**Electives 11-14 hours**

### Elementary and Middle School Emphasis

The following courses in teaching of skills are required in **Physical Education (PHY ED), 14 hours:**

**220**, Teaching of Skills: Movement & Rhythms

**221**, Teaching of Skills: Dance

**222**, Teaching of Skills: Grades PK-4

**223**, Teaching of Skills: Grades 5-9

The following theory of **Physical Education (PHY ED)** courses are required (**31 hours**):

**234**, Teaching of Wellness & Health Related Fitness:

**261**, Physical Activity for the Exceptional Learner

**267**, Performance Analysis in Physical Education

**275**, Psychological Aspects of Physical Education

**277**, Historical/Philosophical Foundations of Physical Education and Sport

**280**, Human Anatomy and Physiology, or Biology 113, Human Physiology and Anatomy I

**282**, Physical Growth and Motor Development

**283**, Kinesiology

**284**, Physiology of Human Exercise

**285**, Sports Medicine

The following Professional Education courses are required (**31 hours**):

**ED FND 111**, The School in Contemporary Society

**EDUC 101**, Introduction to Classroom Teaching

**PSY 270**, Child Psychology

**ED PSY 312**, Psychology of Teaching and Learning

**SPC ED 313**, The Psychology and Education of Exceptional Individuals

**SEC ED 386**, Teaching Reading in Secondary School Content Areas

**PHY ED 268**, The Curriculum and Methods of Teaching Physical Education

**PHY ED 290**, Student Teaching in Physical Education: PK-5

**PHY ED 291**, Student Teaching in Physical Education: 5-9

**Total: 124 hours**

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on

## Physical Education

requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

**Total: 120 hours**

### Grades PK through 12 Emphasis

The following courses in teaching of skills are required in Physical Education (PHY ED), 18 hours:

- 220, Teaching of Skills: Movement & Rhythms
- 221, Teaching of Skills: Dance
- 222, Teaching of Skills: Grades PK-4
- 223, Teaching of Skills: Grades 5-9
- 224, Teaching of Skills: Grades 9-12

The following theory of Physical Education (PHY ED) courses are required (33 hours):

- 234, Teaching of Wellness & Health Related Fitness
- 261, Physical Activity for the Exceptional Learner
- 267, Performance Analysis in Physical Education
- 275, Psychological Aspects of Physical Education
- 276, Sociological Foundations of Physical Education and Sport
- 277, Historical/Philosophical Foundations of Physical Education and Sport
- 280, Human Anatomy and Physiology
- 282, Physical Growth and Motor Development
- 283, Kinesiology
- 284, Physiology of Human Exercise
- 285, Sports Medicine

The following Professional Education courses are required (37 hours):

- ED FND 111, The School in Contemporary Society
- ED 101, Introduction to Classroom Teaching
- SEC ED 213, Techniques of Secondary School Teaching and Field Experience
- PSY 270, Child Psychology
- PSY 271, Adolescent Psychology
- ED PSY 312, The Psychology of Teaching and Learning
- SPC ED 313, Psychology and Education of Exceptional Individuals
- SEC ED 386, Teaching Reading in Secondary School Content Areas
- PHY ED 268, The Curriculum and Methods of Teaching Physical Education

**Two of the following three:**

- PHY ED 290, Student Teaching in Physical Education PK-5
- PHY ED 291, Student Teaching in Physical Education 5-9
- PHY ED 292, Student Teaching in Physical Education 9-12

**Total: 133 hours**

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on

requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

## Athletic Coaching Minor

An Athletic Coaching Minor is available (minimum of 20 hours). The following courses are required:

- PHY ED 280, Human Anatomy and Physiology (this course is a prerequisite to PHY ED 283, PHY ED 284, and PHY ED 285)
- PHY ED 285, Sports Medicine
- PHY ED 275, Psychological Aspects of Physical Education
- PHY ED 283, Kinesiology
- PHY ED 284, Physiology of Human Exercise
- PHY ED 224, Teaching of Skills: Grades 9-12
- PHY ED 312, Management of Sports Programs
- PHY ED 330, Prescribing Physical Activity

All courses apply to, but do not complete, teaching certification in Missouri.

## Graduate Studies

### Master of Education: Elementary or Secondary Education with Physical Education as Teaching Field

A significant number of graduate students choose physical education as the teaching field within one of the Master of Education degree options. Most are currently employed as teachers of health and/or physical education. Certification requirements in Missouri mandate the completion of a master's degree to professionalize the certificate. Therefore, a full complement of graduate courses relating to teaching in physical education is available to meet this need. For many who need to pursue teacher certification in physical education while pursuing the master's degree, most course work needed to meet state certification requirements can be taken in the master's program. For those employed outside of education, an emphasis in Exercise Science is also available, providing a foundation of course work designed to prepare a person in this area. Specific information is available regarding each of these degree programs. Please consult with your graduate adviser to discuss the specific options and requirements.

## Career Outlook

The employment outlook for physical educators in the schools continues to be very strong and positive, especially in the elementary and middle school levels. Recent placement years have yielded full employment opportunities to UM-St. Louis graduates. Rising school enrollments and the expected retirement of a significant portion of currently employed teachers signal optimistic outlooks for the next few years. In addition to elementary, middle school, and high school physical education teaching, more limited opportunities exist in athletic training, dance, research sports management, and exercise leadership fields serving persons of all categories.

# Physical Education

## Course Descriptions

Prerequisites may be waived by consent of the department or the instructor.

### **124 Principles and Practice in First Aid and Cardiopulmonary Resuscitation (1)**

The course provides theory and supervised practice in first aid and cardiopulmonary resuscitation leading to American Red Cross certification in those areas.

### **130 Teaching Health in the Elementary School (3)**

Prerequisites: ED FND 111 and admission to the School of Education. A study of health programs in the elementary school. Emphasis is given to the teacher's responsibilities in the areas of health services, healthful school environment, and instruction in a comprehensive school health program.

### **132 Personal Health (3)**

A study of factors that contribute to physical and mental well-being at all stages of the life cycle. Particular attention will be given to the identification and analysis of individual health behaviors.

### **134 Personal Physical Fitness (3)**

A study of the relationship between vigorous physical activity and individual well-being. Emphasis will be placed on an individualized analysis of health fitness, resulting in a prescribed program to develop optimal levels of physical fitness, including aerobic fitness, strength, muscular endurance, flexibility, body composition, and lifetime sports considerations.

### **165 Physical Education Activities in the Elementary School (3)**

Objectives of physical education for the elementary school child with applications of choice of activities, organization of program, theory, and practices.

### **190 Clinical Experience in Physical Gerontology (3)**

(Same as Gerontology 190.) Early supervised experience in gerontological physical activity programming. Seminar precedes and accompanies clinical experience.

### **193 Clinical Experience in Youth Sport Programs (3)**

Supervised clinical experience in youth sport programs. Seminar precedes and accompanies clinical experience.

### **204 Special Topics in Physical Education (1-3)**

Prerequisite: Consent of instructor. Independent study through readings, reports, field study, or research.

### **220 Teaching of Skills: Movement and Rhythms (3)**

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching fundamental movement skills and rhythmical activities. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

### **221 Teaching of Skills: Dance (3)**

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching dance in school physical education programs. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials. Dance forms studied will be folk, square, ballroom, modern, jazz and creative.

### **222 Teaching of Skills: Grades PK-4 (4)**

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching developmental games, education gymnastics and perceptual-motor activities. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

### **223 Teaching of Skills: Grades 5-9 (4)**

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching track and field, outdoor education, soccer, softball, flag football, basketball, and volleyball. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

### **224 Teaching of Skills: Grades 9-12 (4)**

Prerequisite: Junior Standing. Study of skill analysis and techniques of teaching racquet sports, aquatics, bowling, golf, archery and team handball. Emphasis will be given to biomechanical analysis of movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

### **234 Teaching Wellness and Health-Related Fitness (4)**

Prerequisite: PHY ED 280 or the equivalent, or consent of the instructor. Study and techniques of teaching wellness and health-related physical fitness concepts across the life span. Evaluation, interpretation, and application of wellness concepts to the individual and groups.

### **261 Physical Activity for the Exceptional Learner (2)**

Prerequisites: SPC ED 311 and SPC ED 313. A study of the special physical activity and exercise needs, interests, and problems of the exceptional learner, with considerable emphasis on the development of methods and competencies in modifying physical activities.

### **267 Performance Analysis in Physical Education (3)**

Prerequisite: College-Level Mathematics. A study of quantitative and qualitative approaches, processes and instruments used in assessing student progress in physical education activities. Emphasis will be given to the application of statistical methods to the results of evaluations of human motor performance and the interpretation of those results, as well as to the construction and administration of measurement instruments.

### **268 Curriculum and Methods of Teaching Physical Education (3)**

Prerequisite: PHY ED 101 or SEC ED 213. Study of the scope and sequence of the school program in physical education with emphasis on planning processes, content

# Physical Education

selection, management procedures, instructional strategies, and program assessment.

## **275 Psychological Aspects of Physical Education (3)**

Prerequisites: Psychology 3. A study of the following aspects of psychology as they influence performance in sport and physical activity: learning, retention, transfer, practice, feedback, motivation, anxiety, perception, motor control, social facilitation, cohesion, leadership, and reinforcement.

## **276 Sociocultural Aspects of Physical Education and Sport (2)**

Prerequisite: Junior standing. Study of the theoretical, methodological, experimental, and applied foundations of sport and physical activity programs in society and the schools. Applied issues included cultural, political, economical, legal, and educational aspects of sport and physical activity programs.

## **277 Historical & Philosophical Foundations of Physical Education and Sport PK-4 (2)**

Prerequisite: Junior Standing. A study of the history of physical education and sport programs, philosophical influences and issues related to the programs and applications of the knowledge base to current programs.

## **280 Human Anatomy and Physiology (5)**

Prerequisite: Biology 1 and Biology 3, or consent of instructor. Study of the basic aspects of human anatomy and physiology and their relationship to concepts in sport and physical activity. Two hours of laboratory per week.

## **282 Physical Growth and Motor Development (3)**

Prerequisite: Psychology 270 or Psychology 271. An examination of the physical growth and aging, and motor development of the human being over the life span. Emphasis on evaluative tools, techniques, and studies of research findings. Laboratory field experience for observing individuals. Attention is directed toward acquisition of basic skills, perceptual-motor development, fitness development, and age-related changes in information processing. A required course for physical education majors; an elective course for early childhood, special, and elementary education majors.

## **283 Kinesiology (3)**

Prerequisite: PHY ED 280. Study of the biomechanics of human motion with particular application to performance in sport activities.

## **284 Physiology of Human Exercise (3)**

Prerequisite: PHY ED 280. Study of the physiological effects of human exercise, training, and sport activities upon the human body; understanding and evaluation of physical fitness components, with consideration given also to areas including work, fatigue, nutrition, age, sex, and environment.

## **285 Sports Medicine (3)**

Prerequisite: PHY ED 280 or equivalent. A study of the prevention and care of athletic/sport participation injuries. Emphasis is given to proper conditioning and training of

the sport participant and on emergency responses, including CPR certification.

## **290 Student Teaching in Physical Education: PK-5 (5)**

Prerequisites: Admission to Student Teaching. Clinical teaching experience in physical education settings in the schools under University and school supervision. Required for all majors in physical education receiving certification in Physical Education, Grades PK-5.

## **291 Student Teaching in Physical Education 5-9 (5)**

Prerequisite: Admission to Student Teaching. Clinical teaching experience in physical education settings in the schools under University and school supervision. Required for all majors in Physical Education, Grades 5-9.

## **292 Student Teaching in Physical Education: 9-12 (5)**

Prerequisite: Admission to Student Teaching. Clinical teaching experience in physical education settings in the schools under University and school supervision. Required for all majors in physical education receiving certification in Physical Education, Grades 9-12.

## **312 Management of Sports Programs (3)**

Prerequisite: Consent of instructor. A study of administrative theory, roles, responsibilities, and functions in the management of sports programs.

## **330 Prescribing Physical Activity (3)**

(Same as Gerontology 330.) Prerequisite: PHY ED 280 or consent of instructor. Prescription of physical activity for individualized and group programming based upon physical fitness assessment. Health, nutrition, age, physical fitness, and testing aspects are considered in developing specialized exercise programming based upon current physiological and biomechanical research.

## **380 Nutrition for Human Performance (3)**

A study of human nutrition and its relationship to human performance. Consideration is given to nutrients—function, food source, health concerns and implications, and energy intake and expenditure. Special consideration is given to the following: body composition including weight gain and loss, ergogenic aids, competitive athletes, older adults, children and teens, pregnant women, disease risk, fluid and electrolyte balance, and specific sport activities.

## **390 Student Teaching in Physical Education III (5)**

Prerequisites: PHY ED 291 or equivalent and admission to student teaching. Clinical teaching experience in physical education settings in the school under University and school supervision with seminar included. For students who wish an additional student teaching experience.

## **392 Internship in Physical Gerontology (1-10)**

Prerequisites: PHY ED 190 or consent of instructor. (Same as Gerontology 392) Supervised clinical experience in selected gerontological settings as a physical education practitioner under the supervision of university and program professionals. Internship may include two or more separate experiences completed concurrently or sequentially and involve planning of instruction,

## Physical Education

participant and program evaluation, research, and related activities.

### **462 The Physical Education Curriculum (3)**

Prerequisite: Consent of instructor. A study of current practices, problems, trends, and research involved in the analysis and development of the physical education curriculum.

### **464 Analysis of Teaching in Physical Education (3)**

Prerequisite: Consent of instructor. A study of trends and research relating to teaching methodology, teacher effectiveness, and supervision of instruction in physical education. Emphasis will be given to the application of research on teacher effectiveness in the instructional process in physical education.

### **474 Psychological Dynamics of Sport Performance (3)**

Prerequisite: PHY ED 275 or consent of instructor. Application of specific principles of social psychology to the teaching of physical education and sport and of mental aspects of peak physical performance. Explores the techniques of improving team and individual performance in interscholastic and elite competition through sport psychology. Attention is given to motivation, competitive anxiety, attitude, aggression, team cohesion and leadership, exercise adherence, personality, individual differences, and gender roles as they pertain to sport performance.

### **475 Motor Learning and Control (3)**

Prerequisite: PHY ED 275 or consent of instructor. Application of specific principles of learning and the control of movement to the teaching of motor skills in physical education and sport. Surveys neurologic systems involved in perception and motor performance. Explores theoretical perspectives, including open versus closed loop control, schema theory, information processing, and dynamical systems theory. Attention is given to efficiency of learning skills by accommodating transfer of training, utilizing feedback, manipulating practice schedules, and promoting retention.

### **476 Social Inquiry of Sport (3)**

Prerequisite: PHY ED 276 or consent of instructor. A study of basic social processes in sport, such as socialization, social facilitation, and assimilation.

### **478 Problems and Research in Physical Education (3)**

A study of potential research problems and research processes in specific physical education subdisciplines. A research project will be completed in the student's physical education subdiscipline interest area.

### **482 Life Span Perceptual and Motor Development (3)**

Prerequisite: PHY ED 282 or consent of instructor. A study of sensory and perceptual development and change, and the age-related qualitative and quantitative changes in motor skill. Both current theory and current empirical findings are stressed. Attention is given to methods of structuring learning environments to maximize development. Study is from a life span perspective.

### **483 Biomechanics of Sport Techniques (3)**

Prerequisite: PHY ED 283 or consent of instructor. A study of the biomechanical concepts important to analysis of techniques used in selected sports. Explores recent research findings on efficient sports techniques. Provides experience in the analysis of skill performance.

### **484 Physiological Bases of Physical Performance (3)**

Prerequisites: PHY ED 280 and PHY ED 284 or consent of instructor. Physiological bases and contemporary trends in the study of human performance and exercise stress; will analyze research literature and study experimental strategies with the focus upon application to teaching and coaching.

### **485 Theory of Exercise and Cardiovascular Disease Risk Factor Management (3)**

Prerequisite: Completion of PHY ED 484 or equivalent. A study of the effects of exercise on the basic epidemiology, physiology, and management of unavoidable and avoidable cardiovascular risk factors. Special attention will be given to the examination of the effect of exercise in the management of cardiovascular disease risk.

### **490 Internship (1-10)**

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

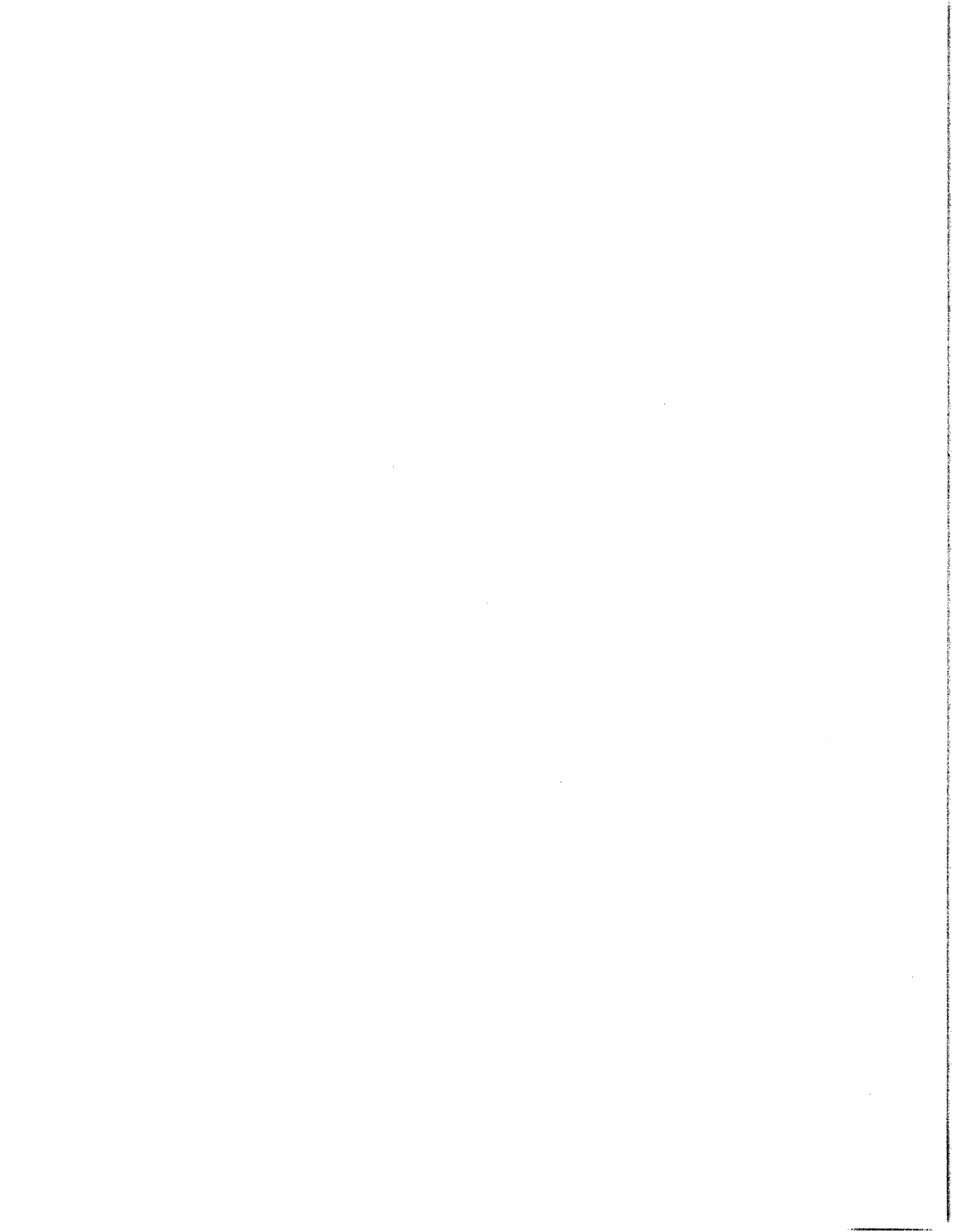
### **497 Problems (1-10)**

Prerequisite: Consent of instructor. Selected problems to meet the needs of individual students.



# EVENING COLLEGE

UM-St. Louis 1996-97 Bulletin



# Evening College

## Administration

**Everette E. Nance**, Dean  
Ed.D., Western Michigan University  
**Harry Gaffney**, Associate Dean  
Ph.D., St. Louis University

## General Information

The Evening College provides undergraduate degree programs for students who, for various reasons, choose to attend evening classes. Twenty-six degree programs are offered through the Evening College. Courses needed as prerequisites for graduate programs are available. In addition, persons who want to maintain their professional competence or broaden their educational background without pursuing degree work will find a broad array of courses which may be taken for credit or on an audit basis.

Recognizing the value of continuing education and career advancement, many St. Louis institutions, businesses, and industries encourage their employees to avail themselves of the educational opportunities offered by the Evening College. The Veterans Administration has approved either full-time or part-time study for educational benefits.

Since most Evening College students are employed full time, they normally carry less than a full academic load. To enable students to carry as many courses as they wish, the Evening College schedules classes after 5:00 p.m. Classes and degree programs are conducted according to the same standards as the day program.

### Course Areas

The Evening College offers courses in 28 academic areas: anthropology, art, astronomy, biology, business administration, chemistry, communication, computer science, criminology and criminal justice, cytotechnology, economics, education, English, French, geography, geology, German, history, mathematics, medical technology, music, philosophy, physics, political science, psychology, sociology, social work, and Spanish.

**Academic Advising and Program Planning** New students are encouraged to consult with an academic adviser to help develop programs appropriate to their needs. Appointments may be made by calling the Evening College, 516-5162.

Transfer students or students with 40 or more credit hours who wish to be assigned advisers and to graduate from the Evening College must file a Declaration-of-Major form.

**Facilities** The facilities of the University of Missouri-St. Louis, including the computer center, library, laboratories, cafeteria, bookstore, health service, placement service, and admissions office, are open in the evening. Evening College students are also eligible to participate in any of the University sports programs that interest them. The athletic facilities of the Mark Twain Building are available.

**Alpha Sigma Lambda** The Beta Epsilon Chapter of Alpha

Sigma Lambda is a national honorary scholastic society for Evening College students. To be eligible for membership, a student must have completed at least four semesters of college or university work, completed a minimum of 30 semester hours in the Evening College, have a cumulative grade point average of 3.2, and be enrolled in the Evening College. Individuals already in possession of a college degree are not eligible for membership.

## Degree Programs

**General Education Requirements** All candidates for a degree through the Evening College must meet the University general education requirements.

**Bachelor of Arts** Majors available for the B.A. degree are biology, chemistry, communication, economics, English, history, mathematics, physics, political science, psychology, and sociology. For further information, consult the appropriate departmental section of the College of Arts and Sciences portion of this Bulletin.

**Bachelor of Science** The B.S. degree is available in applied mathematics, biology, chemistry, computer science, criminology and criminal justice, economics, physics, and sociology. For further information, consult the appropriate departmental section of the College of Arts and Sciences portion of this Bulletin.

**Specialized Bachelor's Degrees** Also available are the Bachelor of Science in Business Administration (B.S.B.A.), the Bachelor of Science in Education (B.S.Ed.), and the Bachelor of Science in Public Administration (B.S.P.A.). The B.S. in Education offers specialization in any of the following: early childhood education, elementary education, middle school/junior high school, special education, and secondary education (in 11 teaching areas). Students should consult the appropriate departmental section of the College of Arts and Sciences portion of this Bulletin or the sections for the School of Business Administration or the School of Education.

**Bachelor of Social Work** The B.S.W. degree program is designed to prepare persons for employment in social welfare agencies, schools, hospitals, correctional institutions, or day care, geriatric, or rehabilitation centers. Individuals currently working in social welfare settings can improve their skills or increase their opportunities for job advancement. For further information, consult the Social Work section of this Bulletin.

## Bachelor of General Studies Degree

The Bachelor of General Studies degree (B.G.S.) is also offered through the Evening College. It is designed to provide mature students with a meaningful alternative to traditional degree programs. It appeals to a variety of students whose circumstances, goals, and aspirations are

## Evening College

different from those of the "typical" college student. The B.G.S. program provides the flexibility needed to enable students, with careful advisement, to develop individualized programs of study.

Some of the educational goals pursued by students in the program are designed to reflect students' interests in the fields of public relations, corporate communication, medical technology and cytotechnology.

The Evening College, in cooperation with the Jewish Hospital College of Nursing and Allied Health, has made courses in medical technology and cytotechnology available for students.

### Admission Requirements for the B.G.S. Program

Candidates for the B.G.S. degree must be admitted to the Evening College and must complete an application for admission to the program. Applications must be approved by the General Studies Committee and the Evening College dean. The criteria for admission are:

- 1) Students must be mature, their programs of study reasonable and be in good academic standing.
- 2) Students should have a broad education and must have demonstrated the equivalent of academic proficiency required for any other undergraduate degree at UM-St. Louis.
- 3) Study programs should be structured to meet students' unique educational goals and should not be readily available under any other UM-St. Louis degree program.
- 4) That the degree will better qualify the recipients to deal with their life goals than if they had some other degree.

## Degree Requirements for the B.G.S. Program

### General Education Requirements

Students must complete the University's general education requirements. For details refer to the General Education Requirements section of this Bulletin.

**Personal Emphasis Area** In consultation with a faculty adviser, students shall develop a personal emphasis area of at least 30 advanced semester hours of graded credit that meets their educational goals. Graded credit consists of degree credit courses in which the student received a letter grade of A, A-, B+, B, B-, C+, C, C-, D+, D, D-. Regardless of the focus, theme, or purpose, the personal emphasis area should result from self-examination and contribute to self-realization and an advanced level of academic competence and achievement. The study program must be approved by the faculty adviser, dean, and General Studies Committee. Students and advisers periodically review the program toward attaining the goal or objective and make appropriate modifications where necessary, subject to the dean's approval.

**Hour and Grade Requirements** The degree requires completion of 120 semester hours with a 2.0 grade point

average overall and in the personal emphasis area. No more than 30 hours may be taken in any one department without written consent of the departmental chairperson. At least 45 hours must be earned in courses beyond the introductory level. A minimum of 24 hours of graded credit must be completed in residence at UM-St. Louis, of which 15 hours must be in the personal emphasis area. No more than 18 hours may be taken on a satisfactory/unsatisfactory basis. Each candidate must be in residence for 24 of the last 30 hours of graded credit (exclusive of courses taken on a satisfactory/unsatisfactory basis).

**Credit for Experience, Special Projects, Examinations, and Non-Traditional Forms of Study** Credit may be earned through the College Level Examination Program in accordance with University policy or through examinations proposed or approved by University departments. Credit also may be earned through correspondence study, supervised independent research study, and college-level courses offered by television or similar education media. Students are responsible for obtaining approval for credit applied under this option.

Students also may receive credit for vocational experience, community service projects, or cultural activities after they have completed 24 hours of course work in residence.

**Vocational Experience** Credit may be granted for vocational experience when related to the personal emphasis area. Credit cannot exceed three semester hours for each year of experience with a maximum of 12 hours allowed only in exceptional circumstances. Petitions for vocational experience credit must be accompanied by a job description verified by the employer or similar appropriate evidence. Credit may be granted only upon recommendation of the adviser and approvals of the dean and the General Studies Committee.

**Community Service Projects/Cultural Activities** Credit not exceeding six hours may be earned for participation in approved community service projects or cultural activities. The projects or activities must be formulated by the student and carried out under the supervision of a faculty member with the approval of the adviser, dean, and General Studies Committee. Students must submit a written report approved by the supervisor upon completion of the projects or activities.

Credit for vocational experience or community service/cultural activities may be applied toward the credits required for the degree but may not be used to complete the personal emphasis area or general education requirements. Students must file a degree application form in the Evening College at least one year before the expected graduation date.

## Minors

**Minor in Employee Training and Development**  
The Evening College and the School of Business

## Evening College

Administration offer a minor in employee training and development. The requirements are:

**BA 318**, or **Psych 318**, Industrial and Organizational Psychology  
**BA 319**, Employee Training and Development  
**ED PSY 312**, Psychology of Teaching and Learning  
**ED TEC 340**, Selection and Utilization of Educational Media  
**Psych 219**, Research Methods

One additional course selected from these approved electives:

**BA 309**, Personnel Management  
**Comm 141**, Business and Professional Speaking  
**Sociology 354**, Occupations and Their Work Settings

Students should consult with an adviser when planning their programs. A 2.0 grade point average is required for the minor. No courses may be taken on a satisfactory/unsatisfactory basis. At least 12 credits of those required must be completed in residence at UM-St. Louis.

This minor is designed for personnel managers in small companies and training managers or personnel specialists in larger companies. The required 18 hours, including the approved elective course, enable the student to be exposed to different skills essential for the occupational area.

### Other Minors

Minors are also available in biology, black studies, business administration, chemistry, communication, computer science, criminology and criminal justice, economics, English, history, legal studies, mathematics, political science, psychology, sociology, and urban studies. For currently offered minors, consult your adviser.

### Certificates

Certificate programs are available in biochemistry, gerontology, women's studies, and writing. For more information consult the Certificate Programs section of this Bulletin.

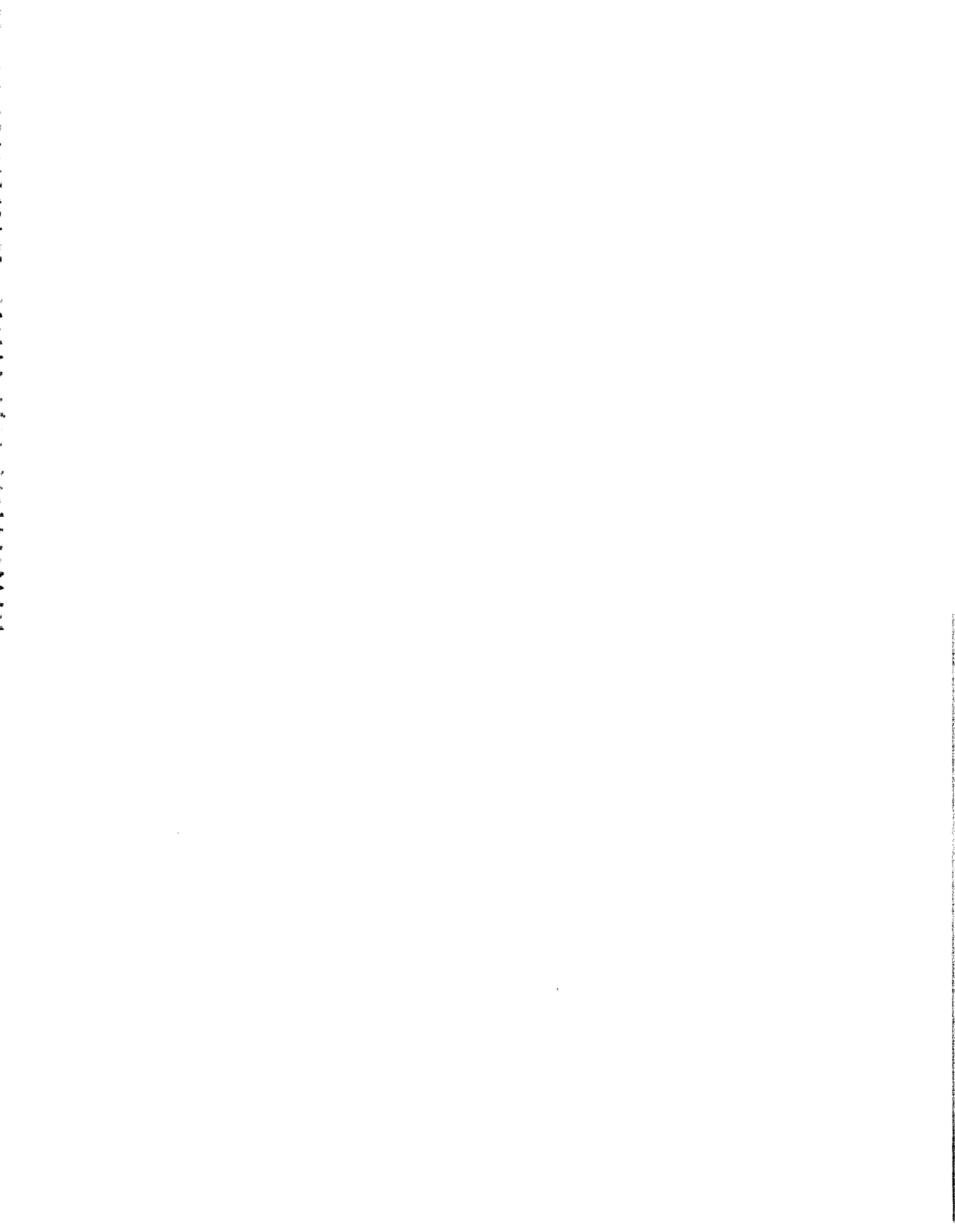
## Career Outlook

Many graduates of the Evening College have found their careers advanced upon obtaining their degree. Some have entered new careers in mid-life and others have found personal satisfaction in the acquisition of knowledge for its own sake. The Evening College staff consists of advisers with extensive experience concerning adult students' needs. For an appointment, call the Evening College office.



INTER-SCHOOL  
STUDIES

UM-St. Louis 1996-97 Bulletin





# Public Policy Administration Graduate Degree Program

## Faculty

**Carol W. Kohfeld**, Director of MPPA Program; Professor of Public Policy Administration and Political Science\*  
Ph.D., Washington University

**E. Terrence Jones**, Professor of Public Policy Administration and Political Science\*; Dean, College of Arts and Sciences

Ph.D., Georgetown University

**George J. McCall**, Professor of Public Policy Administration and Sociology\*

Ph.D., Harvard University

**Eugene J. Meehan**, Curators' Professor Emeritus of Public Policy Administration and Political Science\*

Ph.D., London School of Economics

**Donald Phares**, Professor of Public Policy Administration and Economics\*

Ph.D., Syracuse University

**Dennis L. Dossett**, Associate Professor of Public Policy Administration and Management\*

Ph.D., University of Washington

**Andrew D. Glassberg**, Associate Professor of Public Policy Administration and Political Science\*

Ph.D., Yale University

**J. Germain Gros**, Assistant Professor of Public Policy Administration and Political Science

Ph.D., University of California-Berkeley

**Michele M. Hoyman**, Associate Professor of Public Policy Administration and Political Science\*

Ph.D., University of Michigan

**J. Fred Springer**, Associate Professor of Public Policy Administration and Political Science\*

Ph.D., University of California-Davis

**Lana Stein**, Associate Professor of Public Policy Administration and Political Science\*, Internship Coordinator

Ph.D., Michigan State University

**James M. Krueger**, C.P.A., Assistant Professor of Public Policy Administration and Accounting\*; Associate Vice

Chancellor for Budgeting and Academic Planning

D.B.A., Indiana University

**Timothy D. McBride**, Assistant Professor of Public Policy Administration, Gerontology, and Economics

Ph.D., University of Wisconsin-Madison

**Anne E. Winkler**, Associate Professor of Public Policy Administration and Economics\*

Ph.D., University of Illinois

\*members of Graduate Faculty

The Master's Program in Public Policy Administration (MPPA) is an interdisciplinary program designed to prepare students for managerial positions in the public sector or in agencies having substantial interaction with the public sector. The program is a unit of the Graduate School and is accredited by the National Association of Schools of Public Affairs and Administration. Faculty are on joint appointment in public policy administration and in either economics, political science, sociology, or business administration. The program includes courses in policy analysis, public administration, management, accounting, and economics in the basic curriculum.

The MPPA program at the University of Missouri-St. Louis differs from existing programs available in the Missouri-Illinois region in its interdisciplinary nature and emphasis on the development of analytic and administrative skills. It is designed to meet the needs of prospective full-time students, as well as those who wish to earn a degree in the evening while continuing to work.

In addition to the distinguished doctoral-level faculty in public policy administration, students have access to courses and faculty in business and other social sciences, in the Center for Metropolitan Studies, and in the Center for International Studies. The MPPA Program, together with similar programs at UM-Columbia and UM-Kansas City, is responsible for the editorship of the *American Review of Public Administration*.

The full facilities of the Office of Computing, including the urban data program, are available. UM-St. Louis is also a member of the Inter-University Consortium for Political and Social Research.

## Admission Requirements

Applicants to the MPPA program must meet the general requirements for admission to Graduate School as explained in the Graduate Study section of this Bulletin. Students entering the MPPA program may be required to take up to nine hours of prerequisites in mathematics, accounting, and social science. Up to three hours of graduate-level work at UM-St. Louis, taken to meet prerequisite requirements, may be applied to the 40 hours required for the MPPA degree.

## Degree Requirements

The program includes 40 hours, 25 in the core curriculum sequence and 15 in a special field chosen by students in consultation with their advisers.

## Prerequisites

Students must demonstrate competency in microcomputer-based applications, including spreadsheets and data bases. These competencies must be acquired at the beginning of the degree program, if students are not already familiar with these applications. Competency may be demonstrated by examination, or by successfully completing approved short courses in spreadsheets and data bases, or by completing Public Policy Administration 480, Management Information Systems.

## Core Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

### Administration

**440**, Proseminar in Public Policy Administration

**460**, Organizational Behavior and Administrative Processes

### Accounting and Budgeting

**418**, Governmental Budgeting and Financial Control

### Economics

**421**, Public Sector Microeconomics

## Public Policy Administration Graduate Degree Program

### Policy Analysis

**410**, Introduction to Policy Analysis  
**419**, Cases in Public Policy Analysis

### Statistics and Applications

**401**, Introduction to Policy Research  
**475**, Introduction to Evaluation Research Methods

### Exit Project

**499**, Exit Project Research

A thesis is not required, but students must complete written analyses as part of their course work and/or internships. There is also a one credit hour exit project (PPA 499) examining a problem in public policy administration in the final semester. Public Policy Administration 419 is a capstone course and should be taken toward the end of the program.

Students may select one of four emphasis areas in which to concentrate their advanced studies: (1) Public Sector Human Resource Management, (2) Public Policy Analysis, (3) Public Policy Processes, or (4) the Individualized Policy Emphasis Area. Possible fields for the latter include financial administration, health care policy, criminal justice policy, and urban policy. Specific requirements for each emphasis area are as follows:

#### Public Sector Human Resource Management Emphasis Area (15 hours)

##### a. Required Courses (6 hours)

**Management 461**, Managing Human Resources  
**Public Policy Administration 449**, Human Resources in the Public Sector

b. Choose one of the following courses (3 hours); additional courses may be applied toward optional electives (c).

**Management 462**, Advanced Organizational Behavior and Administrative Processes  
**Management 466**, Personnel Administration: Theory and Practice  
**Psych 452**, Survey of Industrial/Organizational Psychology

c. **Optional Electives** (6 hours—may include courses listed but not counted in (b)).

**Public Policy Administration 495**, Internship (up to 6 hours).  
**Management 463**, Organizational Training  
**Management 464**, Compensation  
**Management 467**, Dynamics of Interpersonal Relations  
**Psych 429**, Psychometric Theory  
**Econ 480**, Labor Economics: Theory and Public Policy

#### Public Policy Analysis Emphasis Area (15 hours)

##### a. Required Course (3 hours)

**Public Policy Administration 365**, Introduction to Econometrics or **Political Science 402**, Intermediate Techniques in Policy Research

b. Choose two of the following courses (6 hours); additional courses may be applied toward optional electives (c).  
**PolSci 411**, Seminar in Policy Analysis

**PolSci 422**, Law, Courts, and Public Policy

**Sociology 304**, Survey Research Practicum

**Sociology 331**, Qualitative Methods in Social Research

c. **Optional Electives** (6 hours—may include courses listed but not counted in (b)).

**Public Policy Administration 495**, Internship (up to 6 hours).

**Econ 366**, Applied Econometrics or **PolSci 403**, Advanced Techniques in Policy Research

**Econ 317**, Public Finance: State and Local

**Econ 450**, Topics in Managerial Economic Analysis

**Econ 470**, The Political Economy of Metropolitan Areas

**Econ 480**, Labor Economics: Theory and Public Policy

**Econ 490**, Advanced Topics in Economic Analysis

#### Public Policy Processes Emphasis Area (15 hours) Required Electives

a. Required Course (3 hours)

**PolSci 442**, The Policy Process

b. Choose two of the following courses (6 hours); additional courses may be applied toward optional electives (c).

**PolSci 420**, Proseminar in Public Law

**PolSci 430**, Proseminar in American Politics

**PolSci 432**, Intergovernmental Relations

**PolSci 470**, Proseminar in Urban Politics

**PolSci 448**, Political Economy and Public Policy

**Sociology 430**, Policy Mediation Processes

c. **Optional Electives** (6 hours—may include courses listed but not counted in (b) above).

**Public Policy Administration 495**, Internship (up to 6 hours).

**Econ 470**, The Political Economy of Metropolitan Areas

**Econ 480**, Labor Economics: Theory and Public Policy

**Econ 450**, Topics in Managerial Economic Analysis

**Econ 317**, Public Finance: State and Local

**Econ 490**, Advanced Topics in Economic Analysis

#### Individualized Policy Emphasis Area (15 hours)

Prior to completion of 15 hours in the MPPA program, the student must present a proposal of specific course work for 15 credit hours of optional electives for approval by the MPPA faculty. No more than 9 hours in a given area (e.g., Financial Administration, Health Policy, Criminal Justice Policy, Urban Policy) may be applied toward degree requirements. The fifteen hours may include Public Policy Administration 495 (Internship) for up to 6 hours.

#### Nonprofit Organization Management Focus Area

**Public Policy Administration 391-A**, Management Issues in Non-Profit Organizations: Staff Management Issues (1)

**Public Policy Administration 391-B**, Management Issues in Non-Profit Organizations: Legal Issues in Governing and Non-Profit Organizations (1)

**Public Policy Administration 391-C**, Management Issues in Non-Profit Organizations: Financial Issues (1)

**Public Policy Administration 394**, Leadership and Management in Non-Profit Organizations (3)

**Public Policy Administration 396**, American Philanthropy and Non-Profit Resource Development (3)

## Public Policy Administration Graduate Degree Program

### b) Optional Electives (6 hours)

**Public Policy Administration 495**, Internship (up to 6 hours)

**Public Policy Administration 496**, Human Resources in the Public Sector (3)

**Sociology 424**, Conflict Management in Organizations (3)

**Sociology 426**, Community and Regional Conflict Intervention (3)

**Sociology 430**, Policy Mediation Processes (3)

**Sociology 444**, Social Policy and Community Planning (3)

**BA 343**, Accounting for Governmental and Nonprofit Entities (3)

**BA 405**, Managerial Communication (3)

**BA 410**, Managerial Economic Analysis (3)

**BA 412**, Public Policies Toward Business (3)

**BA , MKT 470**, Contemporary Marketing Concepts (3)

**Psych 412**, Social Psychology (3)

### Internships

There currently exists a need for well-trained policy administrators and analysts. Frequent contact is maintained with public practitioners and public officials in the St. Louis metropolitan area, providing valuable input for program development, creation of a wide variety of internship possibilities, and assistance with a vigorous placement program for MPPA graduates. Interns may be placed in planning agencies, city managers' offices, administrative departments, or budgeting offices.

MPPA students employed in public agencies may receive up to six hours of credit for internships in those agencies. To do so, students must develop, in consultation with their advisers, special research projects outside the scope of their regular employment duties. Credit is granted after successful completion of the project and a written paper at the end of the semester.

## Career Outlook

The current outlook for graduates of the interdisciplinary Master's Degree in Public Policy Administration program is quite promising. Recent graduates of this program have found careers as budget analysts, personnel analysts, transportation planners, and human resources planners with local, regional, state, and federal agencies.

## Public Policy Administration Graduate Degree Program

### Course Descriptions

#### **365 Introduction to Econometrics (3)**

(Same as Econ 365.) Prerequisites: Econ 52; Econ 251 or BA 410; Econ 265 or MS/IS 481 or Public Policy Administration 401; Math 80 or 101. An introduction to quantitative analysis of economic behavior. The ordinary least squares technique and the assumptions underlying it are developed. Methods designed to detect and correct for the violations of these assumptions are examined. Special emphasis is given to the practical application of the procedures discussed through the use of computer exercises.

#### **391-A Management Issues in Non-Profit Organizations: Staff Management Issues (1)**

(Same as Social Work 391-A) Prerequisite: Junior Standing. This course addresses issues involved in managing staff in non-profit organizations. The course will cover the following topics:

- Fundamentals of staff supervision: balancing supervisory processes with counseling and coaching;
- Effective internal communications and decision making: including planning and leading meetings, cultural diversity, and creative conflict management,
- Preparing, hiring and coaching people to work in stressful environments.

#### **391-B Management Issues in Non-Profit Organizations: Legal Issues in Governing and Non-Profit Organizations (1)**

(Same as Social Work 391-B) Prerequisite: Junior Standing. This course addresses legal issues involved in managing and governing non-profit organizations. The course will cover the following topics:

- The Board as steward of the organization
- Director and officer liability
- Tax laws concerning charitable giving
- Legal issues in managing staff and volunteers (e.g., hiring, evaluating, and terminating employees)

#### **391-C Management Issues in Non-Profit Organizations: Financial Issues (1)**

(Same as Social Work 391-C) Prerequisite: Junior Standing. This course addresses financial issues involved in governing and managing non-profit organizations. The course will cover the following topics:

- Cash flow analysis
- Budgeting
- Cost accounting (determining costs for programs and services)
- Understanding and using standard financial statements, including balance sheets, cash flow statements, statements of activity, and operating and capital budgets.

#### **394 Leadership and Management in Nonprofit Organizations (3)**

(Same as PolSci 394, Social Work 308, and Sociology 308.) Prerequisite: Junior standing. This course addresses the role and scope of the independent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent

sector, the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include:

- 1) the dynamics, functions and membership structure of NPOs, especially staff-board and other volunteer relations
- 2) governance and management of NPOs;
- 3) resource mobilization; and
- 4) program development management and evaluation.

#### **396 American Philanthropy and Non-Profit Resource Development (3)**

(Same as Social Work 396) This course addresses the history, philosophy, roles, and scope of philanthropy in the United States, including its role in the non-profit, voluntary sector of democratic society. It further examines the contemporary philanthropic landscape, giving special attention to the economic, political, and social/cultural forces which impact philanthropy and charitable giving, both by institution and individuals. The course also studies the effective planning and management of development programs within a non-profit organization.

#### **401 Introduction to Policy Research (3)**

(Same as PolSci 401.) Procedures for testing explanations, including research design, principles of measurement, probability sampling, methods of data collection, and techniques for analyzing data.

#### **410 Introduction to Policy Analysis (3)**

(Same as PolSci 410.) Systematic development of a critical/analytic base for dealing with public policy.

#### **415 Directed Reading and Research in Public Policy (1-10)**

(Same as PolSci 415.) Prerequisite: Consent of Instructor. Independent study through readings, reports, research projects, and conferences. May be repeated for credit, provided the subject matter is different.

#### **417 Income and Pension Policy for the Aged (3)**

(Same as PolSci 417 and Gerontology 417.) Prerequisite: Graduate standing or consent of instructor. Examination of federal, state, and local policies that affect the economic well-being of the elderly. The development of social security programs and pension programs is explored within a historical context. Emphasis is placed on the analysis of current policy problems and proposed solutions.

#### **418 Governmental Budgeting and Financial Control (3)**

(Same as BA 418.) Prerequisite: BA 440. A study of municipal and federal financial control and budgeting procedures with emphasis on public policy. The impact of financial control on top management decisions and the effect of budget strategies on the allocations of public funds.

#### **419 Cases in Public Policy Analysis (3)**

(Same as PolSci 419.) Intensive analysis of several public policy cases. Cases will be problem-solving exercises in areas such as personnel management, program financing, budget preparation, and planning.

#### **421 Public Sector Microeconomics (3)**

(Same as Econ 421.) Prerequisites: Econ 251, or BA 410, or equivalent. Application of tools of intermediate

## Public Policy Administration Graduate Degree Program

microeconomics to address public sector issues. Special emphasis is placed on critically analyzing current public policy debates using the models developed. Topics covered include: cases in which competitive market fails to allocate resources efficiently (e.g., externalities and public goods), importance of property rights, incentive effects of the tax and transfer system, and the fundamentals of cost-benefit analysis.

### **434 Seminar in City Administration (3)**

This course provides an overview of the working environment of a city administrator and is jointly sponsored by the local city managers association. Professional city personnel make presentations to the students on six major topics: political structure, organizational structure, service delivery, finance, personnel policies and practices, and leadership. The course provides direct observation of city council meetings, visits to various city facilities, exposure to different philosophies and styles of city management, and provides students a chance to assemble facts, evaluate options, and present policy recommendations for real problems that local administrators face.

### **440 Proseminar in Public Administration (3)**

(Same as PolSci 440.) Examination of major approaches to analyzing public policies and their administration. Emphasis is on the effects of administrative organization and procedures on policy decisions and their impacts. Specific topics may include administrative accountability, intergovernmental relations, public-private interaction, implementation processes, bureaucratic expertise, the legal environment of public policy administration, and public service and merit issues.

### **443 Health Care Policy (3)**

(Same as PolSci 443, and Gerontology 443.) Prerequisites: Graduate standing and consent of instructor. Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

### **444 Seminar in Public Policy and Aging (3)**

(Same as Gerontology 444 and PolSci 444.) Prerequisite: Consent of instructor. The study of specialized issues and methods related to federal, state, and local policies that affect the elderly. Potential policy areas to be covered include housing, taxation, mental health, transportation, etc. May be repeated for credit, provided the subject matter is different.

### **446 Selected Topics in Health Care Policy (3)**

(Same as PolSci and Sociology 446.) Prerequisite: Consent of instructor. The study of specialized issues and methods relating to health care policy. May be repeated for credit, provided the subject matter is different.

### **449 Human Resources in the Public Sector (3)**

(Same as PolSci 449.) Prerequisite: Public Policy Administration 460 or consent of instructor. This course presents an overview of personnel and labor relations in the public sector. The course has particular emphasis on

issues which are unique to the public sector, such as the merit system, the questions of representative bureaucracy and the constraints of personnel in the nonprofit sector. The topics include personnel reforms in the federal sector, equal employment and affirmative action policies, testing, selection, hiring, comparable worth, job evaluation, and labor relations including grievance arbitration and collective bargaining.

### **460 Organizational Behavior and Administrative Processes (3)**

(Same as Management 460.) The theoretical and research contribution of the behavioral sciences to management and administration are examined and applied to selected organizational situations. Areas to be considered from the standpoint of both individual and organizational performance are communication, motivation, conflict, decision making, goal setting, leadership, organizational design, climate, development, and control. Utilizing a systems perspective, the course attempts to develop in each student an ability to analyze and solve organizational problems.

### **475 Introduction to Evaluation Research Methods (3)**

(Same as Psych 475, Sociology 475, and Criminology and Criminal Justice 475.) Prerequisites: At least one course in Research Design and Statistics at the graduate level. A comparative study of research strategies with regard to data sources, data collection, and modes of analysis that are appropriate for program evaluation research. Attention is given to observational, survey, and quasi-experimental designs.

### **480 Management Information Systems (3)**

(Same as MS/IS 480.) Prerequisite: Economics 301. An overview of management information systems is presented, including various information systems concepts and technologies. Students are introduced to a mainframe operating system, a microcomputer-based operating system and a programming language. Students are also exposed to several common microcomputer-based software packages.

### **495 Internship (1-6)**

Independent study involving work with an appropriate public or private agency.

### **499 Exit Project Research (1)**

Prerequisites: Completion of or simultaneous enrollment in other degree requirement courses. The exit project is viewed as the capstone of the MPPA program. As such, it is meant to be undertaken toward the end of a student's program, usually during the final semester. Its purpose is to provide evidence to the faculty that the degree candidate has mastered the skills acquired in the various courses completed during residence at the University and can apply them to the analysis of a practical research problem.

## Gerontology

### Faculty

**Robert J. Calsyn**, Director; Professor\* of Psychology and Gerontology

Ph.D., Northwestern University

**Carl J. Bassi**, Associate Professor of Optometry

Ph.D., Vanderbilt University

**Anna Biggs**, Lecturer Barnes College of Nursing

Ph.D., University of Colorado Health Sciences Center

**Bruce Clark**, Associate Professor\* of Physical Education

Ph.D., University of Illinois

**K. Peter Etzkorn**, Professor\* of Sociology

Ph.D., Princeton University

**Norman Flax**, Associate Professor\* of Social Work

Ph.D., St. Louis University

**Joan Hashimi**, Associate Professor\* of Social Work

Ph.D., Washington University

**Margo-Lea Hurwicz**, Associate Professor of Anthropology and Gerontology

Ph.D., University of California-Los Angeles

**W. Howard McAlister**, Associate Professor of Optometry

O.D., Ohio State University

**Timothy D. McBride**, Associate Professor of Public Policy

Administration, Economics, and Gerontology

Ph.D., University of Wisconsin-Madison

**Ann M. Steffen**, Assistant Professor of Psychology

Ph.D., Indiana University

**Nanora L. Sweet**, Senior Lecturer of English

M.A., University of Missouri-Columbia

**Nina Tumosa**, Assistant Professor of Optometry

Ph.D., State University of New York at Albany (SUNYA)

**Chikako Usui**, Assistant Professor of Sociology and Gerontology

Ph.D., Stanford University

**Timothy A. Wingert**, Assistant Professor of Optometry

O.D., Illinois College of Optometry

**Myra Aud**, Adjunct Lecturer,

M.S.N., St. Louis University

**Richard P. Johnson**, Adjunct Professor

Ph.D., University of Florida

**Kathleen O'Brien**, Adjunct Lecturer,

M.S.W., Washington University

\*members of Graduate Faculty

Faculty from 10 departments and schools are involved in the undergraduate and graduate programs in gerontology.

## Master of Science in Gerontology

The Master of Science Degree in Gerontology program is a multidisciplinary program designed to prepare students for management or direct service positions working with the aged. The program of study includes courses from a variety of departments including anthropology, biology, nursing, political science, psychology, sociology, social work, physical education, English, public policy administration, and optometry. Courses are offered primarily in the evening to accommodate part-time, as well as full-time, students.

### Admission Requirements

Program applicants must have the following:

1. Baccalaureate degree
2. 3.0 or (B) average (students with exceptions should contact the Director of the Gerontology Program)
3. Official transcripts of all previous undergraduate/graduate work
4. Three letters of recommendation

In addition students must meet the other general requirements for admission to the Graduate School as explained in the Graduate Study section of the Bulletin.

### Degree Requirements

The students are required to complete 45 credit hours including 27 hours in gerontology courses, a three-hour research methods course, and a 15-hour specialization that is individually tailored to the student's career goals. Depending on the student's prior course work in gerontology, up to fifteen hours of credit may be waived. The required courses are listed below.

### Gerontology Distribution Requirements

- A. Public Policy and Aging**—6 credits  
**Gerontology (Public Policy Administration, Political Science) 443**, Health Care Policy  
**Gerontology (Public Policy Administration, Political Science) 417**, Income and Pension Policy for the Aged or **Gerontology (Sociology) 449**, Issues in Retirement
- B. Health Behavior of the Elderly**—2 credits  
**Gerontology (Nursing) 401**, Health and Wellness in the Elderly, or **Gerontology 441**, Aging and Health Behavior
- C. Physiological Theories of Aging**—3 credits  
**Biology 311**, Physiology of Aging
- D. Psychological Aspects of Aging**—3 credits  
**Gerontology (Psych) 373**, Psychology of Aging or **Gerontology (Psych) 376**, Mental Health and Aging
- E. Sociocultural Aspects of Aging**—3 credits  
**Gerontology (Sociology) 361**, Sociology of Aging, or **Gerontology (Anthro) 440**, Cultural Aspects of Aging
- F. Gerontology 494**, Integrative Research in Gerontology—3 credits
- G. Gerontology 495**, Practicum in Gerontology—3 credits.
- H. Electives in Gerontology**, 3-4 Credits depending on courses taken to meet gerontology distribution requirements.

### Other Requirements

- A. Graduate level statistics course**, approved by the Director of Gerontology. Acceptable courses include Public Policy Administration (Political Science) 401, Introduction to Policy Research; ED REM 432, Educational and Research Methods II, 3 credits.

## Gerontology

### B. Specialization Area—15 credits

Each student develops a 15-hour specialization area with the guidance of the Director of Gerontology. Most specialization areas focus on administration or counseling.

## Graduate Certificate in Gerontology

The Graduate Certificate in Gerontology is designed for those students who wish to receive postbaccalaureate training in gerontology. The Graduate Certificate in Gerontology can be taken by itself or in conjunction with pursuit of a graduate degree in another field. Eighteen credit hours are required.

### Admission Requirements

Program applicants must have the following:

1. Baccalaureate degree
2. 2.75 grade point average (students with exceptions should contact the director of the Gerontology Program)
3. Official transcripts of all previous undergraduate/graduate work
4. Two letters of recommendation

### Distribution Requirements

#### A. Public Policy—3 credits

**Gerontology (Public Policy Administration, Political Science) 443**, Health Care Policy, or **Gerontology (Public Policy Administration, Political Science) 417**, Income and Pension Policy for the Aged, or **Gerontology (Sociology) 449**, Issues in Retirement

#### B. Health and Physical Aspects of Aging—2 credits

**Gerontology (Nursing) 401**, Health and Wellness in the Elderly, or **Gerontology 441**, Aging and Health Behavior, or **Biology 311**, Physiology of Aging, or **Gerontology 458 (Optometry 558)**, Geriatric Optometry, or **Gerontology (Optometry) 497**, Interdisciplinary Geriatric Care

#### C. Psychological Aspects of Aging—3 credits

**Gerontology (Psych) 373**, Psychology of Aging, or **Gerontology (Psych) 376**, Mental Health and Aging

#### D. Sociocultural Aspects of Aging—3 credits

**Gerontology (Sociology) 361**, Sociology of Aging, or **Gerontology (Anthro) 440**, Cultural Aspects of Aging

#### E. Electives in Gerontology—6-7 credits depending on

courses taken to meet distribution requirements listed above.

## Graduate Certificate in Gerontological Social Work

The Graduate Certificate in Gerontological Social Work is a program designed for students who wish to pursue advanced study in Social Work practice with the elderly. While the program draws from several disciplines, the focus is on practice and/or administration in gerontological

settings. The program can be taken by itself or in conjunction with the pursuit of a graduate degree in another field.

### Admission Requirements

Program applicants must have the following:

1. Baccalaureate degree
2. 2.75 grade point average (students with exceptions should contact the director of the Gerontology program)
3. Official transcripts of all previous undergraduate/graduate work
4. Two letters of recommendation

### Certificate Requirements

Eighteen credit hours are required to complete the certificate. Students must complete 15 hours of required core courses and three hours of gerontology electives at the 300 level or above.

### Required Core Courses

**Gerontology 316**, Clinical Gerontology, or **Social Work 316**, Clinical Gerontology  
**Gerontology 373**, Psychology of Aging, or **Psych 373**, Psychology of Aging  
**Gerontology 361**, Social Gerontology, or **Sociology 361**, Social Gerontology  
**Gerontology 444**, Public Policy and Aging, or **Political Science 444** Public Policy and Aging  
**Social Work 412**, Research Design in Social Work  
**Social Work 491**, Professional Leadership Practice

## Undergraduate Certificate in Gerontological Studies

A Certificate in Gerontological Studies, a multidisciplinary course of study, is available at the University of Missouri-St. Louis. This program provides an opportunity for students to obtain a focused specialty in gerontology in addition to their majors. It utilizes offerings in the College of Arts and Sciences and the Schools of Business Administration, Nursing, and Education. It is appropriate for students in the College of Arts and Sciences or any of the Schools of the University.

### Certificate Requirements

A student may earn the Certificate in Gerontological Studies by completing a total of fifteen hours. Courses must be chosen from at least two of the following four topic areas. No more than three credit hours from Research/Practicum Experience courses will be allowed. The student must have the approval of the Director of the Gerontology Program before enrolling in the course. Courses taken to fulfill the requirements may not be taken on a satisfactory/unsatisfactory basis. New courses continually are added, so it is advisable to check with the Director each term. Many courses are cross-listed and also have a Gerontology designation.

### Humanities

**English 13**, Topics in Literature: Images of Age in Literature

## Gerontology

**Gerontology 156**, Medical Ethics, or **Philosophy 156**,  
Medical Ethics

### **Natural Sciences and Mathematics**

**Gerontology 111**, Issues in Geriatric Health Care,  
or **Biology 111**, Issues in Geriatric Health Care, or  
**Nursing 111**, Issues in Geriatric Health Care

**Biology 311**, Physiology of Aging

### **Social Sciences**

**Gerontology 272**, Adult Development and Aging, or  
**Psych 272**, Adult Development and Aging

**Gerontology 280**, The Psychology of Death and Dying,  
or **Psych 280**, The Psychology of Death and Dying

**Gerontology 373**, The Psychology of Aging, or  
**Psych 373**, The Psychology of Aging

**Gerontology 316**, Clinical Gerontology, or  
**Social Work 316** Clinical Gerontology

**Gerontology 361**, Social Gerontology, or  
**Sociology 361**, Social Gerontology

### **Education**

**Gerontology 190**, Clinical Experience in Physical  
Gerontology, or **PHY ED 190**, Clinical Experience in  
Physical Gerontology

**Gerontology 392**, Internship in Physical Gerontology, or  
**PHY ED 392**, Internship in Physical Gerontology

**Gerontology 330**, Prescribing Physical Activity, or **PHY  
ED 330**, Prescribing Physical Activity

## Career Outlook

The increasing number of elderly in the population has greatly expanded job opportunities in gerontology in the last decade, and job prospects for the future are equally bright. Career possibilities include nursing home administration, administration and planning of community-based programs for the elderly, recreational programming, and counseling of the elderly.



# Gerontology

## Course Descriptions

### 15 Images of the Elderly in Film (3)

(Same as English 15.) Analysis of the portrayal of older adults in various films. Class discussions focus on the style and thematic content of the film, as well as intergenerational relationships.

### 16 Images of Age in Literature (3)

(Same as English 16.) Reading and discussion of literature that portrays aging and old age in various settings. Emphasis is on contemporary novels, but poetry and drama such as *King Lear* are read as well. Discussion and short essays enable consideration of how literature helps in the study of aging and also how the process of aging can be a creative force within literature.

### 60 Aging in America (3)

(Same as Interdisciplinary 60.) An introduction to the major issues, research, problems, and current service approaches in the study of the aging process. An overview of information useful for students in the arts and sciences, business, education, and nursing schools.

### 111 Issues in Geriatric Health Care (2)

(Same as Nursing 111 and Biology 111.) A course designed to acquaint the student with aspects of chronic disease frequent in later life, as well as a synopsis of biological aging processes. Disease symptomatology aspects of health maintenance and medical intervention with an older adult population will be discussed. In addition, issues in health care delivery will also be explored.

### 120 Special Topics in Gerontology (1-3)

(Same as Interdisciplinary 120.) Selected topics dealing with various aspects of gerontology. The specific contents of this course will vary from semester to semester. The course may be repeated for credit with permission of the Gerontology director.

### 156 Medical Ethics (3)

(Same as Philosophy 156.) An examination of ethical issues in medical practice and research and in public policies affecting health care. Topics include abortion, euthanasia, medical experimentation, informed consent, and the right to health care.

### 190 Clinical Experience in Physical Gerontology (3)

(Same as PHY ED 190.) Prerequisite: Consent of instructor. Early supervised experience in gerontological physical activity programming. Seminar precedes and accompanies clinical experience.

### 215 Growing Old in Other Cultures (3)

(Same as Anthro 215.) This course examines the wide ranging variability in the roles of older people across different cultures and the effects these have on older people, their families, and their societies.

### 272 Adult Development and Aging (3)

(Same as Psych 272.) Personality, social, and physiological

development from the onset of early adulthood through maturity and old age.

### 280 The Psychology of Death and Dying (3)

(Same as Psych 280.) This course will address the psychological aspects of death and dying for both adults and children. The psychological reactions of terminally ill patients and their families will also be examined, and therapeutic interventions will be discussed.

### 316 Physiology of Aging (3)

(Same as Biology 311) Prerequisite: Biology 11, 12 and 213 or equivalent, or consent of instructor. An overview of the aging process in animal populations with special emphasis on physiological changes that occur with human aging. Current theories as to the mechanism of aging are considered and critically evaluated in view of recent research findings. Premature aging diseases and age-related diseases are discussed. Three hours of lecture per week.

### 316 Clinical Gerontology (3)

(Same as Social Work 316.) Prerequisite: Social Work 280 or Psych 268. This course includes (1) an examination of the social, economic, health, and psychological problems specific to an older adult population; (2) consideration of special needs of the frail elderly, to include problems in long-term care; and (3) the special practice skills (individual, group) needed for intervention with older adults.

### 330 Prescribing Physical Activity (3)

(Same as PHY ED 330.) Prerequisite: PHY ED 280 or consent of instructor. Prescription of physical activity for individualized and group programming based upon physical fitness assessment. Health, nutrition, age, physical fitness, and testing aspects are considered in developing specialized exercise programming based upon current physiological and biomechanical research.

### 361 Social Gerontology (3)

(Same as Sociology 361.) Prerequisite: Sociology 10 and junior standing or consent of instructor. Topics include sociological theories of aging, technological and social change and its effects on the environment of older people, and prejudice and discrimination against the elderly.

### 373 Psychology of Aging (3)

(Same as Psych 373.) Prerequisite: Nine hours of Psychology or consent of instructor. This course focuses on the developmental changes associated with aging including sensation, memory, emotions, and attitudes.

### 376 Mental Health and Aging (3)

(Same as Psych 376.) Prerequisites: Consent of instructor plus Psychology 272, 373, or graduate student status. A survey of recent theory and research in mental health issues for older populations. The primary focus is on major psychological disorders prevalent among the elderly and in treatment approaches for elders.

### 392 Internship in Physical Gerontology (1-10)

Prerequisite: PHYS ED/GER 190 or consent of instructor. (Same as PHYS ED 392). Supervised clinical experience in selected gerontological settings as a physical education

## Gerontology

practitioner under the supervision of University and program professionals. Internship may include two or more separate experiences completed concurrently sequentially and involve planning of instruction, participant and program evaluation, research, and related activities.

### **401 Health and Wellness in the Elderly (2)**

(Same as Nursing 401.) Prerequisite: Graduate standing. Factors contributing to longevity and health in old age, including genetic predisposition, lifestyle, culture and environment, are related to aspects of maintaining health and promoting wellness. Through a holistic approach, explores aspects of nutrition, exercise, and activity, prevention of hazards to health, maintaining self-responsibility, managing stress, and meeting continued developmental, emotional, and spiritual needs. Considers intervention and support to promote health and wellness in the elderly.

### **417 Income and Pension Policy for the Aged (3)**

(Same as Public Policy Administration 417 and PolSci 417.) Prerequisite: Graduate standing or consent of instructor. Examination of federal, state, and local policies that affect the economic well-being of the elderly. The development of social security programs and pension programs is explored within a historical context. Emphasis is placed on the analysis of current policy problems and proposed solutions.

### **440 Cultural Aspects of Aging (3)**

(Same as Anthro 440.) Focuses on the variety of solutions encountered in different sociocultural contexts for dealing with the problems, challenges, and opportunities of growing old. It is organized around topics that are of concern to both anthropology and social gerontology: the status of the aged, intergenerational relations, aging in modernizing societies, ethnic dimensions of aging in complex societies, health in later life, death and dying. Both in-depth case studies and cross-cultural comparisons are examined in an effort to arrive at a culturally informed assessment of factors affecting aging and the aged in the United States.

### **441 Aging and Health Behavior (3)**

Prerequisite: Graduate standing. This course examines sociocultural influences on health care practices of older adults. The role of social support and other social resources in the health behavior of older adults is emphasized. Topics include self-care decisions, formal service utilization, family caregiving, and planned interventions for older adults.

### **442 Minority Aging (3)**

(Same as Sociology 442.) Prerequisite: Sociology 361 or consent of instructor. The experience of aging for racial and ethnic minority elderly will be examined in the context of their families, communities, and society. Key questions concerning minority elderly frame the course, such as the relative importance of culture versus social structure, and the applicability of gerontological theory to the minority aging experience.

### **443 Health Care Policy (3)**

(Same as PolSci 443 and Public Policy Administration 443.)

Prerequisites: Graduate standing and consent of instructor. Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

### **444 Seminar in Public Policy and Aging (3)**

(Same as Public Policy Administration 444 and PolSci 444.) Prerequisite: Consent of instructor. The study of specialized issues and methods related to federal, state, and local policies that affect the elderly. Potential policy areas to be covered include housing, taxation, mental health, transportation, etc. May be repeated for credit, provided the subject matter is different.

### **445 Sociological Dimensions of Chronic Illness (3)**

(Same as Sociology 445.) Prerequisite: Sociology 400 or consent of instructor. The consequences of chronic illness for social roles, family and organizational dynamics, and the functioning of society are examined. Chronic illness is presented as both a medical problem and a social phenomenon that is shaped by the changing age structure of society.

### **449 Issues in Retirement (3)**

(Same as Sociology 449.) Prerequisite: Graduate standing. This course examines macro and micro issues of retirement in the United States. It considers experiences of older persons in retirement—its processes, causes, and consequences—in relation to economic market conditions, demographic changes, and programs and policies that are targeted to support the elderly (e.g., Social Security). It also examines issues relating to older women and retirement.

### **458 Geriatric Optometry (3)**

(Same as Optometry 558.) Special examination and management considerations of the geriatric patient will be discussed. Psychological, physiological, social, and demographic aspects of aging, as well as ocular changes associated with the aging process will be taught. Supervised interactions with nursing home residents will occur.

### **490 Directed Study (1-3)**

Prerequisite: Consent of instructor. Designed to give the student an opportunity to pursue a more in-depth study of a problem area in gerontology than is normally covered in more formal courses. May be repeated for a total of six credit hours.

### **494 Integrative Research Seminar in Gerontology (3)**

(Same as Psychology 494.) Prerequisite: A graduate level research methods course (e.g., PPA 401). This seminar requires students to critically examine research in terms of methodology. Topics covered include: reliability and validity of measures; internal and external validity; needs assessment; treatment implementation and process evaluation, and qualitative methods.

### **495 Practicum in Gerontology (3)**

(Same as Psychology 495.) Prerequisite: Consent of instructor. This course provides supervised work

## Gerontology

experience in an agency that serves the elderly.

### **496 Gerontology Colloquium (1)**

(Same as Psychology 496.) Presentation of current topics in gerontology by faculty and invited speakers. May be repeated for a total of three credits.

### **497 Interdisciplinary Geriatric Care (2)**

(Same as Optometry 497.) Prerequisite: Consent of instructor. Interdisciplinary approaches that address the medical and social needs of the elderly will be examined. Information about geriatric care and social issues affecting the well-being of older adults will be provided. Clinical, theoretical, and educational perspectives will be presented.

### **498 Advanced Seminar in Gerontology (3)**

Prerequisite: Graduate standing. This course will provide in-depth analysis of specialized topics in gerontology which are not covered in required courses. (Course may be repeated for a maximum of nine credits, assuming topics are different.)

### **499 Topics in Gerontology (1-2)**

Prerequisite: Graduate standing. Analysis of a current problem in gerontology. (Course may be repeated for maximum of five credits, assuming topics are different).

## International Studies

### International Studies Certificates Undergraduate

The Center for International Studies offers, in cooperation with the College of Arts and Sciences, certificate programs in Africana, East Asian, European, Latin American, and International Studies, and in cooperation with the College and the School of Business Administration, the International Business certificate. Students seeking certificates (except African Diaspora or International Business) must take an independent study course (three hours) in which a research paper will be written focusing upon some aspect of the particular field or on one of the fields offered in the program.

Interested students should petition for one of these certificates through the Center for International Studies by the first semester of the senior year. For further information, contact the Center at 516-5753.

### Requirements for Each Program

#### Africana Studies Certificate

Students seeking the Africana Studies Certificate have two options: an emphasis in African Studies and an emphasis in African Diaspora Studies.

#### I. African Studies:

- 1) At least one course in two of the following four areas for a total of nine hours:

**Area 1: Anthropology**  
124, Cultures of Africa

**Area 2: Art and Art History**  
117, African Art

**Area 3: History**  
81, African Civilization to 1800  
82, African Civilization Since 1800

**Area 4: Political Science**  
258, African Politics

- 2) One course in two of the following areas, a total of six hours:

**Area 1: Anthropology**  
234, Cultural Continuity and Change in Sub-saharan Africa  
235, Women in Sub-saharan Africa

**Area 2: Art and Art History**  
\*215, Topics in Tribal Arts

\* Note: Students should take Art History 215 only when the topic is appropriate to Africa.

**Area 3: History**  
380, West Africa to 1800  
381, West Africa Since 1800  
382, History of Southern Africa

**Area 4: Sociology**  
245, Sociology of South Africa

- 3) An independent study course (three hours) in which a research paper will be written on some aspect of African Studies

#### II. African Diaspora Studies

- 1) **Interdisciplinary 40: The Black World** (3)

- 2) One course from each of the following areas, a total of six hours.

**Area 1: Africa**  
**Anthro 124:** Cultures of Africa  
**History 81:** African Civilization to 1800  
**History 82:** African Civilization Since 1800

**Area 2: Diaspora**  
**Anthro 05:** Human Origins  
**History 83:** The African Diaspora to 1800  
**History 84:** The African Diaspora Since 1800  
**History 202:** Black History in the United States  
**History 212:** African-American History: From Civil Rights to Black Power

3. At least one course from each of the following areas, a total of six hours:

**Area 1: Africa**  
**Anthro 234:** Cultural Continuity and Change in Sub-saharan Africa  
**Anthro 235:** Contemporary Women in Sub-saharan Africa  
**Art History 117:** African Art  
**History 380:** West Africa to 1800  
**History 381:** West Africa Since 1800  
**History 382:** History of Southern Africa  
**PolSci 258:** African Politics  
**Sociology 245:** Sociology of South Africa

**Area 2: Diaspora**  
**Comm 332:** Intercultural Communication  
**English 70:** African-American Literature  
**History 385:** African Diaspora to 1800  
**History 386:** African Diaspora Since 1800  
**Music 6:** Introduction to African-American Music  
**PolSci 232:** African Americans and the Political System  
**\*Psych 392:** Selected Topics in Psychology:  
African-American Psychology  
**Sociology 360:** Sociology of Minority Groups

\* Note: Students should take Psychology 392 only when the African American Psychology topic is offered.

# International Studies

## East Asian Studies Certificate

- 1) First- and second-year Chinese, Japanese, Korean, or other appropriate Asian language (20 hours taken in four semesters).
- 2) **History 61** and **History 62**, East Asian Civilization
- 3) One course in three of the following six areas, a total of nine hours:

### Area 1: Anthropology

110, Cultures of Asia

### Area 2: Art and Art History

107, The Arts of China  
108, The Arts of Japan  
208, Topics in Asian Art

### Area 3: History

162, The Chinese Revolution: Readings in Chinese Literature  
361, Modern Japan: 1850 to Present  
362, Modern China: 1800 to Present  
\*393, Senior Seminar

\*Note Students should take History 393 only when the topic is appropriate to East Asia.

### Area 4 Music

9, Non-Western Music I  
10, Non-Western Music II

### Area 5: Philosophy

120, Asian Philosophy

### Area 6: Political Science

155, East Asian Politics  
\*359, Studies in Comparative Politics  
\*388, Studies in International Relations

\*Note Students should take PolSci 359 or PolSci 388 only when the specific topic is appropriate.

## European Studies Certificate

- 1) Four semesters of college work or the equivalent in a modern European foreign language.
- 2) **History 32**, Topics in European Civilization: 1715 to the Present.
- 3) One course each from at least four of the following eight areas, a total of 12 hours. Students should consult advisers at the Center to determine how these courses can best be arranged to meet their interests.

### Area 1: Art and Art History

135, Renaissance Art  
145, Baroque Art  
235, Topics in Renaissance Art  
245, Topics in Seventeenth- and Eighteenth-Century European Art  
255, Topics in Nineteenth- and Twentieth-Century European Art

### Area 2: Economics

### 238, Comparative Economic Systems

### Area 3: English

127, Survey of European Literature from 1650 to the Second World War  
128, The Contemporary World in Literature  
132, English Literature II  
323, Continental Fiction  
346, Restoration and Eighteenth-Century Drama  
364, The Eighteenth-Century English Novel  
365, The Nineteenth-Century English Novel  
372, Literature of the Late Nineteenth and Early Twentieth Centuries  
383, Modern British Fiction

### Area 4: History

31, Topics in European Civilization: Emergence of Western Europe to 1715  
331a, The Age of the Renaissance  
331b, The Age of Reformation  
332d, The Rise of the Modern British State  
332e, Europe from the French Revolution to World War I, 1789-1914  
333a, Contemporary France: Since 1870  
333b, Germany in the Modern Age  
333c, History of Russia From 1917-Present  
333d, Europe in the Twentieth Century  
333e, Contemporary Europe, 1939-Present

### Area 5: Foreign Languages and Literatures

#### FRENCH

110, Modern French Literature in Translation  
150, European Literature in Translation: Special Topics  
211, Contemporary French Civilization  
281, French Literature II: Nineteenth and Twentieth Centuries  
341, Seventeenth-Century French Theatre and Poetry  
342, Seventeenth-Century French Prose  
353, Eighteenth-Century French Literature  
354, Eighteenth-Century French Theatre and Novel  
362, Nineteenth-Century French Novel  
371, Twentieth-Century French Novel  
375, Modern French Theatre

#### GERMAN

110, Masterpieces of German Literature in Translation  
150, European Literature in Translation: Special Topics  
201, Masterpieces of German Literature  
202, The German *Novelle* and Drama  
210, German Culture and Civilization  
315, German Classicism and Romanticism  
320, German Realism and Naturalism  
345, Modern German Literature  
397, Survey of German Literature Part I  
398, Survey of German Literature Part II

#### SPANISH

110, Spanish Literature in Translation  
150, European Literature in Translation: Special Topics  
310, Spanish Literature from 1898 to 1939  
315, Spanish Literature from 1939 to the Present  
320, Realism and Naturalism in the Nineteenth-Century Spanish Novel

## International Studies

321, Poetry and Drama of the Nineteenth Century  
325, Poetry and Drama of the Golden Age

### Area 6: Music

322, Music of the Renaissance  
323, Music of the Baroque  
324, Music of the Classic Period  
325, Music of the Romantic Period

### Area 7: Philosophy

103, Early Modern Philosophy  
104, Kant and Nineteenth-Century Philosophy  
105, Twentieth-Century Philosophy  
205, The Rationalists  
206, The British Empiricists

### Area 8: Political Science

251, Comparative Politics of Europe  
256, Russia and the New Republics  
284, European International Relations  
\*351, Comparative Public Policy and Administration  
\*359, Studies in Comparative Politics  
\*388, Studies in International Relations  
\*Note Students should take PolSci 351, 359, or 388 only when the topic is appropriately European.

## Latin American Studies Certificate

- 1) Thirteen credit hours or the equivalent in Spanish.
- 2) Either **History 71**, Latin American Civilization, or **Spanish 211**, Hispanic Culture and Civilization: Spanish America.
- 3) A total of 12 hours from at least three of the following areas:

### Area 1: Anthropology

134, The Inca, Aztec, and Maya  
140, Cultures of Mexico and Central America  
145, Indians of South America

### Area 2: Art and Art History

119, Pre-Columbian Art of Mexico and Central America

### Area 3: History

371, History of Latin America: To 1808  
372, History of Latin America: Since 1808

### Area 4: Political Science

253, Political Systems of South America  
254, Political Systems of Mexico, Central America, and the Caribbean  
\*359, Studies in Comparative Politics

\*Note Students should take PolSci 359 only when the topic is appropriate to Latin America.

### Area 5: Spanish

111, Spanish-American Literature in Translation  
211, Hispanic Culture and Civilization: Spanish America  
281, Introduction to Hispanic Literature: Spanish America  
340, Spanish-American Literature of the Nineteenth Century  
341, Modernismo  
345, Spanish-American Literature of the Twentieth Century

351, Spanish-American Fiction in the Twentieth Century  
360, Spanish-American Poetry from Modernismo to the Present

## International Studies Certificate

- 1) Satisfactory completion of the language requirements for the degree program in which the student is enrolled.
- 2) PolSci 180, World Politics.
- 3) A total of 12 hours from at least three of the following nine areas:

### Area 1: Anthropology

201, Comparative Economic Behavior  
202, Culture, Politics, and Social Organization

### Area 2: Biology

120, Environmental Biology

### Area 3: Business Administration

316, International Marketing  
317, International Management  
380, International Finance

### Area 4: Communication

332, Intercultural Communication  
354, Comparative Telecommunication Systems  
356, International Communication

### Area 5: Economics

230, International Economic Analysis  
231, International Finance  
238, Comparative Economic Systems  
331, International Economic Analysis: Finance

### Area 6: Geography

102, World Regions

### Area 7: History

112, America in World Affairs  
332e, Europe from the French Revolution to World War I, 1789-1914  
333d, Europe in the Twentieth Century  
333e, Contemporary Europe, 1939-present

### Area 8: Political Science

80, Global Issues  
282, United States Foreign Policy  
285, International Organizations and Global Problem Solving  
289, Middle Eastern Politics  
385, International Law  
386, Studies in War and Peace  
388, Studies in International Relations

### Area 9: Sociology

314, Social Change  
342, World Population and Ecology  
354, Sociology of Business and Work Settings

## International Studies

### International Business Certificate

- 1) Students must complete a minimum of 12 hours in the Business Internship Program in London or in some other approved overseas study program.
- 2) One course from Area 1 and one from Area 2, a total of six hours.

#### Area 1: Business Administration:

316, International Marketing  
317, International Management  
380, International Finance

#### Area 2: International Studies:

Anthro 238: Culture and Business in East Asia  
Econ 230: International Economics Analysis  
Econ 231: International Finance  
Econ 238: Comparative Economic Systems  
Econ 240: Economic Development  
PolSci 283: International Political Economy  
PolSci 388: Studies in International Relations.  
(International Relations of East Asia)  
Sociology 241: Selected Topics in Macro-sociology.  
(Work and Industry in Japan)  
Sociology 354: Sociology of Business and Work Settings

In lieu of a course from Area 2, students may substitute one course (3 hours) at the advanced level of a foreign language. Advanced level is defined as a course beyond the 13 hour introductory language sequence.

- 3) An independent study course is not required for this certificate option.

**Note:** Students participating in other approved overseas study programs such as Hogeschool Holland Business School, Ecole Superieure de Commerce de Saint Etienne, or Université Jean Moulin, may also qualify to apply 12 credit hours toward the International Business Certificate.

### International Studies Certificate Graduate

A Graduate Certificate in International Studies is a program of study featuring advanced, multidisciplinary course work designed for individuals, including teachers and other professionals, who wish to expand their knowledge and understanding of international and cross-cultural affairs. The Certificate is sponsored by the Center for International Studies, and the Departments of Economics, History, Foreign Languages and Literatures, and Political Science. A broad set of course offerings is available in these and other departments, with the flexibility for students to tailor the program to their particular interests and needs. The program has been developed as a vehicle for bringing together the resources of a distinguished faculty in international studies and for providing an opportunity for further graduate learning. For further information, contact the Center for International Studies at 516-5753.

Applicants to the Certificate program must meet the general requirements for admission to Graduate School as

explained in the graduate study section of this Bulletin. The Certificate is awarded after completion of 18 hours, including a minimum of 12 hours drawn from a list of core courses and an additional six hours selected from a wide variety of offerings in eight different disciplines. No more than 12 hours may be from any one discipline. Students may simultaneously earn a graduate degree and count credits earned in their degree program toward the Certificate when appropriate.

#### Requirements

Students must complete at least 12 hours chosen from the following list of core courses:

#### Anthropology

425, Peoples and Cultures of Southeast Asia  
430, Global Refugee Crisis

#### Business Administration

416, International Finance, Investment, and Commercial Relations  
417, International Business Operations  
443, International Accounting

#### Economics

430, International Trade  
431, International Monetary Analysis

#### History

419, Readings in East Asian History  
431, Readings in European History  
460, Readings in Latin American History  
470, Readings in African History

#### Political Science

450, Proseminar in Comparative Politics  
451, Seminar in Comparative Politics  
480, Proseminar in International Relations  
481, Seminar in International Relations  
488, Studies in International Relations

#### Sociology

410, Comparative Social Structures

Students may complete an additional six hours chosen from the following:

#### Business Administration

316, International Marketing  
317, International Management  
380, International Finance

#### Communication

332, Intercultural Communication  
354, Comparative Telecommunication Systems  
356, International Communication

#### Criminology and Criminal Justice

305, Comparative Criminology and Criminal Justice

#### Economics

331, International Economic Analysis: Finance  
395, Special Readings

## International Studies

### English

323, Continental Fiction

### History

314, American Foreign and Military Affairs, 1900-Present

320, History of Feminism in Western Society

332a, History of Spain

332b, Russian History to 1917

332c, Modern France: to 1870

332d, The Rise of the Modern British State

332e, Europe from the French Revolution to World War I, 1789-1914

333a, Contemporary France: Since 1870

333b, Germany in the Modern Age

333c, History of Russia from 1917-Present

333d, Europe in the Twentieth Century

333e, Contemporary Europe, 1939-Present

361, Modern Japan: 1850 to Present

362, Modern China: 1800 to Present

372, History of Latin America: Since 1808

381, West Africa: Since 1800

382, Crisis in Southern Africa

390, Special Readings

### Foreign Languages and Literatures

French 362, Nineteenth-Century French Novel

French 365, Modern French Poetry

French 371, Twentieth-Century French Novel

French 375, Modern French Theatre

German 315, German Classicism and Romanticism

German 320, German Realism and Naturalism

German 345, Modern German Literature

German 398, Survey of German Literature Part II

Spanish 310, Spanish Literature from 1898-1939

Spanish 315, Spanish Literature from 1939 to Present

Spanish 320, Realism and Naturalism in the Nineteenth-Century Spanish Novel

Spanish 321, Poetry and Drama of the Nineteenth Century

Spanish 340, Spanish-American Literature of the Nineteenth Century

Spanish 341, Modernismo

Spanish 345, Spanish-American Literature of the Twentieth Century

Spanish 351, Spanish-American Fiction in the Twentieth Century

Spanish 360, Spanish-American Poetry from Modernismo to the Present

### Music

325, Music of the Romantic Period

326, Music of the Twentieth Century

### Political Science

351, Comparative Public Policy and Administration

359, Studies in Comparative Politics

385, International Law

386, Studies in War and Peace

388, Studies in International Relations

485, Directed Readings and Research in International Relations

### Sociology

342, World Population and Ecology



**BARNES COLLEGE  
OF NURSING**

**UM-St. Louis 1996-97 Bulletin**



## College of Nursing

### Faculty

**Shirley A. Martin, Dean; Professor\***  
Ph.D., St. Louis University

**Connie K. Koch, Assistant Professor\*; Associate Dean**  
Ed.D., Southern Illinois University-Edwardsville

**Dotty Akerson, Clinical Associate Professor**  
MSN, St. Louis University

**Janice M. Attala, Assistant Professor\***  
Ph.D., Southern Illinois University-Carbondale

**Margaret Jean Auffarth, Clinical Instructor**  
MSN, University of Missouri-Kansas City

**Jean Bachman, Associate Professor\*, Director for Graduate Affairs**  
D.S.N., University of Alabama

**Bertha Ballard, Clinical Assistant Professor**  
MSN, St. Louis University

**Anna J. Biggs, Clinical Professor**  
Ph.D., University of Colorado

**Deborah Birk, Clinical Instructor**  
MSN, Southern Illinois University-Edwardsville

**Donna Bridgman Musser, Clinical Assistant Professor**  
M.S.N., Southern Illinois University-Edwardsville

**Wilma Calvert, Clinical Assistant Professor**  
MSN, University of Oklahoma

**Mary Reardon Castles, Professor Emeritus\***  
Ph.D., St. Louis University

**Virginia Drake, Associate Professor\*, Director, Undergraduate Affairs**  
DNsc, Catholic University of America

**Gretchen Drinkard, Clinical Associate Professor**  
MSN, FNP, University of Missouri-Columbia

**Marianne Fox, Clinical Assistant Professor**  
MSN, Webster University

**Patricia Freed, Assistant Professor**  
EdD, Southern Illinois University-Edwardsville

**Kay Gaehele, Clinical Assistant Professor**  
MSN, St. Louis University

**June Hertell, Clinical Assistant Professor**  
MSN, St. Louis University

**Joyce Hunter, Clinical Assistant Professor**  
MSN, St. Louis University

**Ruth L. Jenkins, Associate Professor\***  
Ph.D., St. Louis University

**Mary Ann Baroni-Kaestner, Clinical Assistant Professor**  
MSN, St. Louis University

**Kathy Klepzig, Clinical Instructor**  
MSN, Southern Illinois University-Edwardsville

**Gail Lewis, Clinical Associate Professor**  
MSN, University of Nebraska

**Sandy Lindquist, Clinical Associate Professor**  
MSN, St. Louis University

**Nancy Magnuson, Student Health Administrator and Clinical Professor**  
DSN, University of Alabama at Birmingham

**Judith Maserang, Assistant Professor\***  
Ph.D., St. Louis University

**Maryellen McSweeney, Professor\***  
Ph.D., University of California-Berkeley

**Shirley Moore, Associate Professor\***  
Ph.D., St. Louis University

**Teri Murray, Clinical Assistant Professor**  
MSN, St. Louis University

**Jean Nelson, Clinical Assistant Professor**  
MSN, Southern Illinois University-Edwardsville

**Susan Panzarine, Associate Professor\***  
Ph.D., University of Utah

**Robyn Rice, Clinical Associate Professor**  
MSN, Southern Illinois University-Edwardsville

**Shirley Saunders, Clinical Assistant Professor**  
MSN, St. Louis University

**Linda Sherman, Clinical Associate Professor**  
MSN, Southern Illinois University-Edwardsville

**Linda Steele, Clinical Professor\***  
Ph.D., ANP, University of Texas at Austin

**JoAnn Steel, Clinical Instructor**  
MSN, St. Louis University

**Mary Jo Stralka, Clinical Associate Professor**  
Ph.D., PNP St. Louis University

**Lanette Tanaka, Clinical Assistant Professor**  
MSN, St. Louis University

**Margaret Ullione, Assistant Professor\***  
Ph.D., University of Maryland

**Georgia Urban, Clinical Assistant Professor**  
MSN, St. Louis University

**Carlotta Wider, Clinical Instructor**  
MSN, University of Missouri-Kansas City

**Valerie Yancey, Clinical Associate Professor**  
MSN, St. Louis University

**Marilyn M. Dickerson, Adjunct Assistant Professor\*\***  
MA, PNP

**Mary L. Krywanio, Adjunct Assistant Professor\*\***  
DNS

**Carol W. Trotter, Adjunct Assistant Professor\*\***  
RNC, MPH, NNP

**Lyn Vargo, Adjunct Assistant Professor\*\***  
RNC, MSN, NNP

**Judith Annette Vinson, Adjunct Assistant Professor\*\***  
RN, BSN, MSN

\* Members of Graduate Faculty

\*\* Affiliated Adjunct Faculty

### General Information

Barnes College of Nursing offers nursing studies at the undergraduate and graduate levels. Knowledge and skills needed to complete the professional licensure examination to become a registered nurse are available through a basic baccalaureate option. Nurses who have obtained their basic nursing education through associate degree or diploma nursing programs may complete the BSN Completion option without repetition of previous nursing education. The Master of Science in Nursing program is offered in cooperation with the School of Nursing at University of Missouri-Kansas City. The PhD in Nursing is offered in cooperation with the Schools of Nursing at University of Missouri-Columbia and Kansas City. Admission to the PhD is available at the post BSN and MSN levels.

### Undergraduate Studies

The Barnes College of Nursing provides course work leading to the Bachelor of Science in Nursing. The program is accredited by National League for Nursing and the Missouri Board of Nursing. The undergraduate

## College of Nursing

program offers two means for achieving the bachelor's degree in nursing:

- studies which are preparatory for completion of the professional nurse licensure examination.
- advanced placement for the professional registered nurse without repetition of fundamental nursing courses (B.S.N. completion).

### Admission Policies

#### Basic Baccalaureate

- 1) Admission to the University (see Undergraduate Admission and Application Procedure section in this Bulletin);
- 2) Cumulative high school grade point average of 2.5 (4.0 scale);
- 3) Rank in upper third of high school class;
- 4) High school course work required in Chemistry and Biology
- 5) "B" average preferred for high school course work in English Composition, Algebra I and II, Geometry, Chemistry, and Biology.

#### B.S.N. Completion

- 1) Admission to the University (see Undergraduate Admission and Application Procedure section in this Bulletin);
- 2) Graduate of either a NLN accredited diploma or associate degree program in nursing;
- 3) Evidence of current licensure as a registered nurse with eligibility for licensure in Missouri;
- 4) Cumulative grade point average of 2.5 (4.0 scale)\* on all previous college-level course work;
- 5) Minimum of 30 hours of college credit applicable to a degree.
- 6) Validation of basic nursing knowledge (total of 30 credits granted).

\* Cumulative GPA of 3.0 required of individuals seeking accelerated access to MSN option.

#### Acceptance into the B.S.N. Program

Following the completion of the University's admission requirement, the Admissions Committee of the College of Nursing will review the application for acceptance into the program.

Students are required to furnish their own transportation to and from campus and clinical agencies. Students must have automobile access for all community experiences throughout the program.

For specific information regarding the B.S.N. degree program, please contact Nursing Student Services and Records office at (314) 516-6066.

#### Credit by Transfer and Examination

Credit may be granted for selected general studies. See Admission and Application Procedure section in this Bulletin for credit information.

Graduates of diploma nursing programs will be awarded 30 college credits for successful validation of basic nursing

knowledge as part of the admission process. A processing fee is assessed for this procedure.

#### Degree Requirements

The Bachelor of Science in Nursing degree requires comprehensive course work in general education and nursing. A minimum of 125 credit hours is required for graduation from the basic baccalaureate program option.

#### Satisfactory/Unsatisfactory

Undergraduate nursing majors may not take required related area general education or nursing courses on a satisfactory/unsatisfactory basis.

#### General Education Requirements

All nursing majors must complete all general education requirements of the University as outlined in this *Bulletin* (see Undergraduate Studies, General Education Requirements). The College's required general education requirements are in keeping with those of the University. See a curriculum planning guide for specific courses and proper sequencing.

Within the general education requirements, the following are related area requirements for the nursing major:

#### Basic Baccalaureate

##### 1) Natural science course work

**Biology 110**, Human Biology or equivalent  
**Biology 113**, Human Physiology and Anatomy I  
**Biology 114**, Human Physiology and Anatomy II  
**Biology 116**, General Microbiology  
**Chem 1**, General Chemistry

##### 2) Behavioral science course work

**Sociology 10**, Introduction to Sociology  
**Psych 3**, General Psychology  
**Psych 268**, Human Growth and Behavior  
**Econ 40**, Introduction to American Economy  
**Anthro/Advanced Sociology**, 3 semester hours of choice

##### 3) Statistics selected from one of the following:

**BA 131**, Elementary Statistics  
**Math 31**, Elementary Statistical Methods  
**Nursing 373**, Quantitative Analysis in the Health Sciences  
**Psych 201**, Psychological Statistics  
**Sociology 220**, Sociological Statistics

#### B.S.N. Completion

##### 1) Natural science course work

**Biology 213**, Vertebrate Physiology  
**Chem 2**, General Organic Chemistry

##### 2) Statistics selected from one of the following:

**BA 131**, Elementary Statistics  
**Math 31**, Elementary Statistical Methods  
**Nursing 373**, Quantitative Analysis in the Health Sciences  
**Psych 201**, Psychological Statistics  
**Sociology 220**, Sociological Statistics

## College of Nursing

### Nursing Requirements

#### Basic Baccalaureate

The following are **required** nursing courses:

- Demonstration of basic computer literacy
- 100, Nursing as Human Caring
- \*101, Application of the Human Caring Process
- \*102, Human Caring Process for the Developing Family
- 105, Professional Relationships: Communicating with Care
- 110, Nutrition and Health Promotion
- 115, Pathophysiology
- 120, Introduction to Pharmacology
- \*230, Human Caring in Illness: Threats to Survival Needs
- \*232, Human Caring in Illness: Threats to Functional, Integrative and Growth-Seeking Needs
- \*235, Assessment of Clients in Health and Illness
- 240, Ethics of Human Caring
- 326, Nursing Research
- \*345, Management of Clients with Complex Needs
- \*355, Leadership in Health Care Delivery Systems
- 360, Nursing Seminar

#### BSN Completion

The following are required nursing courses:

- \*200, Dimensions of Professional Nursing Practice
- \*217, Information Systems Utilized in Health Care
- \*220, Health Assessment
- \*236, Families and Communities
- 316, Management and Leadership in Nursing
- 326, Nursing Research
- \*340, Synthesis in Nursing Practice
- 350, Contemporary Nursing Issues

\*Includes a laboratory and/or clinical component.

### Graduate Studies

#### Cooperative Graduate Programs in Nursing

##### Master of Science in Nursing

The College of Nursing at St. Louis, in cooperation with the School of Nursing at University of Missouri-Kansas City, offers graduate nursing studies in three areas of clinical specialization:

- Health Care of the Adult
- Health Care of Children
- Health Care of Women

This graduate program offers students two ways of completing the Master of Science in Nursing Degree: one means is through completion of a minimum of 36 credit hours with functional role emphasis in administration, education, or clinical specialization; the second concentrates on the functional role of practitioner with completion of a minimum of 43 credit hours. Those selecting the practitioner functional role option will be eligible to complete national certification examinations.

#### Admission Requirements

Applicants must meet the following:

- 1) B.S.N. from NLN-accredited nursing program or B.S.N.

program comparable to UM-St. Louis College of Nursing's B.S.N. program.

- 2) Minimum cumulative grade point average of 3.0 (4.0 scale).
- 3) Current professional nurse licensure with eligibility for licensure in Missouri.
- 4) Basic cardiac life support certification.
- 5) Successful completion of an undergraduate descriptive and inferential statistics course.
- 6) Successful completion of an undergraduate health assessment course.
- 7) Nurse practitioner functional option is available on a limited basis and requires a two-step admission process: initial admission to the M.S.N. followed by application to the practitioner functional role.

### Degree Requirements

#### Core Courses (completed by all students)

- \*404, Health Assessment for Advanced Nursing Practice
- 445, Foundations of Advanced Nursing Practice
- 448, Pathophysiology for Advanced Nursing Practice
- 450, Theoretical Foundations in Nursing
- 455, Quantitative Methods in Nursing Research
- \*472, Advanced Practice Nursing: Synthesis Practicum

**Emphasis Courses\*** (Students must complete one course from each focal area.)

#### Health Promotion Focus

- 460A, Health Promotion and Protection in Adult Health Nursing
- 460C, Health Promotion in the Nursing Care of Children
- 460W, Women's Health Care I

#### Acute and Chronic Nursing Care Focus

- 461A, Acute and Chronic Adult Health Nursing
- 461C, Acute and Chronic Child Health Nursing
- 461W, Women's Health Care II

#### Functional Role Courses

**Role Foundation** (Students must complete one course.)

- 471NA, Role of the Nurse Administrator
- 471NE, Role of the Nurse Educator
- 471NS/NP, Role of the Clinical Specialist/Nurse Practitioner

#### Role Enactment (Practitioner functional role only)

- \*464, Ambulatory Care Management
- 407, Pharmacology for Advanced Nursing

#### Elective (Completed by all students)

Students complete three hours which support the chosen functional role. Course work may be taken within the College of Nursing or from an approved list available from the Student Services Office in the College of Nursing.

#### Culminating Research Activity

(All students complete seminar course. Students choose either project or thesis.)

- 477, Thesis/Directed Research Seminar
- 478, Directed Research
- 479, Research Thesis

\*Includes a clinical component

## College of Nursing

**Ph.D. in Nursing** The College of Nursing at St. Louis, in cooperation with the Schools of Nursing at Columbia and Kansas City, offers doctoral studies in three substantive areas:

**Health Promotion and Protection**—Addresses modes of delivery in nursing that are supportive-educative, encompassing concepts which promote and maintain health as well as concepts which focus on reducing risk for injury or illness.

**Health Restoration and Support**—Addresses human responses to acute, critical, and chronic health conditions.

**Health Care Systems**—Focuses on nursing and health care systems with both health promotion and protection, and health restoration and support considered.

The Ph.D. is designed to promote scholarly inquiry within the discipline of nursing. Each program of study is individualized to best reflect the research interests of the student. Course work in research and inquiry, nursing theory and analysis, and nursing applied science are focal in the program.

### Admission Requirements

Applicants must meet the following:

- 1) Graduate of NLN Baccalaureate program or equivalent with 3.2 minimum GPA (4.0 scale).
- 2) Graduate of NLN Master's program or equivalent with 3.5 minimum GPA (4.0 scale).
- 3) Graduate Record Examination (composite score of 1500 or better desired).
- 4) Three letters of reference.
- 5) Original essay (3–7 pages) addressing doctoral study and research interests related to Health Promotion and Protection, Health Restoration and Support, and/or Health Care Systems.
- 6) Interview by invitation contingent on ranking related to above criteria.

### Degree Requirements

While each program of study is individualized, B.S.N graduates complete a minimum of 60 hours of graduate level course work. MSN graduate course work which supports the chosen substantive area is individually evaluated to determine eligibility for transfer. The following defines the overall structure of the program:

### Modes of Inquiry

**Research and Inquiry**, 8–16 hours external to the College of Nursing, such as advanced statistics, research design, computer applications, philosophical foundations of science.

**Nursing Research and Inquiry**, 8–16 hours within the College of Nursing, such as advanced quantitative nursing research design, advanced qualitative nursing research design, health survey methods, issues in research design, doctoral seminar.

Dissertation, 12 hours.

### Nursing Content Areas

**Nursing Theory Analysis and Development**, 8–16 hours within the College of Nursing which advance the chosen substantive area, such as conceptual structures, nursing practice models, theory development, theoretical foundations, doctoral seminar.

**Nursing Applied Sciences**, 8–16 hours within selected substantive area.

**Collateral Support Courses**, 12 hours external to the College of Nursing which support selected substantive area.

## Professional Organizations

### American Nurses Association

Students, as registered nurses, are eligible for membership in the American Nurses Association. Membership and participation in this professional organization is strongly urged for all nurses practicing today. Nurses, as the largest group of health professionals, have a responsibility to assume leadership positions in the determination of health care policy, and this activity can best be accomplished by participating in the professional organization.

### Sigma Theta Tau

The College is an official chapter—Nu Chi—of Sigma Theta Tau International Honor Society. Membership is offered by invitation to those students graduating the upper third of their class and to those recognized as outstanding community nursing leaders.

### Student Nurses' Association

The College of Nursing is a constituent of the national Student Nurses' Association. The purpose of this organization is to provide a means for nursing students in the basic baccalaureate program the opportunity to connect with the nursing profession prior to licensure.

### Continuing Education-Extension

Continuing education offerings in the field of nursing are currently presented to provide nurses with new information, techniques, and trends within the nursing profession.

Credit courses which will apply to the B.S.N. program are offered at various off-campus sites.

# College of Nursing

## Course Descriptions

All previous level nursing courses must be successfully satisfied prior to progressing to the next level nursing courses.

### 100 Nursing as Human Caring (2)

Offers an introduction to the history and theoretical development of nursing. Examines the profession as an art and a science. Presents theory of human caring as it applies to nursing practice.

### 101 Application of the Human Caring Process (7)

Prerequisites: Biology 113; Biology 114; Psych 3; Nursing 100. Introduces a caring framework for nursing practice with acquisition of basic psychomotor and critical thinking skills. Application of caring factors with emphasis on health promotion and illness prevention. Includes a clinical component.

### 102 Human Caring Process for the Developing Family (7)

Prerequisites: Sociology 10; Psych 268; Nursing 101; Nursing 105. Provides a holistic perspective on family health care. Emphasis on health promotion and maintenance across family life cycles. Includes a clinical component.

### 105 Professional Relationships: Communicating with Care (3)

Prerequisite: English 10. Assists in the development of communication abilities utilized in professional nursing. Introduces interpersonal skills which enable the student to develop effective human caring relationships with clients and colleagues.

### 110 Nutrition and Health Promotion (3)

Prerequisites: Biology 113 and 114. Examines nutritional needs throughout the life span with emphasis on nutritional principles related to health promotion and illness prevention. Includes discussion of dietary requirements associated with illness states.

### 111 Issues in Geriatric Health Care (2)

(Same as Biology 111 and Gerontology 111.) A course designed to acquaint the student with aspects of chronic disease frequent in later life, as well as a synopsis of biological aging processes. Disease symptomology aspects of health maintenance and medical intervention with an older adult population will be discussed. In addition, issues in health care delivery will also be explored.

### 115 Pathophysiology (3)

Prerequisites: Biology 113; 114; 116; and Chem 1. Studies the nature of disease, its causes and the bodily changes which accompany it. Includes study of general principles of disease, specific diseases of individual organs and systems, and the clinical implications.

### 120 Introduction to Pharmacology (3)

Prerequisites: Biology 113; 114; 116; and Chemistry 1. Surveys general classifications of drugs. Emphasizes general principles of drug action and toxicity, as well as clinical considerations and application.

### 200 Dimensions of Professional Nursing Practice (6)

Prerequisites: Admission to the College of Nursing as RN. This transition practicum course for the registered nurse who successfully completed an associate degree or diploma nursing program investigates the roles and responsibilities of the professional nurse within a rapidly changing health care system. Key issues are explored with emphasis on health promotion and primary prevention.

### 217 Information Systems Utilized in Health Care (4)

Prerequisite: Admission to College of Nursing as an RN or consent of instructor. This laboratory course establishes competency in health information systems. The course incorporates the impact of information systems on health care delivery.

### 220 Health Assessment (4)

Prerequisites: Nursing 200 and Nursing 217. This laboratory course focuses on the knowledge, communication abilities, and technical skills necessary for comprehensive assessment of individuals of all ages.

### 224 Sociology of the Family (3)

(Same as Sociology 224.) Prerequisite: Sociology 10. Universal and variable aspects of family organization, family role systems, and changes in family social structure.

### 230 Human Caring in Illness: Threats to Survival Needs (8)

Prerequisites: All sophomore level nursing courses. Explores the application of caring factors to children and adults experiencing pathophysiologic processes affecting body regulatory mechanisms. Includes a clinical component.

### 232 Human Caring in Illness: Threats to Functional, Integrative and Growth-Seeking Needs (8)

Prerequisites: All sophomore level nursing courses. Explores the application of caring factors to children and adults experiencing pathophysiologic and psychopathologic processes related to growth and development, functional abilities, and integrative components. Includes a clinical component.

### 235 Assessment of Clients in Health and Illness (3)

Prerequisites: All sophomore level nursing courses. Builds on theoretical knowledge, communication abilities, and the technical skills of basic assessment. Integrates the practice of human caring in the assessment of clients experiencing altered health states. Includes a clinical component.

### 236 Family and Community Nursing (6)

Prerequisites: Nursing 200, 217 and 220. This practicum course introduces the concepts, principles, skills, and professional nursing roles essential to practice community-based professional nursing with families and groups.

### 240 Ethics of Human Caring (3)

Prerequisites: Nursing 102; Philosophy course; or consent of instructor. Focuses on examination of ethical dimensions of professional nursing practice with exploration of applied nursing ethics, moral development, ethical theories and principles, and moral reasoning.

### 299 Special Study in Nursing (1-3)

Prerequisite: Consent of instructor. In-depth study of selected

## College of Nursing

topics in nursing under the guidance of a specific instructor. No more than six hours may be taken under this option.

### **316 Leadership and Management in Nursing (3)**

**Prerequisite:** Completion of all junior-level nursing courses. Focuses on organizational processes and management theories and provides an examination of motivational theories, group processes, critical thinking, leadership and communication skills, as well as authority and accountability.

### **320 Perioperative Nursing (2)**

**Prerequisite:** Consent of instructor. Provides experiences in preoperative, intraoperative, and postoperative settings. Includes a clinical component.

### **322 Transcultural Nursing (3)**

**Prerequisite:** Consent of instructor. Examines transcultural nursing concepts, theories and practices in relationship to human caring. Focuses on application and analysis of health care and scope of practice (within selected cultural contexts). Includes practicum experiences.

### **326 Nursing Research (3)**

**Prerequisites:** Senior status; Psych 201 or equivalent course in statistics. Introduces the values and characteristics of quantitative and qualitative research within an ethical perspective. Examines research process through analysis and critique of published nursing research.

### **332 Dimensions of Health Care: Implications for Professional Nursing Practice (3)**

**Prerequisite:** Completion of junior-level nursing courses or consent of instructor. Legislative, legal, economic, and bioethical concepts are explored as they impact professional nursing practice and health care delivery in a changing society.

### **338 Sociology of Health (3)**

(Same as Sociology 338.) **Prerequisites:** Sociology 10 and junior standing. Exploration of social dimensions and issues related to health and illness such as access to the health care delivery system; factors influencing prevention, utilization, and compliance; changing relationships among health care providers and consumers; health care costs, trends, and cross-cultural variations.

### **340 Synthesis in Nursing Practice (6)**

**Prerequisites:** Completion of all junior level classes; **Corequisite:** Nursing 326 or equivalent, Nursing 350. This practicum course focuses on community-based application and synthesis of professional nursing roles and responsibilities with selected populations determined to be at risk for a variety of health related problems. The course includes assessment of cognitive and affective growth achieve while in the BSN Completion Program.

### **341 Advanced Nursing Assessment and Management of Clients with Cardiac Dysrhythmias (3)**

**Prerequisite:** Senior status. Focuses on advanced nursing assessment and management of clients with cardiac rhythm problems and conduction disturbances. Includes a clinical component.

### **345 Management of Clients with Complex Needs (8)**

**Prerequisites:** All junior level nursing courses. Synthesizes human caring and human science in developing megastrategies that address the complex needs of persons. Includes a clinical component.

### **350 Contemporary Nursing Issues (2)**

**Prerequisites:** Nursing 316, 326, 332, and 340 (may be taken concurrently). Analyzes the development of the professional nursing role in the health care delivery system in contemporary and future society. (This course must be taken in the student's final semester.)

### **352 Primary Care Nursing (3)**

**Prerequisites:** Completion of all junior level courses; **Corequisite:** Nursing 340. This course introduces the role of the advanced practice nurse as a principal provider of primary health care to families across the life span. Major issues relate to health care provided in a variety of community settings are addressed.

### **355 Leadership in Health Care Delivery Systems (8)**

**Prerequisites:** All junior level nursing courses. Explores a conceptual foundation for community health nursing that recognizes community as client. Studies human caring related to leadership and management roles of the nurse in health care institutions and the community. Includes a clinical component.

### **360 Nursing Seminar (3)**

**Prerequisite:** Senior status. Explores current issues related to health care delivery and nursing practice through review of professional literature, group presentations, and discussions.

### **365 Women's Issues in Health Care (3)**

This course is open to nursing majors and other persons interested in women's issues in health care. This seminar offers students the opportunity to explore women's issues in health care from the perspectives of both providers of health care and consumers of health care. Wellness, rather than pathology, is the emphasis of discussion of specific health care issues related to women. Student interest will determine specific issues to be examined.

### **370 Topics in Nursing (1-3)**

**Prerequisite:** Consent of instructor. Explores special topics in the areas of clinical practice, nursing education, nursing administration, and professional development. No more than six hours may be taken under this option.

### **373 Quantitative Analysis in the Health Sciences (3)**

**Prerequisite:** Math 30 or equivalent or permission of instructor. Uses examples and content from health sciences to provide the basic conceptual structure for quantitative analysis.

### **376 Child Assessment: Denver II (2)**

This course identifies principles of growth and development and trains persons to be screeners using the Denver II. The Denver II is a general developmental screening test that primarily evaluates personal-social ability, fine motor-adaptive skills, language, and gross motor skills. To a



## College of Nursing

lesser extent, Denver II is used as a very rough gauge of speech intelligibility, hearing, and vision. This screening instrument is currently used on all Medicaid children and in the Parents as Teachers program.

### **385 Family Health Behavior (3)**

**Prerequisite:** Nursing 445; or consent of instructor. This course considers various theoretical perspectives and research approaches for studying and providing nursing care to families over the life cycle (from childbearing families through aged families). Attention is given to theoretical and methodological issues related to family nursing and research from a family perspective.

### **399 Interdisciplinary Identification of Developmental Delays in Children Birth to Three Years (3)**

**Prerequisite:** Permission of instructor or adviser. This course provides an overview of the Missouri state initiative of Public law 99-457 and focuses on identification of children birth to 36 months who are at risk for developmental delays. Case finding and case management, the importance of parental-professional partnerships and available resources are addressed. Screening methods used to identify developmental delays by nursing, physical and occupational therapy, psychology, audiology, education and speech, and language therapy are presented.

### **401 Health and Wellness in the Elderly (2)**

(Same as Gerontology 401.) **Prerequisite:** Graduate standing. Factors contributing to longevity and health in old age, including genetic predisposition, lifestyle, culture, and environment, are related to aspects of maintaining health and promoting wellness. Through a holistic approach, explores aspects of nutrition, exercise and activity, prevention of hazards to health, maintaining self-responsibility, managing stress, and meeting continued developmental, emotional, and spiritual needs. Considers cross-disciplinary interventions to promote health and wellness in the elderly.

### **404 Health Assessment for Advanced Nursing Practice (2)**

**Prerequisite:** Undergraduate Health Assessment or consent of instructor. This course is designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals. The course builds on basic health assessment skills and emphasizes advanced assessment skills, lab work interpretation, validation, documentation and analysis of assessment findings.

### **407 Pharmacology for Advanced Nursing Practice (3)**

**Prerequisite:** Nursing 445 (may be taken concurrently) or consent of instructor. This course centers on clinical pharmacotherapeutics used for primary health care management. Emphasis is placed on the clinical use of drugs in the management of specific illnesses.

### **415 Conceptual Structure of Nursing (3)**

**Prerequisites:** Admission to PhD in Nursing Program or consent of instructor. This course focuses on the discipline of nursing including the substantive content as expressed in theoretical systems and the development of this substantive content through scholarly inquiry. The evolution and state of the art of conceptual and theoretical

development in nursing are examined. One nursing theory is studied in depth to illustrate the process of theory development. Concept mapping showing relationships between and among terms is accomplished.

### **416 Nursing Practice Theories and Models**

**Prerequisites:** Admission to PhD in Nursing program or consent of instructor and N 415 or N481. This course focuses on the development of nursing practice theory, and nursing practice models, from the perspective of various populations and other theories. Nursing protocols, procedures, rules of practice, and systems for delivering care for selected populations or sub-populations are developed.

### **421 Child Growth and Development (3)**

**Prerequisite:** Basic course in child growth and development or consent of instructor. Seminar discussions in child growth and development and child rearing practices as influenced by cultural, family, and organic conditions. Theories of growth and development, normal development, variation from normal and the use of current developmental screening methods are included.

### **445 Foundations of Advanced Nursing Practice (3)**

**Prerequisite:** Admission to master's nursing program. This course provides a foundation for advanced nursing practice. Major issues related to clinical and functional role development are addressed. (This course must be taken in the first semester of the master's nursing sequence.)

### **448 Pathophysiology for Advanced Nursing Practice (3)**

**Prerequisite or corequisite:** Nursing 445. This course focuses on implications for advanced nursing practice through examination of selected pathophysiological phenomena which occur frequently in the diverse populations to whom advanced nurses provide care.

### **450 Theoretical Foundations in Nursing (3)**

**Prerequisite:** Nursing 445 (may be taken concurrently). This course analyzes major concepts and theories relevant to nursing. Ethical issues and dilemmas inherent in advanced nursing practice are also addressed.

### **455 Quantitative Methods in Nursing Research (3)**

**Prerequisites:** Nursing 373 or equivalent; Nursing 450 (may be taken concurrently). This course provides the principles and techniques common to scientific investigation as applied to nursing. A plan of study for a nursing problem is developed.

### **457 Qualitative Methods in Nursing Research (3)**

**Prerequisites:** Nursing 450; 455 or equivalent. This course introduces the skills necessary to understand and conduct qualitative research in nursing. Emphasis is placed on utilization of qualitative research methods in the study of selected nursing problems.

### **458 Research Utilization in Nursing (3)**

**Prerequisites:** Nursing 445 and 455. This course prepares nurses to implement a research utilization model to validate practice. The theoretical basis for research utilization and practical instances of its application in

## College of Nursing

nursing is examined. Opportunities are provided to develop a research utilization plan to address a clinical area of practice.

### **460A Health Promotion and Protection in Adult Health Nursing (3)**

Prerequisites: Nursing 445, 404, 448 (may be taken concurrently). This clinical course focuses on advanced primary care nursing of individuals with emphasis placed on health promotion. Consideration is given to the impact of health promotion and protection on individuals, families and selected aggregates.

### **460C Health Promotion in the Nursing Care of Children (3)**

Prerequisites: Nursing 445, 404, 448 (may be taken concurrently). This clinical course focuses on comprehensive primary care for children and families addressing various developmental stages, multiple socio-economic groups, and multiple cultural backgrounds.

### **460F Family Health Promotion (3)**

Prerequisites: Nursing 445, 404 (may be taken concurrently). This clinical course examines principles and concepts critical to the family nurse practitioner role within a primary care environment. Attention is given to the decision-making process and clinical management from a health promotion focus of the family system across the life span.

### **460W Women's Health Care I (3)**

Prerequisites: Nursing 445, 404, 448 (may be taken concurrently). This clinical course addresses advanced nursing practice with women across the life span. Emphasis is placed on the years from puberty through climacteric.

### **461A Acute and Chronic Adult Health Nursing (3-4)**

Prerequisites: Nursing 404, 445, and 448. Corequisite: Nursing 450. This clinical course provides opportunities to apply advanced knowledge and skills to advanced nursing care of patients and families experiencing acute and/or chronic health problems.

### **461C Acute and Chronic Child Health Nursing (3-4)**

Prerequisites: Nursing 404, 445, and 448. Corequisite: Nursing 450. This clinical course provides opportunities to apply advanced knowledge and skills to advanced nursing care of children and families experiencing acute and/or chronic health problems.

### **461F Acute and Chronic Problems in the Family I: Parent-Child (4)**

Prerequisites: Nursing 404, 445, and 448. Corequisite: Nursing 450. This course is designed to examine concepts and skills essential to family nurse practitioners. Advanced nursing care of families experiencing acute and chronic health problems with particular emphasis on women's and children's health will be addressed.

### **461W Women's Health Care II (3-4)**

Prerequisites: Nursing 404, 445, and 448. Corequisite: Nursing 450. This clinical course provides opportunities to apply advanced knowledge and skills to advanced nursing care of women, neonates and families in the childbearing cycle.

### **464 Ambulatory Care/Case Management (3-4)**

Prerequisites: Nursing 404, 407, 460, and 461. This course focuses on the therapeutic management of common health problems encountered by nurse practitioners in selected health care settings. Enrollment limited to those in the practitioner functional role.

### **464F Acute and Chronic Problems in the Family II: Adult (4)**

Prerequisites: Nursing 404, 445, and 448. Corequisite: Nursing 450. This clinical course is designed to examine concepts and skills essential to family nurse practitioners. Advanced nursing care of families experiencing acute and chronic health problems with particular emphasis on adult health will be addressed.

### **471NA Role of the Nurse Administrator (3)**

Prerequisite: Nursing 445. This course builds on the fundamentals of advanced nursing practice by focusing on the sub-role of the nurse administrator. Content focuses on essential knowledge for today's senior and executive level nurse managers in health care.

### **471NE Role of the Nurse Educator (3)**

Prerequisite: Nursing 445. This course facilitates development of the nurse educator role in a variety of settings. Knowledge and skills essential for the enactment of the nurse educator role are provided.

### **471NS/NP Role of the Clinical Nurse Specialist/Nurse Practitioner (3)**

Prerequisite: Nursing 445. This course focuses on issues impacting the merging roles of clinical nurse specialist and nurse practitioner. It facilitates role development and emphasis on primary care providers and/or specialists within specific clinical areas of advanced nursing practice.

### **472NA Advanced Nursing Practice: Synthesis Practicum (3)**

Prerequisites: All required courses except Nursing 478/479. This clinical course is a concentrated, experiential opportunity to function in the advanced practice nursing role of nurse administrator, educator, clinical specialist, or practitioner within a chosen setting.

### **475 Special Study in Graduate Nursing (1-3)**

Prerequisites: Nursing 445 and permission of the instructor. In-depth study of selected topics in nursing under the guidance of a specific instructor. No more than three hours may be applied to the master's program of study.

### **477 Thesis/Directed Research Seminar (1)**

Prerequisites: Nursing 455 and permission of thesis/directed research chair. Presentation and discussion of selected research problems in nursing.

### **478 Directed Research (1-6)**

Prerequisites: Nursing 455 and permission of faculty research adviser. Individual participation in the investigation of a research problem of relevance to nursing under the direction of a faculty research adviser.

### **479 Research Thesis (1-6)**

Prerequisites: Nursing 455 and permission of faculty. Individual investigation of a research problem of relevance

## College of Nursing

to nursing. Student works under the direction of a faculty committee to prepare and orally defend a thesis.

### **480 Doctoral Seminar (1-10)**

**Prerequisites:** Admission to PhD in Nursing Program and consent of instructor. This course provides for discussion, analysis, and critique of selected contemporary issues and research in nursing. Topics will be chosen from among issues in health promotion and protection, health restoration and support, and health care systems. May be repeated for maximum of 10 hours on unduplicated topics.

### **481 Nursing Theory Analysis and Development (3)**

**Prerequisites:** Admission to PhD in Nursing Program and N450 or equivalent. This course examines foundations of nursing using both traditional and hermeneutic methods of theory analysis and evaluation. Relevant historical and contemporary writings are analyzed.

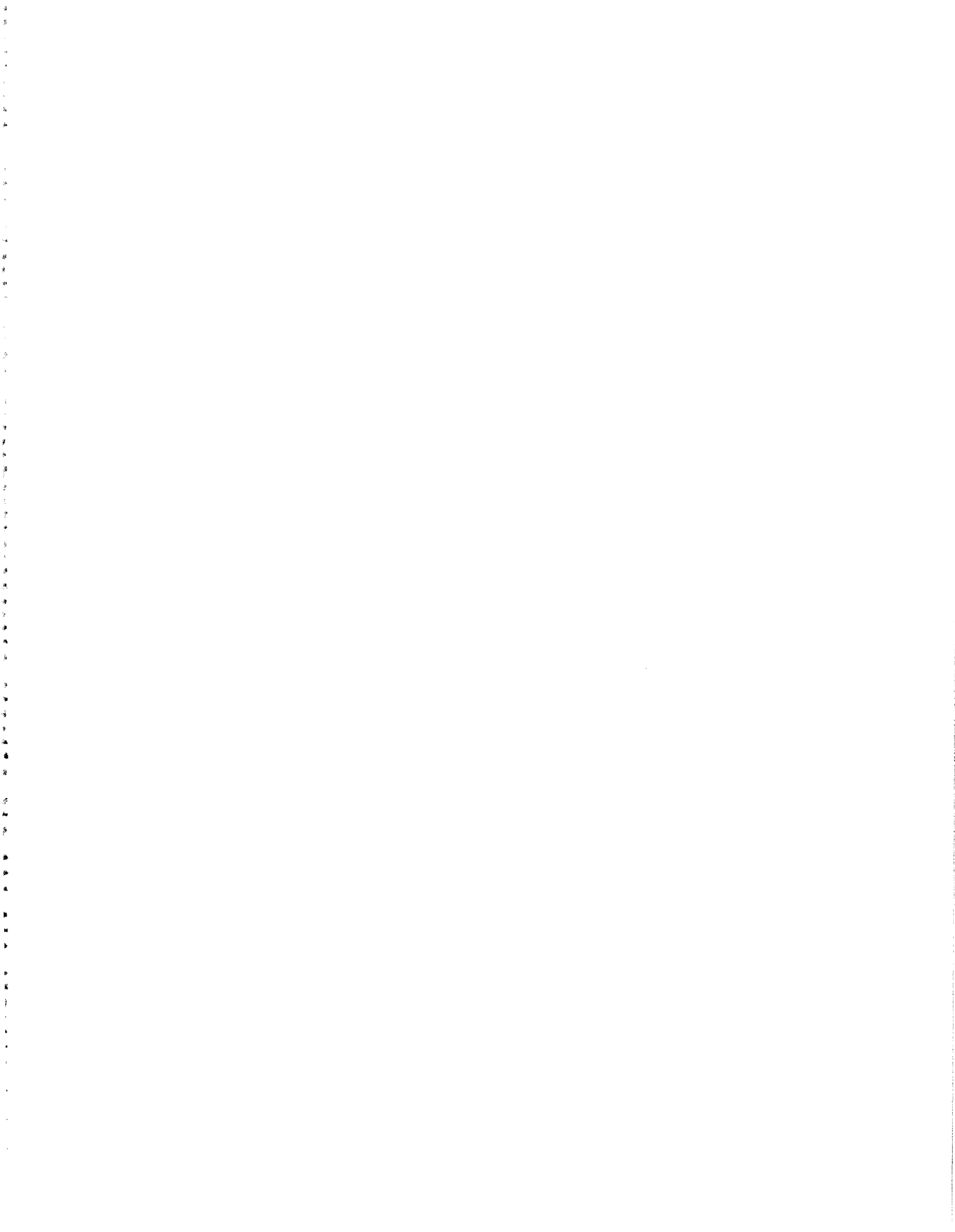
### **485 Issues and Methods in Quantitative Analysis in Nursing (3)**

**Prerequisites:** N455 or equivalent; graduate level quantitative research methods course and graduate course work in univariate and multivariate applied statistics. This course provides the opportunity to consolidate prior knowledge of quantitative analysis methods; to apply those methods to the analysis of nursing phenomena; and to explore at an advanced level issues relevant to their use in nursing. Techniques of particular use in the analysis of health data will be considered.



SCHOOL OF  
OPTOMETRY

UM-St. Louis 1996-97 Bulletin



## School of Optometry

### Faculty

**David S. Loshin**, Dean  
O.D., Ph.D. - Ohio State University

**David W. Davidson**, Associate Dean for Academic and Student Affairs  
O.D., M.S. - University of California-Berkeley

**Gerald A. Franzel**, Associate Dean for Clinical Education, Continuing Education and Community Relations  
O.D. - University of Houston

**Ralph P. Garzia**, Director, Optometric Services  
O.D. - Pennsylvania College of Optometry

**W. Howard McAllister**, Director, Residency Programs  
M.A., M.P.H., O.D. - Ohio State University

**Carol K. Peck**, Director, Graduate Programs  
Ph.D. - University of California - Los Angeles

**Faye DeClue Allen**, Clinical Assistant Professor; Coordinator, Optometric Center  
O.D., University of Missouri-St. Louis

**William G. Bachman**, Associate Professor\*  
M.S., University of Alabama-Birmingham; O.D., Southern College of Optometry

**Carl J. Bassi**, Associate Professor\*  
Ph.D., Vanderbilt University; Postdoctoral Fellow, University of Southern California, Doheny Eye Institute

**Edward S. Bennett**, Associate Professor\*;  
Chief, Contact Lens Service  
M.S.Ed., O.D., Indiana University-Bloomington

**Lisa Harmel Chabot**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Jerry L. Christensen**, Professor\*  
O.D., Ph.D., The Ohio State University

**David W. Davidson**, Associate Professor\*;  
Associate Dean for Academic and Student Affairs  
M.S., University of Alabama-Birmingham;  
O.D., University of California-Berkeley

**Larry J. Davis**, Assistant Professor\*  
O.D., Indiana University

**James A. DeClue**, Clinical Assistant Professor  
O.D., Illinois College of Optometry

**Lisa Dibler**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Gail B. Doell**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Aaron S. Franzel**, Assistant Professor\*  
O.D., University of Missouri-St. Louis

**Gerald A. Franzel**, Clinical Associate Professor; Associate Dean for Clinical Education, Continuing Education and Community Relations  
O.D., University of Houston

**Carrie S. Gaines**, Clinical Assistant Instructor;  
Coordinator of Low Vision Services  
O.D., University of Missouri-St. Louis

**Ralph P. Garzia**, Associate Professor\*;  
Director, Optometric Services; Chief, Pediatric/Binocular Vision Services  
O.D., Residency, Pediatric Optometry, Pennsylvania College of Optometry

**Steven J. Grondalski**, Clinical Assistant Professor  
O.D., Pennsylvania College of Optometry; Residency, Hospital-Based Optometry, VA Medical Center, Wilkes Barre, PA

**Alexander J. Harris**, Clinical Assistant Professor; Chief, Externship Program  
M.A., Washington University; O.D., University of Missouri-St. Louis

**Beth A. Henderson**, Clinical Assistant Professor  
O.D., The Ohio State University

**Vinita A. Henry**, Clinical Associate Professor  
O.D., Residency, Contact Lenses, University of Missouri-St. Louis

**Vasudevan Lakshminarayanan**, Assistant Professor\*  
M.Sc., University of Madras, India; Ph.D., University of California-Berkeley

**Stephen W. Lehmkuhle**, Professor\*  
Ph.D., Vanderbilt University; Postdoctoral Fellow, University of Virginia

**William F. Long**, Associate Professor\*;  
Coordinator of Photographic Services  
Ph.D., Michigan State University; O.D., Indiana University

**David S. Loshin**, Professor; Dean  
M.S., O.D., Ph.D., The Ohio State University

**Todd Lucas**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**W. Howard McAllister**, Associate Professor\*;  
Director, Residency Programs  
M.A., Webster College; M.P.H., University of Illinois-Chicago; O.D., Ohio State University

**Jonathan P. McIntyre**, Adjunct Assistant Professor  
Ph.D., University of Cincinnati

**Carol F. Merritt**, Assistant Professor\*;  
Coordinator, East St. Louis Eye Center  
O.D., University of Missouri-St. Louis

**Robert L. Mobley**, Clinical Assistant Professor  
O.D., Illinois College of Optometry

**Bruce Morgan**, Clinical Assistant Professor  
O.D., Northeastern State University

**Sean P. Mulqueeny**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Raymond I. Myers**, Clinical Associate Professor  
O.D., Indiana University

**Leonard L. Naeger**, Adjunct Associate Professor of Pharmacology  
Ph.D., University of Florida; Residency, Hospital-Based Pharmacy, VA Medical Center, St. Louis

**Carol K. Peck**, Professor\*;  
Director, Graduate Programs  
Ph.D., Postdoctoral Fellow, University of California-Los Angeles

**Jane E. Shea**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Robert R. Smith**, Lecturer  
M.S., University of Georgia

**Nina Tumosa**, Assistant Professor\*  
Ph.D., State University of New York-Albany; Postdoctoral Fellow, University of Calgary; Postdoctoral Fellow, University of Wisconsin

**Jeffrey L. Weaver**, Assistant Professor\*;  
Coordinator of Emergency Eye Services  
M.S., Ohio State University; M.B.A., Drury College; O.D., Pennsylvania College of Optometry

**Timothy A. Wingert**, Associate Professor\*;  
Chief, Primary Care Service  
O.D., Illinois College of Optometry

### Off Campus Adjuncts

**Paul Ajamian**, Clinical Assistant Professor  
O.D., New England College of Optometry

**P. Douglas Becherer**, Clinical Assistant Professor  
O.D., Southern College of Optometry

## School of Optometry

**Paul R. Boyt**, Clinical Assistant Professor  
O.D., Illinois College of Optometry

**Ron Brackenbury**, Clinical Assistant Professor  
O.D., Indiana University; Residency, Hospital-Based  
Optometry, Danville, Illinois VA

**Carmen Castellano**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**John M. Garber**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**N. Rex Ghormley**, Clinical Assistant Professor  
O.D., Southern California College of Optometry

**James M. Gordon**, Clinical Assistant Professor of  
Ophthalmology  
M.D., University of Minnesota; Residency, Ophthalmology,  
Washington University, Barnes Affiliated Hospitals

**Timothy Harkins**, Clinical Assistant Professor  
O.D., Southern California College of Optometry

**Lynn Hellerstein**, Clinical Assistant Professor  
O.D., Pacific University

**Debbie L. Hettler**, Clinical Assistant Professor  
O.D., The Ohio State University; M.P.H., University  
of Illinois

**Deborah Kerber**, Clinical Assistant Professor  
O.D., University of Missouri-St. Louis

**Robert A. Koetting**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**Julia Lampo**, Clinical Assistant Professor  
O.D., University of California at Berkeley

**John McGreal**, Assistant Clinical Professor  
O.D., Pennsylvania College of Optometry

**Joseph H. Maino**, Clinical Assistant Professor  
O.D., Illinois College of Optometry; Residency,  
Rehabilitative Optometry, VA Medical Center, Kansas City

**Robert L. Morgan**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**Stewart Neiber**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**Francis E. O'Donnell, Jr.**, Clinical Associate  
Professor of Ophthalmology  
M.D., Johns Hopkins University, Residency, Ophthalmology,  
Wilmer Institute, Johns Hopkins University

**Patricia O'Kelley**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**Robert Prouty**, Clinical Assistant Professor  
O.D., Pacific University

**Lori Schelm**, Clinical Assistant Professor  
O.D., Southern California College of Optometry; Residency,  
Rehabilitative and Hospital-Based Optometry,  
Kansas City VA

**Carol Scott**, Clinical Assistant Professor  
O.D., Southern College of Optometry

**Don Walters**, Clinical Assistant Professor  
O.D., University of Houston

**Jack Yager**, Clinical Assistant Professor  
O.D., The Ohio State University

**Natalie Yampolsky**, Clinical Assistant Professor  
O.D., Illinois College of Optometry

\*members of Graduate Faculty

## General Information

The UM-St. Louis School of Optometry enrolled its first class in 1980, graduating 32 students in May 1984. It is located on the South Campus complex of the University of Missouri-St. Louis at 7800 Natural Bridge Road. A modern five-story building houses the School's classrooms, laboratories, research facilities, administrative offices, health-science library, and the Center for Eye Care and Vision Research campus facility (the University Eye Center). The complex also includes a student lounge and an impressive 350-seat amphitheater.

The University Eye Center located on campus is open to the public, as well as to the faculty, staff, and students of the University. The primary goal of the center is to provide patients with high-quality vision care. This purpose is consistent with the overall goal of training well-qualified eye care practitioners.

In addition to the University Eye Center, the School operates the Optometric Center of St. Louis, a full-scope optometric eye care facility in the Central West End of the city and the East St. Louis Eye Center, jointly owned and operated by the University of Missouri-Saint Louis School of Optometry and Southern Illinois University at Edwardsville.

A number of externships have been established to provide additional sites for the advanced clinical training of fourth-year student interns. These programs have been established to broaden the patient care experiences of the senior clinicians. Through these programs, the students are able to examine more patients than they would see at the UM-St. Louis eye care facilities, and students are usually exposed to different types of patients than seen on campus. Currently, the following are off-campus eye care sites: Carl Albert Indian Health Facility, Ada, Oklahoma; American Eye Institute, Marion, Illinois; Anadarko Indian Health Center Anadarko, Oklahoma; Colorado Optometric Center, Denver, Colorado; Grace Hill Neighborhood Health Center, St. Louis, Missouri; Kessler Air Force Base, Kessler AFB, Mississippi; Missouri Eye Institute St. Louis, Missouri; Lighthouse Low Vision Services, New York, New York; O'Donnell Eye Institute, St. Louis, Missouri; Omaha Eye Institute, Omaha, Nebraska; Omni Eye Services of Georgia, Atlanta, Georgia; Omni Eye Services of Colorado, Denver, Colorado; Naval Medical Clinic, Pearl Harbor, Hawaii; Marine Crop Air Station, Kaneohe Bay, Hawaii; Scott Air Force Base, Scott AFB, Illinois; St. Louis Comprehensive Neighborhood Health Center, St. Louis, Missouri; Veteran's Administration Hospital, Marion, Illinois; Veteran's Administration Hospital Kansas City, Kansas City, Missouri; Veteran's Administration Hospital, Poplar Bluff, Missouri; Washington University Eye Center, St. Louis, Missouri. Students may also arrange their own off-campus externships which may include private practices and/or institutional sites with the approval of the Director of Externships.

Situated in Missouri's largest metropolitan area, the School enjoys the city's strong community and professional support. The urban setting offers many opportunities for outreach programs, expanding the scope of optometric



## School of Optometry

education and making available highly diverse programs of clinical training. Another asset of the School is the location of the national headquarters of the American Optometric Association, approximately twelve miles from the campus.

The curriculum leading to the Doctor of Optometry degree is a four-year, full-time program of study. The first year of the professional curriculum stresses optics and basic health sciences, and introduces students to optics of the visual system. The second year covers vision science and training in eye examination techniques. The third year emphasizes patient care and introduces the student to various specialty areas within optometry, such as contact lenses, pediatric and geriatric vision care, binocular vision and vision training, and low vision rehabilitation. The second and third years also include course work and clinical training in ocular disease and pharmacology. The fourth year provides additional patient care experiences and includes rotations through a variety of outreach programs, giving the student added experience in the treatment of eye diseases, as well as valuable experience in other optometric specialties.

In 1986 the Missouri Optometry Practice Act was revised by the state legislature to include treatment of certain eye diseases utilizing pharmaceutical agents. Thus, optometry students at UM-St. Louis are uniquely situated to receive excellent training in this aspect of optometric practice. Roughly half of the states in the United States now have laws authorizing optometrists to prescribe drugs in the treatment of certain eye diseases. The training and clinical experience optometry students receive at UM-St. Louis in the diagnosis, treatment, and management of ocular disease is excellent and qualifies UM-St. Louis graduates to practice optometry in any state in the nation.

A student who satisfactorily completes all four years of the professional curriculum will be eligible to receive the Doctor of Optometry degree.

The School of Optometry is a member of the Association of Schools and Colleges of Optometry and is accredited by the Council on Optometric Education of the American Optometric Association, the official optometric agency recognized by the National Commission on Accrediting and by the International Association of Boards of Examiners in Optometry.

All optometry students enrolled in the University of Missouri-St. Louis School of Optometry are eligible for membership in the student optometric association, which is affiliated with the American Optometric Association. Through this organization, students become involved in local and national optometric activities. The organization provides an environment for the cultivation of professional leadership skills, and members have organized and participated in a variety of community service activities, including community health screenings and vision care to residents of nursing homes, convalescent hospitals, and mental institutions. Furthermore, optometry students have formed local chapters of SVOSH (Student Volunteer Optometric Services to Humanity), an international organization of optometrists providing free vision care

to people in impoverished nations and the NOSA (National Optometric Student Association), which strives to recruit minority students into optometry and encourages retention of minority students.

In addition to the many activities through the School of Optometry, optometry students are able to take advantage of all the activities provided by the University to the entire University community. These include intramural sports; movies and cultural activities; a modern, fully-equipped gymnasium; and access to many social and cultural opportunities in St. Louis at reduced cost.

### Class Size

Each entering class will be limited to 44 students.

## Admission Requirements

### Semester

English - 2

Biology (including laboratory)\* - 2

Physics (including laboratory) - 2

Chemistry

General (including laboratory) - 2

Organic (including laboratory) - 1

Mathematics\*\*

Calculus - 1

Statistics - 1

Psychology - 2

Social and Behavioral Sciences - 2

or

Quarter

English - 3

Biology (including laboratory)\* - 3

Physics (including laboratory) - 3

Chemistry

General (including laboratory) - 3

Organic (including laboratory) - 2

Mathematics \*\*

Calculus - 1

Statistics - 1

Psychology - 2

Social and Behavioral Sciences - 2

\* One semester (or one quarter) of Microbiology is a requirement. Other biological science courses that are recommended include: genetics; cellular physiology; embryology.

\*\* Trigonometry as a prerequisite course for Calculus must be completed either in high school or college.

All courses used to satisfy the admission requirements must have been taken at a fully accredited institution or must be acceptable by an accredited institution toward degree credit. Specific prerequisite courses must be taken for a letter grade; they cannot be taken as an Audit or on a Pass/Fail or Satisfactory/Unsatisfactory basis. Applicants must have completed 90 semester or 135 quarter hours (the equivalent of three years of college education) prior to the start of classes. The applicant cannot apply more than 60 semester hours or 90 quarter hours which were earned at a two-year institution toward the credit-hour requirement. Applicants holding a bachelor's degree will be given preference over applicants with similar academic credentials who do not

## School of Optometry

have a degree. Applicants to the School come from a variety of undergraduate backgrounds, such as biological sciences, psychology, education, and business.

**Admission Test** All applicants are required to take the Optometry Admission Test (OAT). The OAT is offered twice each year in February and October. Results are sent to the applicant and colleges of optometry approximately six to eight weeks following the date of testing. Official test scores are acceptable for up to three years from the testing date.

Applicants are encouraged to take the examination in February or October of the year preceding anticipated application to the School of Optometry. If applicants wish to enhance their scores, they are encouraged to repeat the examination. For an OAT application packet and additional information, contact:

Optometry Admission Testing Program  
211 East Chicago Ave.  
Chicago, IL 60611  
(312) 440-2693.

## Application Procedures

The Admissions Committee begins to process applications on August 1 for the class entering the following year. An applicant's file will be considered complete and ready for consideration by the Admission Committee when the following material has been received:

- 1) Application.
- 2) \$50 non-refundable application fee.
- 3) Official high school and college transcripts, followed by updated transcripts as they become available.
- 4) Academic Record form.
- 5) Official OAT results.
- 6) A composite evaluation prepared by the preprofessional advisory committee at the educational institution the applicant is attending. Those applicants not currently attending college or who are at an institution that does not offer a committee evaluation will be required to submit four letters of recommendation.

In addition to the standard application procedures, prospective students living outside the United States and its possessions must take the Test of English as a Foreign Language (TOEFL).

Applications are processed and considered as they are received. Applicants are encouraged to begin the admissions process approximately one year in advance of their planned entrance date. Early submission of applications is encouraged.

Applications must be complete by March 15 to be considered for admission to the class entering in August of the same year. Application materials received after March 15 will not be evaluated for the class entering in August of the same year.

All correspondence and inquiries, including transcripts, should be addressed to:

Chairperson, Admissions Committee, School of Optometry,  
University of Missouri-St. Louis  
8001 Natural Bridge Road  
St. Louis, Missouri 63121-4499  
(314) 516-6263.

### Selection Procedures

The Admissions Committee has the responsibility to review and evaluate all applicants and select the best qualified candidates. The Committee considers: an applicant's overall grade point average, the grade point achieved in the sciences, any grade trends over the years in college, and the scores on the Optometry Admission Test (OAT). Concurrently, candidates are evaluated on less quantitative measures such as extracurricular activities and interests, related or unrelated work experience, written narrative, and letters of recommendation.

Those applicants whom the committee feels to be most competitive will be scheduled for an on-campus interview. The on-campus interview facilitates the committee's assessment of the applicant's interests, motivation, and personal characteristics. In addition, the on-campus interview allows the applicant to tour the facilities, meet with currently enrolled students, have questions answered regarding financial aid and housing, and learn more about the School. From this group of interviewed applicants, the entering class of 40 students will be selected. The policies of the University of Missouri-St. Louis and the School of Optometry comply with the provisions under those laws which forbid discrimination on the basis of race, color, sex, national origin, religion, age, handicap, or veteran status. The School of Optometry encourages minority applicants.

### Acceptance Procedures

Students accepted for admission will begin receiving notices of acceptance in December prior to the year of anticipated matriculation. Notices of acceptance may be received as late as the following May. If acceptance to the class is conditional, the terms of the condition must be completed prior to matriculation. Applicants who have indicated that degree requirements will be completed prior to matriculation, and who have been selected for admission, may receive a conditional offer of acceptance contingent upon completion of the degree.

### Financial Aid

The University of Missouri-St. Louis maintains an Office of Student Financial Aid to assist eligible students in financing their education when their own and/or their families' resources are insufficient for this purpose. For information regarding available sources of student financial assistance contact: Student Financial Aid, Room 209 Woods Hall, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4499, (314) 516-5526. In addition, the UM-St. Louis School of Optometry Office of Student Affairs has up-to-date information on numerous scholarships and grants. This information is given to a prospective student during the pre-interview process.

## School of Optometry

### Fees

Tuition/Fees Summer 1996\*  
Resident - \$3,262.10  
Non-resident - \$6,427.70

Tuition/Fees Fall 1996  
Resident - \$6,524.20  
Non-resident - \$12,885.40

Tuition/Fees Winter 1997  
Resident - \$6,524.20  
Non-resident - \$12,855.40

\*A Summer Session is required between the third and fourth professional year. Tuition/Fees vary according to rotation location.

The above figures include the Education Fee, Student Facility and Activity Fee, the Instructional Computing Fee, and the Health Service Fee; they do not include the optional Parking Fee.

#### Residence

The UM-St. Louis School of Optometry is state-supported and therefore gives preference to individuals who are bona fide residents of Missouri. Twenty of the forty available positions are reserved for Missouri residents. This number may be revised slightly (upward or downward) based on annual variations in the applicant pool. The remaining places will be allocated to residents of other states with some preference given to qualified applicants from states that provide contract support.

Currently, five nonresident positions are allocated by State Reciprocal Agreements for residents of Kansas. Individuals who are admitted under these Agreements will pay reduced educational fees. For additional information, contact: Optometry Program, Kansas Board of Regents, Suite 609, Capitol Tower, 400 S.W. Eighth, Topeka, KS 66603 (913) 296-3517.

Optometry students will be required to pay Non-resident Educational Fees if they do not meet the University's residency requirements at the time of their enrollment. The definition of "residency" is outlined in the pamphlet Tuition and Residency Rules available from the Cashier's Office, (314) 516-5151.

## Four-Year Professional Degree (O.D.) Curriculum

### First Year

**Fall Semester**  
504, Neuroanatomy  
505, Geometric Optics  
506, Practice Management I  
508, Human Anatomy and Physiology  
512, Biochemistry

### Winter Semester

513, Physical Optics and Photometry  
514, Clinical Optometry I  
515, Ocular Optics  
516, Physiological Optics Laboratory  
517, Ocular Motility  
518, Anatomy and Physiology of the Eye  
519, Physical Optics and Photometry Lab  
522, Systemic Disease

### Second Year

#### Fall Semester

520, Ophthalmic Optics  
521, Clinical Optometry II  
524, Monocular Sensory Processes  
541, Practice Management II  
555, General Pharmacology

#### Winter Semester

530, Ophthalmic Dispensing  
531, Clinical Optometry III  
532, Binocular Vision and Space Perception  
533, Ocular Disease I  
535, Epidemiology  
565, Ocular Pharmacology

### Third Year

#### Fall Semester

550, General Clinic I  
553, Contact Lenses I  
554, Binocular Vision Anomalies  
556, Ocular Disease II  
558, Geriatric Optometry  
596, Public Health

#### Winter Semester

557, Environmental Vision  
560, General Clinic II  
561, Specialty Clinic  
562, Contact Lenses Specialty Clinic  
563, Contact Lenses II  
564, Low Vision  
567, Pediatric Optometry  
582, Practice Management III

### Fourth Year

#### Required Courses

573, UM-St. Louis Pediatric/Binocular Vision Patient Care  
574, UM-St. Louis Contact Lens Patient Care  
575, UM-St. Louis Co-Management Patient Care  
583, Practice Management IV  
593, Clinic Seminar  
572, East St. Louis Center Patient Care  
and/or  
576, Optometric Center Patient Care  
577, Optometric Center Low Vision Patient Care  
585, External Rotation in Ocular Disease Patient Care  
or  
586, External Rotation in Institutional Patient Care

## School of Optometry

### Elective Courses

- 570, External Rotation in General Patient Care
- 571, Community Service Rotation in Patient Care
- 578, External Rotation in Contact Lens Patient Care
- 579, External Rotation in Pediatric/Binocular Vision Patient Care
- 585, External Rotation in Ocular Disease Patient Care
- 586, External Rotation in Institutional Patient Care
- 592, External Rotation in Low Vision Patient Care

**Note:** 585 and 586 cannot be taken twice.

Students must complete a minimum of five credit hours of approved elective courses during the course of their professional curriculum. Additionally fourth year students must complete three elective clinic courses during their fourth year.

## Graduate Studies

### Physiological Optics

Physiological Optics is a multidisciplinary area concerned with the study of normal and anomalous vision. The goal of this program in Physiological Optics is to train the next generation of researchers in clinical and basic vision science, to conduct research, and to educate faculty for schools of optometry. Students will be required to integrate basic skills in vision science with focal studies in an area of research emphasis. This program will emphasize research aimed at new treatments and cures for vision disorders, as well as research in basic mechanisms of visual functions. The School of Optometry offers both an M.S. degree and a Ph.D. degree. Students may apply to the Graduate School for admission to either the M.S. or the Ph.D. program.

### Admission Requirements

Students should have the appropriate background for graduate training in physiological optics and appropriate undergraduate courses for their anticipated research emphasis. Applicants must have a bachelor's degree from an accredited college or university within the United States or from an equivalent institution outside of the United States. In order to be admitted as regular graduate students, applicants must have a grade point average of at least 3.0 in their overall undergraduate work, in their undergraduate major, and in any post-baccalaureate academic work. Students must arrange for transcripts to be submitted from all post-secondary academic work and to have at least three letters of recommendation sent by faculty members at previously attended colleges and universities. Students must also submit Graduate Record Examination (GRE) scores (verbal, quantitative, and analytic). Applicants to the M.S. program must have combined scores on the verbal and quantitative sections of at least 1000; applicants to the Ph.D. program must have combined scores of at least 1100. In addition, students from countries where English is not a primary language must submit Test of English as a Foreign Language (TOEFL) scores of 550 or better. All materials and scores must be submitted by March 1 if an applicant wishes to be considered for financial assistance for the fall semester.

## Master of Science in Physiological Optics

### Degree Requirements

The M.S. degree requires 30 semester hours of course work, including the core courses. At least 25 of these hours will normally be taken from courses offered by the School of Optometry with no more than 10 of these in Physiological Optics 490, Graduate Research in Physiological Optics. Each M.S. student will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

The M.S. degree requires 30 semester hours of course work, including the core courses. At least 25 of these hours will normally be taken from courses offered by the School of Optometry with no more than 10 of these in Physiological Optics 490, Graduate Research in Physiological Optics. Each M.S. student will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

### The Core Courses for this program are:

- Physiological Optics 400**, Sensory Processes and Perception (3 credits)
- Physiological Optics 401**, Visual Optics (3 credits)
- Physiological Optics 402**, Ocular Anatomy and Physiology (3 credits)
- Physiological Optics 403**, Psychophysical Methods and Experimental Design (3 credits)
- Physiological Optics 404**, Sensory Neuroscience (3 credits)

Special Topics, Individual Studies, and Advanced Topics courses in Physiological Optics are also offered.

Each M.S. student must also complete a thesis based on research conducted during the program. The thesis must be approved by a committee of at least three members of the graduate faculty, at least two of which must be from the graduate faculty in Physiological Optics.

## Ph.D. in Physiological Optics

### Degree Requirements

The doctoral degree requires 60 semester hours of course work, including the core courses. Each Ph.D. student will also be required to demonstrate proficiency in a foreign language, computer language, advanced statistical methods, or another acceptable tool skill. The tool skill and level of proficiency must be selected in advance in consultation with the Graduate Committee in Physiological Optics. Students will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

Written qualifying examinations will be offered at the beginning of each semester and regular summer session. Full-time students must attempt qualifying examinations before beginning their third year of study. Students must declare their intent to take the examinations at least one

## School of Optometry

month prior to the beginning of that semester or summer session. In addition to completing the general qualifying examination, students must complete a major area paper in their area of specialty focus by the end of the semester following the one in which they successfully complete the qualifying examination.

The preparation of the dissertation will be supervised by a dissertation committee, which will be selected by the student and the student's adviser and will consist of at least three members of the graduate faculty, at least two of which must be from the doctoral faculty in Physiological Optics. An oral examination of the written dissertation proposal will be conducted by the Committee. This will be required of all students for advancement to candidacy. An oral defense of the completed written dissertation before the Committee is also required.

The Core Courses for this program are:

**Physiological Optics 400**, Sensory Processes and Perception

**Physiological Optics 401**, Visual Optics

**Physiological Optics 402**, Ocular Anatomy and Physiology

**Physiological Optics 403**, Psychophysical Methods and Experimental Design

**Physiological Optics 404**, Sensory Neuroscience

Special Topics, Individual Studies, and Advanced Topics courses in Physiological Optics are also offered.

## Career Outlook

### Doctor of Optometry Degree

A Doctor of Optometry or "optometrist," is an independent health care professional who is specifically educated, clinically trained, and licensed to examine, diagnose, and treat conditions or impairments of the human vision system. Optometrists examine the eyes and related structures to determine the presence of vision problems, eye disease, and other ocular abnormalities.

Optometrists are the major providers of vision care. They provide treatment by prescribing ophthalmic lenses or other optical aids, provide vision therapy to preserve or restore maximum efficiency in vision, and in most states (including Missouri) are authorized to prescribe drugs in the treatment of certain eye diseases.

Optometrists can also detect certain general diseases of the human body such as diabetes, hypertension, and arteriosclerosis that have the potential capacity to affect vision. When an eye examination reveals diseases in other parts of the body, the optometrist will refer patients to the appropriate health care practitioner for treatment. Like physicians and dentists, optometrists are primary health care professionals.

The scope of optometry requires an understanding of the development of vision from infancy through adulthood, and the therapeutic and rehabilitative methods required to care for the problems of vision from infancy through the declining years.

Optometry is the largest eye care profession and one of the largest independent health care professions in the United States. Currently, some 28,900 doctors of optometry practice in America. They are widely distributed across the nation, practicing in more than 7,100 different municipalities. In more than 4,300 of these communities, the optometrist is the only primary care provider. As such, optometrists provide the major portion of primary eye care services in the United States. Nationwide, optometrists' services are available in more than 75 percent of all counties.

Optometric studies indicate that a ratio of one practicing optometrist to every 7,000 people (a ratio of 14.3 practicing optometrists per 100,000 population) is a reasonable average for the United States. Despite recent growth in the profession, few states meet this criteria.

As our society becomes more technically oriented, vision requirements become more exacting. The number of persons needing professional help for reading and other near-point visual tasks, including both older citizens and school children, is steadily growing. Increased demands for vision care result not only from population growth but also from increased understanding of how good vision relates to industrial production, student achievement, adjustments to aging, and other areas crucial to modern society.

The patients whom the practicing optometrist treats may have varied and challenging needs. On any given day, an optometrist might be involved in restoring vision to a partially sighted patient; fitting glasses for a child whose vision problem is affecting academic achievement; treating an eye infection with antibiotics; improving the function of a patient's eyes through vision training; helping an elderly patient in a nursing home cope with changing vision through critical eye health education; and performing comprehensive eye examinations for those who need glasses or contact lenses to correct astigmatism, nearsightedness, and numerous other vision problems.

The practice of optometry offers independence, flexibility, and diversity. Optometrists have a wide range of modes of practice. They may choose to practice in the inner cities, suburbs, and rural areas. Opportunities exist for solo practice, associateship, optometric or multidisciplinary group practice, government or military service, and clinical or hospital settings. Additional optometric employment opportunities may be found in teaching, research, or both.

Optometry is a rewarding career, both economically and personally. Based on data from the Bureau of Labor Statistics and surveys by professional associations, optometry is one of the top 10 income-earning professions in the country.

## **School of Optometry**

### **Graduate Degrees**

The Master of Science program provides research-oriented training beyond that offered in the professional program in optometry. Many optometry schools require that applicants for faculty positions hold an M.S. or Ph.D. degree, as well as an O.D. degree. Additional employment possibilities for individuals with M.S. degrees are found in industry and in both public and private research foundations.

The Ph.D. program prepares students as research professionals in vision science. Employment opportunities are available in college or university teaching and research, in research institutes, and in industry. Within academic optometry, individuals with both O.D. and Ph.D. degrees are in high demand as faculty members.

## School of Optometry

### Course Descriptions

*The following 400-level courses may be taken in the Master of Science or Doctor of Philosophy programs in Physiological Optics.*

#### **400 Sensory Processes and Perception (3)**

Prerequisite: Consent of instructor required for graduate students not in Physiological Optics. Current views on the encoding of various aspects of the visual stimulus (intensity, space, time, and wavelength) that give rise to the perceptions of brightness, contour, motion, and color will be considered in this course. The psychophysical tools available to examine visual encoding will be emphasized. Other topics will include binocular vision and depth perception, information processing approaches to visual pattern recognition, and the similarities and interactions of the visual system with the other sensory modalities.

#### **401 Visual Optics (3)**

Prerequisite: Optometry 406, Optometry 505, or consent of instructor. This course deals with the optical properties of the eye. Included are a review of general optics including physical optics, paraxial and non-paraxial geometric optics, image quality, radiometry and photometry, and optical instrumentation. Topics in visual optics will include schematic eyes, measurement of the parameters of the eye, accommodation, retinal image size, refractive errors, visual axes, spectral absorption by the ocular media, and the optical performance of the eye.

#### **402 Ocular Anatomy and Physiology (3)**

Prerequisite: Consent of instructor required for graduate students not in Physiological Optics. The structures and fluids of the eye and orbit, their interactions and functions are considered in this course. Specific topics include the eyelids, tearfilm, conjunctiva, cornea, iris, ciliary body, vasculature, aqueous humor, vitreous body, and the retina.

#### **403 Psychophysical Methods and Experimental Design (3)**

Prerequisite: Consent of instructor required for graduate students not in Physiological Optics. Advanced methodology for the design and analysis of experiments in a variety of areas of visual science are considered in this course. Both basic and applied topics will be considered. Special emphasis will be placed on psychophysical methodology, signal detection analysis, and scaling techniques.

#### **404 Sensory Neuroscience (3)**

Prerequisite: Optometry 405, Optometry 504, or consent of instructor. This course will deal with the neural organization of the sensory systems with an emphasis on vision. It will include a review of general neurophysiology and neuroanatomy as they relate to the processing of environmental stimuli into neural information, as well as experimental approaches utilized in neurobiology. Topics to be covered include neural transduction and sensory coding by receptors and neurons, constraints on perception defined by the functional organization of the nervous system, sensory development and plasticity as related to neural development, and evolution of sensory systems.

#### **405 Neuroanatomy (5)**

Prerequisite: Graduate standing. Detailed gross and microscopic anatomy of the human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system. Students may not receive credit for both Optometry 405 and Optometry 504.

#### **406 Geometric Optics (5)**

Prerequisite: Graduate standing. The principles of geometrical optics as applied to refracting and reflecting surfaces, thin lenses, thick lenses, and lens systems. The optics of various ophthalmic instruments and techniques will be examined. A student may not receive credit for both Optometry 406 and Optometry 505.

#### **405 Corneal Physiology (2)**

Prerequisite: Completion of core or consent of instructor. A detailed consideration of the biochemical and biophysical aspects of corneal transparency, including nutrition, metabolism, and methods of investigation. The effects of altered corneal environments (such as exist during sleep or contact lens wear) will be discussed.

#### **405 Growth and Development of the Visual System (2)**

Prerequisite: Completion of core or consent of instructor. This course will be an in-depth coverage of topics related to the growth and development of the visual system, including visual deprivation, neuronal specificity and plasticity, and neurotrophic influences.

#### **405 Advanced Physiology of Other Sensory Systems (2)**

Prerequisite: Completion of core or consent of instructor. This course will deal with the structure and function of the auditory, vestibular, olfactory, and somatosensory systems. Particular emphasis will be placed on similarities and interrelationships between these senses and vision.

#### **405 Binocular Vision (2)**

Prerequisite: Completion of core or consent of instructor. Binocular fusion and summation, binocular rivalry and suppression, and stereopsis and depth perception are the major topics of the course. The neurophysiology of binocular vision, and its development will also be covered in the course.

#### **405 Visual Information Processing (2)**

Prerequisite: Completion of core or consent of instructor. This course covers a variety of topics related to the computer modeling of visual problems, such as the detection of surfaces and three-dimensionality, the perception of color, and the encoding of motion. Computer models will be evaluated in terms of their efficiency, veridicality, and relation to biology.

#### **405 Oculomotor Systems (2)**

Prerequisite: Completion of core or consent of instructor. The intra- and extraocular muscle systems illustrate the role of visual and other sensory information in feedback control systems. Topics include the control of eye movements, accommodation and pupil size, and their synergistic relationship in the near triad. The anatomy, physiology, and pharmacology of the muscles, kinematics, methods of measuring eye movements, neurophysiology

## School of Optometry

of eye movements, and perceptual phenomena are also discussed.

### **457 Comparative and Evolutionary Aspects of Vision (2)**

**Prerequisite:** Completion of core or consent of instructor. This course explores the evolution of visual systems by examination of structural and functional aspects of vision in vertebrate and invertebrate species. Topics include photosensitivity and photoreception; structure of the eye in vertebrates and invertebrates; discrimination of form, motion, and color; visual reflexes, parallel processing; elaboration of central visual pathways; binocular vision; and stereopsis. Structural and functional adaptations to selective pressure will also be discussed.

### **458 Noninvasive Assessment of the Visual System (2)**

**Prerequisite:** Completion of core or consent of instructor. This course reviews historical topics and emphasizes current topics in the noninvasive clinical and laboratory assessment of the normal and diseased human visual system. Topics will range from delineation of disease mechanisms (such as retinal and choroidal disorders, cataract, corneal disease, glaucoma, strabismus, and amblyopia) to the design and assessment of new techniques and technology for evaluating the function of the visual system (e.g., advances in imaging techniques, fluorophotometry, perimetry, laser interferometry, psychophysics, etc.).

### **459 Introduction to Computer Programming for Vision Research (3)**

**Prerequisite:** Consent of instructor required for graduate students not in Physiological Optics. This course will expose the student to fundamental concepts of computer programming. The Prograph programming language will be used on the Macintosh computer to illustrate procedural and object-oriented programming philosophies. Examples and assignments will focus upon research applications in vision science.

### **470 Individual Studies in Physiological Optics (2)**

**Prerequisite:** Consent of instructor. This course designation can be used to cover a variety of topics in visual science. In general, very specific topics of limited interest will be presented as individual studies. Individual studies and advanced topics enable the student's course of study to be sharply tuned to his or her major area of interest.

### **490 Graduate Research in Physiological Optics (1-15)**

**Prerequisite:** Consent of instructor. Research in an area selected by the student in consultation with faculty members. May be taken to a maximum of 10 hours for the M.S. and 15 hours for the Ph.D.

### **497 Interdisciplinary Geriatric Care (2)**

(Same as Gerontology 497.) **Prerequisite:** Consent of instructor. Interdisciplinary approaches that address the medical and social needs of the elderly will be examined. Information about geriatric care and social issues affecting the well-being of older adults will be provided. Clinical, theoretical, and educational perspectives will be presented.

### **499 Current Topics in Optometry and Vision Science (1)**

**Prerequisite:** Consent of instructor. This seminar course examines and analyzes current publications in eye care and vision research. May be taken as an optometry elective to a maximum of 3 hours.

*The following 500-level courses are taken in the Doctor of Optometry (O.D.) program.*

### **504 Neuroanatomy (4)**

Detailed gross and microscopic anatomy of the human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system.

### **505 Geometric Optics (4)**

The principles of geometrical optics as applied to refracting and reflecting surfaces, thin lenses, thick lenses, and lens systems. The optics of various ophthalmic instruments and techniques will be examined.

### **506 Practice Management I (2)**

An introduction to the profession of optometry, including a consideration of the characteristics of a profession, the history of optometry, the profession's legal limitations, and major optometric organizations. The ethical basis of the practice of optometry will be explored, including a consideration of biomedical ethical and the moral responsibilities of health care professional codes of ethics and the moral responsibilities of health care practitioners, and ethical issues that arise in the practice of optometry. This is an interactive course, requiring active participation on the part of the student.

### **508 Human Anatomy and Physiology (6)**

The general anatomy of the human body and the physiology of the major organ systems including the peripheral and autonomic nervous system, the cardiovascular, respiratory, endocrine, digestive, and reproductive systems will be presented. The anatomy of the head and neck will be emphasized and the histology of the basic tissue types and organs will be related to general human anatomy and physiology. (Five hours lecture, two hours laboratory/week.)

### **512 Biochemistry (3)**

Basic concepts of general and cellular biochemistry. Study of nomenclature structure, and reactions of organic molecules. Some emphasis on visual system—tears, intraocular fluids, lens, and photochemistry.

### **513 Physical Optics and Photometry (2)**

Basic photometric concepts, measurements of light levels, applications in ergonomics, visual and photographic optics. Physical optics including diffraction, interference, polarization, birefringence, and lasers.

### **514 Clinical Optometry I (2)**

Selected tests for ocular health, to include perimetry, ophthalmoscopy, biomicroscopy, and tonometry.

### **515 Ocular Optics (3)**

The eye as an image-forming mechanism, the schematic eyes, the optical role of the pupil, the retinal image and its



## School of Optometry

evaluation. Nature, classification, and etiology of ametropia. Mechanism and optical aspects of accommodation.

### 516 Physiological Optics Laboratory (1)

Experiments designed to accompany Optometry 515 and Optometry 517.

### 517 Ocular Motility (3)

The anatomy, physiology, neurology, measurement, characteristics, and control of the intra- and extraocular system.

### 518 Anatomy and Physiology of the Eye (5)

Vegetative anatomy and physiology of the eye, optic nerve, orbit, and adnexa will be discussed. This includes discussion of embryology and the dynamics of ocular fluids and includes a two-hour laboratory.

### 519 Physical Optics and Photometry Laboratory (1)

Experiments designed to accompany Optometry 513.

### 520 Ophthalmic Optics (3)

History of ophthalmic materials; physical characteristics of lenses, aberration theory and its application to lens design, ophthalmic prisms, lens specifications, special lenses, multifocal lenses, unique designs, low vision aids, aniseikonic lenses, protective eyewear.

### 521 Clinical Optometry II (5)

Continuation of clinical optometry. Essentials of the case history, patient care in the areas of refraction, binocular integration, and visual performance.

### 522 Systemic Disease (4)

Principles of health and disease. A survey of disease, disease processes, and disease manifestations. A study of tissue changes in inflammation, tumor formation, allergies, disturbances of metabolism and circulation, and injuries.

### 524 Monocular Sensory Processes (5)

Monocular sensory mechanisms of vision, photoreception, visual neurophysiology, spatial and temporal effects, visual acuity and resolution, adaptation, brightness discrimination, and color vision. Topics include a consideration of both the psychophysical aspects and neurophysiological bases of these mechanisms.

### 530 Ophthalmic Dispensing (2)

Physical characteristics of frames, lens and frame specifications, fabrication and verification, fitting and dispensing concepts and procedures.

### 531 Clinical Optometry III (5)

Correlation and analysis of optometric data. Emphasis on diagnosis, prognosis, and therapy of visual problems.

### 532 Binocular Vision and Space Perception (4)

Binocular vision and space perception. Visual direction, theory of correspondence, fusion, rivalry, ocular dominance, and stereopsis. Developmental aspects and neurophysiological mechanisms.

### 533 Ocular Disease I (4)

Prerequisite: Optometry 522. The etiology, epidemiology, symptoms, signs, and course sequelae of ocular disease and anomalies. Disease and anomalies of lids, orbit, conjunctiva, cornea, sclera, iris, ciliary body, lens, vitreous, retina, choroid, and optic nerve.

### 535 Epidemiology (2)

A review of descriptive statistics, probability sampling, correlation, and prediction. The essentials of epidemiological study procedures and a discussion of the epidemiology of vision disorders.

### 541 Practice Management II (2)

Prerequisite: Optometry 506. Principles of human interpersonal relationships. The development of patient-doctor relationships. Emphasis will be on preparing the student to understand and deal with the many human interpersonal relationships necessary in the practice of optometry.

### 550 General Clinic I (6)

The clinical examination and care of general clinic patients, along with the fitting and dispensing of lenses and frames.

### 553 Contact Lenses I (3)

Historical development of the contact lens and its use. Basic lens terminology, specifications, physiochemical characteristics, optics, fabrication, and verification. Preliminary patient evaluation, indications and contraindications for contact lenses. Basic fitting philosophies for all lens types. Corneal topography and physiology. Patient and practice management considerations. Limited clinical experience.

### 554 Binocular Vision Anomalies (4)

The etiology, epidemiology, symptoms, signs, and course sequelae of the obstacles to binocular vision—sensory, integrative, and motor. The detection, diagnosis, prognosis, and orthoptic treatment of such anomalies. Clinical care of aniseikonias.

### 555 General Pharmacology (3)

General pharmacological principles, methods of administration, various systemic drugs and their pharmacological action and side effects, with emphasis on those that affect the visual system. Agencies, laws, and drug abuse.

### 556 Ocular Disease II (4)

Prerequisite: Optometry 533. Ocular manifestations of systemic diseases and anomalies. The etiology, epidemiology, symptoms, signs, and course sequelae of visual and ocular neurological anomalies, lid and pupillary anomalies, paralytic strabismus, and visual field problems.

### 557 Environmental Vision (2)

This course considers the relationship of the eye and vision to all aspects of one's environment including home, work, recreation, and transportation. Emphasis will be placed on protecting the eye from injury and maximizing vision performance.

## School of Optometry

### **558 Geriatric Optometry (3)**

(Same as Gerontology 458.) Special examination and management considerations of the geriatric patient will be discussed. Psychological, physiological, social, and demographic aspects of aging, as well as ocular changes associated with the aging process will be taught. Supervised interactions with nursing home residents will occur.

### **560 General Clinic II (6)**

Same as General Clinic I.

### **561 Pediatric/Binocular Vision Specialty Clinic I (1)**

The clinical examination and care of patients in the optometric specialty areas of binocular vision and pediatric vision.

### **562 Contact Lens Specialty Clinic (1)**

The clinical examination and care of patients in the optometric specialty area of contact lenses.

### **563 Contact Lenses II (3)**

Advanced contact lens fitting, theories, and clinical methods for aspheric, astigmatic, presbyopic, keratoconic, and aphakic designs. Special considerations including the application of lenses in high refractive errors, binocular vision training, low vision devices, color deficiency, orthokeratology, and extended wear. Use and fitting of haptic lenses, cosmetic shells, and prostheses. Patient and practice management considerations. Limited clinical experience.

### **564 Low Vision (3)**

The etiology, epidemiology, symptoms, signs, and course sequelae of low-vision problems. Methods of testing, prognosis, selection of therapy, design of environmental and optical aids, problems of rehabilitation. Agencies, laws, public and social assistance for the partially sighted and blind.

### **565 Ocular Pharmacology (3)**

Pharmacology, uses, doses, contraindications, adverse effect of drugs producing miosis, mydriasis, cycloplegia, accommodation, and corneal anesthesia. The pharmacology, use contraindications, and adverse effects of drugs commonly used in treating visual and ocular problems.

### **567 Pediatric Optometry (3)**

Special examination and management considerations of the pediatric patient. Psychological, physiological, social, and demographic aspects of early visual development. Discussion of the optometric considerations of children with learning and reading disabilities.

### **568 Clinical Medicine (2)**

Prerequisite: Successful completion of the first two years of the optometric curriculum or consent of the instructor. This course will describe medical treatment of patients with systemic disease, with emphasis on conditions which have ocular manifestations. Co-management with family practitioners or the appropriate specialists will be emphasized.

### **569 Ocular Photography (2)**

Optical principles and clinical techniques in photographing the internal and external eye and its adnexa. Includes laboratory exercises on use of the most common types of clinical cameras. (One hour lecture, two hours laboratory)

### **570 External Rotation in General Patient Care (7)**

Comprehensive clinical care of a general population of optometric patients at external sites approved by the School of Optometry's Externship Council. This elective course fulfills one of three elective clinic courses required for graduation.

### **571 Community Service Rotation in Patient Care (7)**

Comprehensive clinical care of patients at St. Louis area community health centers. This elective course fulfills one of the three elective clinic courses required for graduation.

### **572 East St. Louis Center Patient Care (7)**

Comprehensive clinical care of patients at the SIU-E/UM-St. Louis East St. Louis Optometric Center. This course fulfills one of three elective clinic courses required for graduation.

### **573 UM-St. Louis Pediatric/Binocular Vision Patient Care (3)**

Comprehensive clinical care of patients in pediatric/binocular vision clinic at the University of Missouri-St. Louis Center for Eyecare and Vision Research. This course is required for graduation.

### **574 UM-St. Louis Contact Lens Patient Care (3)**

Comprehensive clinical care in contact lens clinic at the University of Missouri-St. Louis Center for Eyecare and Vision Research. This course is required for graduation.

### **575 UM-St. Louis Co-Management Patient Care (1)**

Comprehensive clinical care of patients in the co-management clinic of ocular disease patients with ophthalmologists at the University of Missouri-St. Louis Center for Eyecare and Vision Research. This course is required for graduation.

### **576 Optometric Center Patient Care (6)**

Comprehensive clinical care of patients at the University of Missouri-St. Louis Optometric Center. This course must be taken in conjunction with Optometry 577. This course is required for graduation.

### **577 Optometric Center Low Vision Patient Care (1)**

Comprehensive clinical care of patients seeking low vision care at the University of Missouri-St. Louis Optometric Center. This course must be taken in conjunction with Optometry 576. This course is required for graduation.

### **578 External Rotation in Contact Lens Patient Care (7)**

Comprehensive clinical care of contact lens patients at an external site approved by the School of Optometry's Externship Council. This elective course fulfills one of three elective clinic courses required for graduation.

### **579 External Rotation in Pediatric/Binocular Vision Patient Care (7)**

Comprehensive clinical care of pediatric/binocular vision patients at an external site approved by the School of

## School of Optometry

Optometry's Externship Council. This elective course fulfills one of three elective clinic courses required for graduation.

### **582 Practice Management III (3)**

Prerequisites: Optometry 506 and Optometry 541. The development and management of an optometric practice from a patient and community service point of view—office design, office routine, patient care administration, personnel management, and recall systems. The establishment, development, and management of an optometric practice from a business point of view. Legal developments, governmental relationships, legislation and the legislative process, malpractice, professional ethics, taxes, fee structures, insurance, and accounting methods.

### **583 Practice Management IV (2)**

Prerequisite: Optometry 582. Further in-depth discussion in practice management.

### **585 External Rotation in Ocular Disease Patient Care (7)**

Comprehensive clinical care of patients with ocular disease at external sites approved by the School of Optometry's Externship Council. Successful completion of this course or Optometry 586 is required for graduation. If Optometry 586 is used as the required course, this course (Optometry 585) may be chosen as one of three elective clinic courses required for graduation.

### **586 External Rotation in Institutional Patient Care (7)**

Comprehensive clinical care of primary care patients at external institution sites approved by the School of Optometry's Externship Council. Successful completion of either this course or Optometry 585 is required for graduation. If Optometry 585 is chosen as the required course, then this course (Optometry 586) may be chosen as one of three elective clinic courses required for graduation.

### **587 Sports Vision (2)**

Special examination and management considerations of the competitive athlete. This elective course includes a study of the special visual requirements and demands resulting from athletic endeavors.

### **588 Directed Research (3)**

Credit is given for independent research. Projects may be laboratory, library, or clinically based research in any area of vision science. All projects must be undertaken under the supervision of a three-member faculty committee. This elective may be repeated once.

### **589 Directed Readings (1)**

Credit is given for independent literature review of a specific topic in any area of basic or clinical vision science. Readings are to be supervised by a two-person faculty committee and at least one member of this committee must be selected from among the full-time regular faculty. Credit is awarded upon approval of a written paper regarding the selected topic. This elective may be repeated once.

### **591 Geriatric Patient Care Delivery (3-6)**

Prerequisite: Consent of Geriatric Residency Instructors. Direct optometric patient care to a population that is largely geriatric. Emphasis will be on integrating specialty care available for these patients to provide comprehensive vision care. Two hours of direct patient care per week are required per hour of credit. In addition, the student will attend weekly supervisory meetings. May be repeated with consent of instructor for a total of 18 credits. Patient care will become more independent of direct supervision and the type of patients seen will be more varied with each repeat.

### **592 External Rotation in Low Vision Patient Care (7)**

Comprehensive clinical care of low vision patients at an external site approved by the School of Optometry's Externship Council. This elective course fulfills one of three elective clinic course required for graduation.

### **593 Clinic Seminar (1)**

Presentation and discussion of interesting clinical patients. Additional clinical testing techniques and concepts. Further discussion of patient data analysis—the process of determining diagnosis, prognosis, and therapy. Further discussions in the optometric specialties.

### **594 Topics in Geriatric Optometry (3)**

Prerequisite: Optometry 558. This course will address concerns and options in providing optometric care to a geriatric population. New techniques, research, and public policy changes will be discussed to assist students in assembling a global perspective on delivering health care to a specific population.

### **595 Computer Applications in Optometric Practice (2)**

An introduction to microcomputers and computerized office management systems. This course is designed to provide students with training in the use of computers, office management software, and microprocessor technology in an optometric office.

### **596 Public Health (2)**

A review of local, state, and federal organizations involved in health care, comprehensive health planning, new trends in health care delivery, and the assessment of the quality of health care delivery. The relationship of vision care to these topics is emphasized.

### **598 Clinical Applications of Current Topics in Visual Science (2)**

A seminar on the use of new discoveries in visual science in clinical optometry. Students will participate in selecting the topics, which will change from year to year, with the guidance of the instructor. The course will also include laboratory demonstrations of seminar topics.



PIERRE LACLEDE  
HONORS COLLEGE

UM-St. Louis 1996-97 Bulletin



## Pierre Laclède Honors College

### General Information

The Honors College's goal is to enrich significantly the educational experience of a select group of highly motivated and intelligent undergraduates. With this in mind, it enrolls promising students who give clear indication that they are ready to accept academic challenges and become creatively involved in the learning process together with a team of similarly committed instructors.

Given this special mission, the College has a unique structure and identity. Unlike the University's other Schools and Colleges, it has no academic departments or areas or faculty of its own, and it grants no degrees. Instead, it brings together a cross section of the University's students and teachers in a special curriculum.

Beginning with the Fall 1991 semester, the College will offer two academic formats:

- 1) A Four-Year Program open to entering freshmen and extending over a student's entire undergraduate career;
- 2) A Two-Year Program open to a select group of third-year students who are either continuing at or have transferred to the University and are engaged in work on a major.

### Faculty

Honors College instructors are drawn from the various academic departments and areas in those Colleges and Schools which have an undergraduate component. What these teachers have in common is a willingness to work closely with a select, diverse group of intellectually curious and academically high-achieving students. They demonstrate this by designing courses directed toward such an audience. This faculty is an organic body. Each term it adds members to its roster. The newcomers invariably include individuals whose teaching and scholarship have been singled out for special distinction. Their talents add to the Honors College's already rich instructional pool.

### Honors Scholars

The Honors College's student Scholars are highly qualified graduates from a broad range of public and private secondary schools predominantly in the St. Louis metropolitan area. They enter the College with different interests and remain part of it while simultaneously enrolling in classes and pursuing Bachelor of Arts and Bachelor of Science degrees in other academic divisions.

Many students major in liberal arts areas spanning the humanities, social sciences, and natural sciences, while others focus on preparing for careers in business or education. Among the Scholars are prospective engineers, lawyers, and doctors. Several plan to go on to graduate study or professional schools.

### Curriculum

#### Four-Year Program

Approximately 40 percent of the 120 hours Honors Scholars earn toward graduation carries Honors credit. Most of this is associated with a sequence of Honors courses designed specifically for them, the majority of which are taken during the first two years. During this period, these students fulfill virtually all of the University's General Education Requirements, usually in innovative ways. In their junior and senior years, Honors Scholars also earn Honors credit for work done within their major fields.

#### First Year

**Honors 10**, Freshman Composition  
**Honors 20**, Contemporary Issues and Events Symposium  
**Honors 30**, Critical Analysis  
**Honors 101**, Western Traditions  
**Honors 102**, American Traditions  
**Honors 103**, Non-Western Traditions

#### Second Year

Scholars take four of the following classes:  
**Honors 201**, Inquiries in the Humanities  
**Honors 202**, Inquiries in the Fine and Performing Arts  
**Honors 203**, Inquiries in the Social and Behavioral Sciences  
**Honors 204**, Inquiries in Business and Economics  
**Honors 205**, Inquiries in Mathematics and the Natural Sciences

During the first two years, a typical Honors Scholar will also take additional course work in other areas, such as mathematics, natural science, foreign language, and major prerequisite classes to satisfy various University, Honors College, and specific degree requirements. Scholars must satisfy special mathematics and natural science requirements.

#### Third and Fourth Years

**Honors 300**, Honors Seminar  
 Six hours of work in the major field taken for Honors credit.

#### Two-Year Program

Scholars in this program will take a combination of Honors College courses and also earn Honors credit for work done in their major fields. They must also satisfy the College's special mathematics and natural science requirements if this has not been done prior to their admission into the College.

## Pierre Laclede Honors College

### Third Year

**Honors 20**, Contemporary Issues and Events Symposium

**Honors 200** (one course in this sequence)

**Honors 300**, Honors Seminar

Six hours of work in the major field taken for Honors credit

### Fourth Year

Same as for Third Year with the exception of Honors 20.

The satisfactory/unsatisfactory option does not apply to any course work undertaken for Honors credit.

## Admission and Retention

To be considered for admission into either the Four-Year or Two-Year Honors Program, a candidate must file a special Honors College application. Prospective freshmen must also submit a regular application for admission into the University. These forms and additional information concerning scholarship and stipend awards, general eligibility guidelines, the admission process, and other features associated with participation in the Honors College can be obtained by contacting the College's administrative office: 389-0096.

To remain in good standing, a student must maintain both a cumulative and Honors GPA of at least 3.00 while remaining actively engaged in Honors studies.

## Additional Honors College Features

### Community Mentorship Program

Since students at UM-St. Louis are part of a thriving metropolis and most are likely to remain so, the Honors College seeks to instill a high degree of urban awareness in them. Based on their intellectual and career interests, Honors Scholars are matched with appropriate role models working in various sectors of the community. Some of these relationships may eventually lead to internships.

### Scholarships and Stipends

Every new freshman admitted into the Honors College is awarded some form of academic scholarship. Scholars continue to receive these awards as long as they meet the criteria associated with them.



## Pierre Laclède Honors College

### Course Descriptions

The following courses fulfill the Humanities (H) breadth of study requirements: 30, 101, 102, 103, 201, 202. The following courses fulfill the Social Sciences (SS) breadth of study requirements: 101, 102, 103, 203, 204. The following course fulfills the Natural Sciences and Mathematics (SM) requirements: 205.

Depending on the nature of the topic, Honors 300, Advanced Honors Seminar, also fulfills specific breadth of study requirements.

#### 10 Freshman Composition (3)

Prerequisite: Consent of the dean of the Honors College. Theory and practice of writing expository prose. Emphasis on individual tutorial. Assignments will be linked with topics discussed in Honors 101.

#### 20 Contemporary Issues and Events Symposium (2)

Prerequisite: Consent of the dean of the Honors College. Open discussion of current and usually controversial issues relating to various disciplines. An assigned reading on the topic serves as the catalyst for an exchange of views between the class and a panel made up of students and a guest expert. Students are also required to attend and report on cultural events in the St. Louis area as part of this class.

#### 30 Critical Analysis (30)

Prerequisite: Consent of the dean of the Honors College. An introduction to the forms and techniques of rational discussion. The emphasis is on improving skills in identifying, analyzing, evaluating, and formulating arguments. Topics include deductive and non-deductive reasoning, causal analysis, analogical arguments, logical fallacies, vagueness and ambiguity, methods of definition, and argumentative writing.

#### 101 Western Traditions (3)

Prerequisite: Consent of the dean of the Honors College. A seminar based on the reading and discussion of a few major works of exceptional importance. The works discussed will cover all eras of Western civilization from ancient times to the present and will range over several fields of study. These works will convey diversity within Western traditions and will not represent any single perspective.

#### 102 American Traditions (3)

Prerequisite: Consent of the dean of the Honors College. A seminar based on the reading and discussion of a few major works of exceptional importance. The works discussed will cover all eras of American history from the colonial era to the present and will range over several fields of study. These works will convey diversity within American traditions and will not represent any single perspective. This course satisfies the American history and government requirement.

#### 103 Non-Western Traditions (3)

Prerequisite: Consent of the dean of the Honors College. A seminar based on the reading and discussion of a few major works of exceptional importance. The works discussed may represent a single region of the non-Western world, but they will cover all eras from the ancient times to the present and will range over several fields of study. These works will not represent any single perspective. This course satisfies the non-Euro-American studies requirement.

#### 201 Inquiries in the Humanities (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies by which various disciplines in the humanities approach their subjects and achieve their goals. This is demonstrated through the close examination of specific topics and issues as illustrated in key texts.

#### 202 Inquiries in the Fine and Performing Arts (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies by which various disciplines in the arts approach their subjects and achieve their goals. This is demonstrated through the close examination of specific topics and issues as illustrated in key works of creative art. Students will also take part in various cultural activities (e.g., museum and gallery visits, concerts, theatrical performances).

#### 203 Inquiries in the Social and Behavioral Sciences (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies by which various disciplines in the social and behavioral sciences approach their subjects and achieve their goals. This is demonstrated by the close examination of specific topics and issues as illustrated in central texts, case studies, etc.

#### 204 Inquiries in Business and Economics (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to engage students in the discussion and analysis of some topics of special importance and interest in the fields of business and economics, with attention to the methodologies used to deal with these issues.

#### 205 Inquiries in Mathematics and the Natural Sciences (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies used by mathematicians and natural scientists to deal with their subjects and achieve their goals. This is demonstrated by an examination of theories and experiments.

#### 300 Advanced Honors Seminar (3)

Prerequisite: Consent of the dean of the Honors College. This interdisciplinary seminar examines a specific topic from various perspectives and underscores the value of making connections between diverse areas of study. The course may be repeated for credit whenever the topic is substantially different.



**OTHER PROGRAMS**

**UM-St. Louis 1996-97 Bulletin**



# UM-St. Louis/Washington University Joint Undergraduate Engineering Program

## Administration

**William P. Darby**, Dean  
Ph.D., Carnegie Mellon University  
**Nancy Shields**, Associate Dean  
Ph.D., Southern Illinois University - Carbondale  
**Marie I. Cuccia-Brand**, Director of Academic and Student Services  
M.A., Washington University

## Faculty

**James C. Ballard**, Associate Professor  
M.A., Washington University  
**Harold J. Brandon**, Affiliate Professor  
Sc.D., Washington University  
**Christopher I. Byrnes**, Professor  
Ph.D., University of Massachusetts  
**Roger D. Chamberlain**, Assistant Professor  
D.Sc., Washington University  
**John D. Corrigan**, Affiliate Assistant Professor  
Ph.D., University of Missouri  
**Richard A. Gardner**, Associate Professor  
Ph.D., Purdue University  
**Phillip L. Gould**, Professor  
Ph.D., Northwestern University  
**H. Richard Grodsky**, Assistant Professor  
D.Sc., Washington University  
**Raimo J. Hakkinen**, Professor  
Ph.D., California Institute of Technology  
**I. Norman Katz**, Professor  
Ph.D., Massachusetts Institute of Technology  
**Michael I. Miller**, Professor  
Ph.D., The Johns Hopkins University  
**William J. Murphy**, Affiliate Professor  
D.Sc., Washington University  
**Michael T. Pauken**, Assistant Professor  
Ph.D., Georgia Institute of Technology  
**David A. Peters**, Professor  
Ph.D., Stanford University  
**Seymour V. Pollack**, Professor  
M.S., Brooklyn Polytechnic Institute  
**Barry E. Spielman**, Professor  
Ph.D., Syracuse University  
**S.P. Sutera**, Professor,  
Ph.D., California Institute of Technology  
**Kevin Z. Truman**, Associate Professor  
Ph.D., University of Missouri - Rolla  
**Jonathan S. Turner**, Professor  
Ph.D. Northwestern University  
**Alan C. Wheeler**, Affiliate Professor  
Ph.D., Stanford University

## General Information

The Joint Undergraduate Engineering Program of UM-St. Louis and Washington University was approved in 1993 by the University of Missouri and the Coordinating Board for Higher Education. While a pre-engineering curriculum has been in place for more than ten years, the new program will support non-traditional, place-bound students who wish to pursue a bachelor's degree in engineering.

The program is designed to offer course work beyond the pre-engineering courses at UM-St. Louis and the area

community colleges. Pre-engineering and general education courses are offered at UM-St. Louis and upper-level engineering courses are offered on the Washington University campus. Students will be admitted to the upper division program only after they have completed an acceptable pre-engineering program. They can earn a Bachelor of Science in Civil Engineering (BSCE), a Bachelor of Science in Electrical Engineering (BSEE), or a Bachelor of Science in Mechanical Engineering (BSME).

Professional engineering degree programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). The BSEE and BSME have been designed to meet ABET accreditation requirements. However, ABET does not consider degree programs for accreditation before there are graduates. Thus, the first graduates of any new engineering degree program do not technically receive ABET-accredited degrees. Once the program is accredited by ABET, previous graduates are typically treated as if they had received accredited degrees for matters such as professional engineering licensure.

## Admission

Admission to candidacy for these degrees is granted jointly by the University of Missouri-St. Louis and Washington University.

Normally admission is granted to persons who have completed the pre-engineering program with a minimum grade point average of 2.75 over all mathematics, chemistry, physics and introductory engineering courses (statics, dynamics, and engineering graphics).

## Degree Requirements

**Bachelor of Science in Civil Engineering**  
**Bachelor of Science in Electrical Engineering**  
**Bachelor of Science in Mechanical Engineering**

A program of 137 semester hours is required for the Bachelor of Science in Civil Engineering, a program of 131 semester hours is required for the Bachelor of Science in Electrical Engineering, and a program of 137 semester hours is required for the Bachelor of Science in Mechanical Engineering, as shown below.

All majors must complete the University General Education Requirements, the Pre-Engineering Requirements and the Core Engineering Requirements. Except with special permission of the program faculty, students must first complete JEMT 217, Engineering Mathematics, and JEE 180, Introduction to Electrical Networks (Mechanical and Electrical Engineering majors only), with minimum grades of C, to be eligible to take the other upper-level engineering courses (those with course numbers starting with the letter "J"). A minimum grade of C is necessary to meet the prerequisite requirement for any course.

### Pre-Engineering Requirements

**Math 80**, Analytic Geometry/Calculus I  
**Math 175**, Analytic Geometry/Calculus II

## UM-St. Louis/Washington University Joint Undergraduate Engineering Program

**Math 180**, Analytic Geometry/Calculus III  
**Math 202**, Differential Equations  
**Chem 11**, Introductory Chemistry I  
**Chem 12**, Introductory Chemistry II  
**Physics 111**, Physics: Mechanics & Heat  
**Physics 112**, Physics: Electricity, Magnetism & Optics  
**Engineering 30**, Engineering Graphics  
**Engineering 144**, Statics  
**Engineering 145**, Dynamics  
**English 10**, Composition

Humanities Electives\*  
 Social Sciences Electives\*

### Engineering Core Requirements

**JCS 36**, Introduction to Computing  
**JEMT 217**, Engineering Mathematics  
**JEC 210**, Engineering Communications  
**JME 220**, Thermodynamics  
**JME 225**, Materials Science  
**JME 331**, Control Systems I\*\*  
**JEE 180**, Introduction to Electrical Networks\*\* OR  
**JCHE 343**, Environmental Engineering Chemistry  
**JEE 150**, Electrical Laboratory I\*\*

\*\* Required for electrical and mechanical engineering majors only.

### Civil Engineering Major Requirements

**JCE 116**, Surveying  
**JCE 241**, Structural Analysis  
**JCE 242**, Structural Design  
**JCE 252**, Environmental Engineering Science  
**JCE 274**, Hydraulics and Hydrology  
**JCE 319**, Soil Mechanics  
**JCE 320**, Soil Exploration and Testing  
**JCE 374**, Economic Decisions in Engineering  
**JCE 375**, Introduction to Urban Planning  
**JCE 376**, Site Planning and Engineering OR  
**JCE 382**, Design of Water Quality Control Facilities  
**JCE 384**, Probabilistic Methods in Civil Engineering Design  
**JCE 399**, Senior Civil Engineering Seminar  
**JCE 372**, Legal Aspects of Construction OR  
**JEP 361**, Introduction to Environmental Law and Policy  
**JME 141**, Mechanics of Deformable Bodies  
**JME 270**, Fluid Mechanics  
**JME 280**, Fluid Mechanics Laboratory  
 Civil Engineering Electives (200-399)

### Electrical Engineering Major Requirements

**JEE 160**, Digital Logic  
**JEE 190**, Introduction to Digital and Linear Electronics  
**JEE 214**, Electromagnetic Fields  
**JEE 227**, Power, Energy, and Polyphase Circuits  
**JEE 279**, Signal Analysis for Electronic Systems and Circuits  
**JEE 316**, Electrical Energy Laboratory  
**JEE 355**, Digital Systems Laboratory  
**JEE 380**, Senior Design  
 Electrical Engineering Electives (200-399)

### Mechanical Engineering Major Requirements

**JME 141**, Mechanics of Deformable Bodies  
**JME 218**, Elements of Mechanisms and

**JME 219**, Mechanisms Laboratory  
**JME 221**, Energetics for Mechanical Engineers  
**JME 222**, Machine Design and  
**JME 223**, Machine Design Laboratory  
**JME 270**, Fluid Mechanics  
**JME 280**, Fluid Mechanics Laboratory  
**JME 271**, Principles of Heat Transfer  
**JME 281**, Heat Transfer Laboratory  
**JME 317**, Dynamic Response of Physical Systems and  
**JME 318**, Dynamic Response Laboratory  
**JME 390**, Senior Design  
 Mechanical Engineering Electives (200-399)

### \*Humanities and Social Sciences Electives

The student's choice of humanities and social sciences electives must meet both the UM-St. Louis General Education Requirements and the Humanities and Social Sciences Requirements of the Joint Undergraduate Engineering Program. Check with your adviser for details. In particular:

- A course in American history or government, or in Missouri history or government must be included.
- The cultural diversity requirement must be fulfilled.
- At least 8 credit hours must be in one department or area within humanities or social sciences; of these 8 credit hours, at least 1 credit hour must be in a course at the junior level or higher, taken at a four-year institution.
- Some courses that fulfill the humanities [H] or social sciences [SS] breadth of study requirement do not count as Humanities and Social Sciences Electives; an example would be a statistics course taught in economics or psychology. See the Office of the Joint Undergraduate Engineering Program for a listing of courses that do not count as Humanities or Social Sciences Electives in this program, or check with your adviser.

## Minor in Environmental Engineering Science

A program of 18 semester hours is required to earn the Minor in Environmental Engineering Science. The minor is designed to provide formal recognition to recipients of bachelor's degrees in civil, electrical, or mechanical engineering that they have acquired the education necessary for entry-level careers as environmental professionals. They will also have a solid foundation to undertake graduate-level education in environmental engineering and science.

Enrollment in all courses in the Minor in Environmental Engineering Science is limited to students who have been admitted to candidacy for the Bachelor of Science in Civil Engineering, the Bachelor of Science in Electrical Engineering, or the Bachelor of Science in Mechanical Engineering in the UM-St. Louis/Washington University Joint Undergraduate Engineering Program. The minor may only be awarded to students who earn the Bachelor of Science in Civil Engineering, the Bachelor of Science in Electrical Engineering, or the Bachelor of Science in Mechanical Engineering in the UM-St. Louis/Washington University Joint Undergraduate Engineering Program.

# UM-St. Louis/Washington University Joint Undergraduate Engineering Program

**JCHE 343**, Environmental Engineering Chemistry  
**JCE 252**, Environmental Engineering Science  
 (EE, ME Majors) OR  
**JCE 375**, Introduction to Urban Planning (CE Majors)  
**JCE 308**, Environmental Engineering Laboratory -  
 Water/Soil OR  
**JCE 309**, Environmental Engineering Laboratory - Air  
**JCE 382**, Design of Water Quality Control Facilities  
**JEP 337**, Environmental Risk Assessment  
**JEP 361**, Introduction to Environmental Law and Policy

## Engineering Design and Engineering Science Requirements

The number of semester hours assigned to each engineering course in the Joint Undergraduate Engineering Program is further divided into four categories of content: engineering design, engineering science, basic science, and other, as shown below.

Each engineering student must complete a curriculum that contains at least 18 semester hours of engineering design and 36 semester hours of engineering science content, including all courses: pre-engineering requirements, engineering core requirements, major requirements, and electives. Civil, electrical, and mechanical engineering majors should consult with their advisers to select electives at the 200 and 300 level that include sufficient engineering design and engineering science content to produce the required totals. Transfer courses from other institutions do not necessarily have the same engineering science and engineering design content as their equivalents in the UM-St. Louis/Washington University Joint Undergraduate Engineering Program. Students who include transfer courses in their curricula should consult with their advisers to be sure that these requirements are met.

Course Number	Semester Hours	Engineering Design	Basic Science	Science
Eng 10	1.0	0.0	1.0	0.0
Eng 30	3.0	1.0	2.0	0.0
Eng 124	3.0	0.0	3.0	0.0
Eng 125	3.0	0.0	3.0	0.0
Eng 126	3.0	0.0	3.0	0.0
Eng 144	3.0	0.0	3.0	0.0
Eng 145	3.0	0.0	3.0	0.0
Eng 146	3.0	0.5	2.5	0.0
Eng 147	3.0	0.0	3.0	0.0
Eng 180	3.0	0.75	2.25	0.0
Eng 201	3.0	0.0	3.0	0.0
Eng 202	3.0	0.0	3.0	0.0
JCE 116	3.0	0.0	3.0	0.0
JCE 241	3.0	0.5	2.5	0.0
JCE 242	3.0	2.5	0.5	0.0
JCE 252	3.0	1.0	2.0	0.0
JCE 274	3.0	0.0	3.0	0.0
JCE 308	3.0	0.0	2.0	1.0
JCE 309	3.0	0.0	2.0	1.0
JCE 310	3.0	3.0	0.0	0.0
JCE 319	3.0	1.0	2.0	0.0
JCE 320	1.0	0.0	1.0	0.0
JCE 364	3.0	3.0	0.0	0.0

Course Number	Semester Hours	Engineering Design	Basic Science	Science
JCE 369	3.0	3.0	0.0	0.0
JCE 372*	3.0	0.0	0.0	0.0
JCE 373	3.0	0.0	2.0	0.0
JCE 374	3.0	0.75	2.25	0.0
JCE 375	3.0	1.5	1.5	0.0
JCE 376	3.0	1.5	1.5	0.0
JCE 378	3.0	1.0	2.0	0.0
JCE 382	3.0	3.0	0.0	0.0
JCE 384	3.0	1.5	1.5	0.0
JCE 399	1.0	0.0	0.0	0.0
JCHE 343	3.0	0.0	0.0	3.0
JCS 36	4.0	2.0	2.0	0.0
JEC 210*	3.0	0.0	0.0	0.0
JEE 150	3.0	1.0	2.0	0.0
JEE 160	3.0	1.5	1.5	0.0
JEE 180	3.0	0.75	2.25	0.0
JEE 190	3.0	0.75	2.25	0.0
JEE 214	3.0	1.0	2.0	0.0
JEE 227	3.0	1.2	1.8	0.0
JEE 262	3.0	1.0	2.0	0.0
JEE 279	3.0	1.0	2.0	0.0
JEE 280	3.0	1.0	2.0	0.0
JEE 290	3.0	1.0	2.0	0.0
JEE 292	3.0	1.0	2.0	0.0
JEE 310	3.0	1.0	2.0	0.0
JEE 316	3.0	1.5	1.5	0.0
JEE 332	3.0	1.0	2.0	0.0
JEE 345	3.0	1.0	2.0	0.0
JEE 355	3.0	2.2	0.8	0.0
JEE 358	3.0	1.5	1.5	0.0
JEE 360	3.0	1.2	1.8	0.0
JEE 368	3.0	1.0	2.0	0.0
JEE 380	3.0	3.0	0.0	0.0
JEMT 217	4.0	0.0	0.0	4.0
JEP 281	3.0	1.5	1.5	0.0
JEP 337	3.0	0.75	2.25	0.0
JEP 361*	3.0	0.0	0.0	0.0
JME 141	3.0	0.5	2.5	0.0
JME 218 & 219	4.0	2.0	2.0	0.0
JME 220	3.0	0.0	3.0	0.0
JME 221	3.0	0.5	3.0	0.0
JME 222 & 223	4.0	4.0	0.0	0.0
JME 225	4.0	0.0	4.0	0.0
JME 261	3.0	0.0	3.0	0.0
JME 270	3.0	0.0	3.0	0.0
JME 271	3.0	0.0	3.0	0.0
JME 280	1.0	0.0	1.0	0.0
JME 281	1.0	0.0	1.0	0.0
JME 317 & 318	4.0	1.0	3.0	0.0
JME 331	3.0	1.0	2.0	0.0
JME 390	4.0	4.0	0.0	0.0

\*Other, 3.0

### Fees

Students register on the UM-St. Louis campus and pay UM-St. Louis fees plus an engineering fee for both Pre-engineering and Engineering courses. Limits on enrollments are determined by the availability of resources.

## **UM-St. Louis/Washington University Joint Undergraduate Engineering Program**

### **For Further Information**

For information about enrolling in this program, please contact the UM-St. Louis/Washington University Joint Undergraduate Engineering Program at (314) 516-6800, or the Washington University School of Engineering and Applied Science at (314) 935-6100.

### **Career Outlook**

Engineering is one of the few careers in which the bachelor's degree is a professional degree. Students earning a bachelor of science degree in one of the engineering disciplines are well qualified for entry-level engineering positions in a variety of businesses, industries, consulting firms, and government agencies. As society becomes increasingly dependent on technology, the outlook for all engineering disciplines becomes increasingly bright. Engineering careers typically rank at, or very near, the top of virtually any published ranking of promising jobs for the twenty-first century. Besides tackling challenging technical problems, roughly two-thirds of all engineers will have some level of management responsibility within ten years of receiving their bachelor's degrees. Many practicing engineers will eventually continue their education by pursuing graduate degrees on a part-time basis. Typical areas of graduate study include all advanced technical and scientific fields and management.



# UM-St. Louis/Washington University Joint Undergraduate Engineering Program

## Course Descriptions

Prerequisites may be waived by consent of the Joint Program faculty.

### Engineering

#### 10 Introduction to Engineering (1)

Course consists of a series of lectures on engineering, fields of study within engineering, the engineering profession, types of work activities, and professional registration. Guest lecturers will participate.

#### 30 Engineering Graphics (3)

Prerequisites: Math 30 and 35 or equivalent. The course covers the principles of scales, geometric construction, orthographics, auxiliaries, sections, dimension, tolerancing, descriptive geometry, vector graphics, developments and intersections. Examples and problems are solved manually and with computer graphics.

#### 126 Digital Circuits (3)

Prerequisites: Engineering 124; Mathematics 202 (may be taken concurrently). Course consists of a study of circuits having application in digital equipment such as electronic calculators and computers. The engineering concepts of circuits for logical design, digital arithmetic, and digital systems are introduced.

#### 144 Statics (3)

Prerequisites: Math 175 and Physics 111. Statics of particles and rigid bodies. Equivalent systems of forces. Distributed forces: centroids. Applications to trusses, frames, machines, beams, and cables. Friction. Moments of inertia. Principle of virtual work and applications.

#### 145 Dynamics (3)

Prerequisite: Engineering 144. Review of vector algebra and calculus. Kinematics of a particle. Newton's laws and the kinetics of a particle. Work and energy. Impulse and momentum. Kinematics of rigid bodies. General theorems for systems of particles. Kinetics of rigid bodies. The inertia tensor.

#### 146 Strength of Materials (3)

Prerequisite: Mathematics 175 and Engineering 144. Normal and shear stresses and strains. Stress-strain diagrams. Hooke's Law and elastic energy. Thermal stresses. Stresses in beams, columns, torsional members, and pressure vessels. Elastic deflection of beams and shafts. Statically indeterminate structures. Mohr's circle of stress. Stability concepts.

#### 147 Thermodynamics (3)

Prerequisite: Mathematics 175, Chemistry 11, Physics 111. Classical thermodynamics, thermodynamic properties, work and heat, first and second laws. Entropy, irreversibility, availability. Application to engineering systems.

#### 180 Introduction to Electrical Networks (3)

(Same as JEE 180.) Prerequisite: Physics 112 and Mathematics 202 (may be taken concurrently). Elements, sources, and interconnects. Ohm's and Kirchhoff's laws, superposition and Thevenin's theorem; the resistive circuit, transient analysis, sinusoidal analysis, and frequency response.

#### 201 Elementary Electronics (3)

(Same as Physics 201.) Prerequisite: Physics 112. Primarily a laboratory study of characteristics of standard circuit elements, amplifier circuits, power supplies, operational amplifiers, digital and switching circuits, servo systems, shielding and noise problems, transducers and oscilloscopes. Six hours of laboratory per week.

#### 202 Elementary Electronics II (3)

(Same as Physics 202.) Prerequisite: Engineering 201. Continuation of Engineering 201. Six hours of laboratory per week.

### Chemical Engineering

#### JCHE 343 Environmental Engineering Chemistry (3)

Prerequisite: Chemistry 12. Introduction to the engineering aspects of air, water, soil, and geosphere chemistry. Toxicology and hazardous wastes. Pollution sources, dynamic, and ultimate fates. Sampling, control strategies, and regulations.

### Civil Engineering

#### JCE 116 Surveying (3)

Horizontal and vertical control surveys, including traverses, triangulation, trilateration, and leveling; basic adjustments of observations; geodetic data; coordinate systems. Basic route surveying, including horizontal and vertical curves.

#### JCE 241 Structural Analysis (3)

Prerequisite: JME 141. A review of the calculation of reactions, shear, and bending moment. Definition, construction and use of influence lines. Deflections for statically determinate structures using the virtual work method. Analysis of statically indeterminate trusses using the method of consistent deformations. Analysis of continuous beams and planar frames using the consistent deformation, slope-deflection and moment distribution methods. The influence of span on strength, stability, and economy of structures. An introduction to structural analysis software.

#### JCE 242 Structural Design (3)

Prerequisites: JME 225, JCE 241. Fundamentals of structural design in steel, reinforced concrete, and timber. Familiarization with the sources of various design codes and practice in interpreting them. Computer graphics applications.

#### JCE 252 Environmental Engineering Science (3)

Prerequisite: JME 270 (may be taken concurrently), or permission of instructor. Application of the basic principles of chemistry, microbiology, and fluid mechanics to the

## UM-St. Louis/Washington University Joint Undergraduate Engineering Program

analysis of environmental problems, especially those involving control of water and land contamination. Properties of municipal and industrial waste water, solid waste, and hazardous waste. Estimation of assimilative capacity and other characteristics of receiving waters. Introduction to unit processes and unit operations used in the treatment of municipal and industrial waste water. Design of processes and facilities used for treating drinking water, waste water, and sludge disposal. Waste minimization and recycling in both industrial and municipal settings.

### **JCE 274 Hydraulics and Hydrology (3)**

Prerequisite: JME 270 (may be taken concurrently). The concepts and theory of hydraulics and hydrology are discussed through lectures and practical engineering applications. Open channel flow, hydrograph analysis, watershed hydrology, frequency concepts, hydraulic design, and sedimentation are addressed.

### **JCE 308 Environmental Engineering Laboratory - Water/Soil (3)**

Prerequisite: JCHE 343. Laboratory experiments to illustrate the application of engineering fundamentals to environmental systems. Characterization and control of water/soil pollutants. Introduction to relevant analytical instrumentation and laboratory techniques. Laboratory work supported with theoretical analysis and modeling as appropriate.

### **JCE 309 Environmental Engineering Laboratory - Air (3)**

Prerequisite: JCHE 343. Laboratory Experiments to illustrate the application of engineering fundamentals to environmental systems. Characterization and control of air pollutants. Introduction to relevant analytical instrumentation and laboratory techniques. Laboratory work supported with theoretical analysis and modeling as appropriate.

### **JCE 310 Design of Timber Structures (3)**

Prerequisites: JCE 241, JCE 242. Study of basic physical and mechanical properties of wood and design considerations. Design and behavior of wood beams, columns, beam-columns, connectors, and fasteners. Introduction to plywood and glued laminates members. Analysis and design of structural diaphragms and shear walls.

### **JCE 319 Soil Mechanics (3)**

Prerequisites: JME 141, JME 270. Basic geology as it relates to index and classification properties of soil. Exploration, sampling, and testing techniques. Soil classification systems. Clay minerals and soil structures. Compaction and stabilization. Capillary, shrinkage, swelling, and frost action in soils. Effective stress, permeability, seepage, and flow nets. Consolidation and consolidation settlements. Stresses in soil. Time rate of consolidation. Mohr's circle, stress path, and failure theories. Shearing strength of sand and clays.

### **JCE 320 Soil Exploration and Testing (1)**

Prerequisite: JCE 319 (may be taken concurrently). Soil exploration; in-situ testing, laboratory testing of soil; processing of test data using a microcomputer; statistical

analysis of test data; use of test results in the decision-making process.

### **JCE 364 Foundations (3)**

Prerequisites: JCE 242, JCE 319, JCE 320. Principal problems in design and construction of foundations for bridges and buildings. Bearing capacity of deep and shallow foundations; pressure on retaining walls and slope stability; modern developments in piling, cofferdams, open caissons, pneumatic caissons.

### **JCE 369 Construction Management Project (3)**

Prerequisites: JCE 373, JEP 281. The course entails the study of principles and steps involved in the development of a project from design through bidding and construction with emphasis on preconstruction planning and construction operations. The students will be required to submit a report on project budget, bidding strategy and construction schedule. Lecture topics will be supplemented by a resource pool of consultants on estimating, scheduling and contracting who will provide advice and guidance to the students.

### **JCE 372 Legal Aspects of Construction (3)**

Prerequisite: Junior standing. A survey of the legal problems of the construction manager. Including but not limited to, liability in the areas of contracts, agency, torts, assurance, bad judgment and oversight.

### **JCE 373 Construction Operations and Management (3)**

Prerequisites: Junior standing. The construction industry, its development, components, and organization. Contracting methods. Applications and limitations. Selection of equipment using production analysis and economics. Field engineering, including form design, shoring, embankment design. Purchasing and change orders. Safety and claims.

### **JCE 374 Economic Decisions in Engineering (3)**

Prerequisite: Junior standing. Principles of economics involved in engineering decisions. Decisions between alternatives based on the efficient allocation of resources. Topics include the time element in economics, analytical techniques for economy studies, and taxes.

### **JCE 375 Introduction to Urban Planning (3)**

Prerequisite: Senior standing. A focus on the fundamental factors and techniques that the civil engineer must consider: population, economic base, land use, urban design, regional analysis, fiscal analysis, zoning, and public facilities analysis. Synthesis of these techniques into a major student project, typically involving groups of three to six students. Each project is assigned by the instructor and usually involves a real-life situation or problem that requires original data collection. In-class presentation, discussion, and critique of each group project.

### **JCE 376 Site Planning and Engineering (3)**

Prerequisite: Senior standing. A focus on the legal, engineering, and economic aspects of planning and design of facilities at a site-specific level. Concepts of legal and economic feasibility of site design are developed in conjunction with the study of civil engineering activities involved in dealing with urban design alternatives for residential, commercial, industrial, and recreational land

# UM-St. Louis/Washington University Joint Undergraduate Engineering Program

uses. Case studies and review of current legislation affecting site planning and engineering are undertaken, culminating in a major design project.

## **JCE 378 Knowledge-Based Expert Systems in Civil Engineering (3)**

Prerequisite: JCS 36 or equivalent. Topics relating to the development of expert systems discussed with emphasis on application in civil and structural engineering. Subjects include knowledge engineering, frame- and rule-based expert systems, use of expert shells and tools, prototyping, and reasoning with uncertainty. Case studies and computer exercises supplement lectures. Students are expected to develop a prototype expert system.

## **JCE 382 Design of Water Quality Control Facilities (3)**

Prerequisite: JCE 252. Application of environmental engineering principles to design of water and wastewater treatment facilities. Critical review of process design issues associated with physical, chemical, and biological treatment processes. Definition of problems and objectives, evaluation of alternatives, and use of these concepts in process design. Design-oriented class/group project.

## **JCE 384 Probabilistic Methods in Civil Engineering Design (3)**

Prerequisite: JCE 242 (may be taken concurrently). Probability concepts. Analytical models of random phenomena. Functions of random variables. Estimating parameters from data. Empirical determination of distribution models. Regression and correlation analyses. Monte Carlo simulation. Detailed examples of the application of probabilistic methods to structural, transportation, hydrologic, and environmental system design.

## **JCE 399 Senior Civil Engineering Seminar (1)**

Prerequisite: Senior standing. Students will research assigned topics of importance to graduates entering the Civil Engineering profession and prepare oral presentations and a written report. Student presentations will be augmented by lectures from practicing professionals. Topics include professional registration, early career development, graduate study, effective presentations, construction quality, and case histories of civil engineering projects.

## **Computer Science**

### **JCS 36 Introduction to Computing (4)**

Workshop course (lectures and supervised laboratories) covering the fundamental organization and operating principles of digital computers and the systematic development of well-structured programs. Students start with the simple von Neumann simulator to learn about internal data representation and program execution at the machine level. With this as background, they undertake a variety of programming projects, using both the Pascal and FORTRAN languages, to acquire experience in modular construction and static and dynamic data structures, graphic display, and database handling. There is continuing emphasis on sound design and documentation practices.

## **Electrical Engineering**

### **JEE 150 Electrical Laboratory I (3)**

Prerequisite: JEE 180. Lectures and laboratory exercises related to sophomore topics in introductory networks and basic electronics.

### **JEE 160 Digital Computers I: Organization and Logical Design (3)**

Prerequisite: JCS 36. Digital computers and digital information-processing system; Boolean algebra, principles and methodology of logical design; machine language programming; register transfer logic; microprocessor hardware, software, and interfacing; fundamentals of digital circuits and systems; computer organization and control; memory systems; arithmetic unit design.

### **JEE 180 Introduction to Electrical Networks (3)**

Prerequisite: Physics 112 and Mathematics 202 (may be taken concurrently). Elements, sources, and interconnects. Ohm's and Kirchhoff's laws, superposition and Thevenin's theorem; the resistive circuit, transient analysis, sinusoidal analysis, and frequency response.

### **JEE 190 Introduction to Digital and Linear Electronics (3)**

Prerequisite: JEE 180. Introduction to contemporary electronic devices and their circuit applications. Terminal characteristics of active semiconductor devices. Characteristic and D-C models of junction diodes, bipolar transistor (BJTs), and metal-oxide semiconductor field effect transistors (MOSFETs) are developed and used to design single- and multi-stage amplifiers. Models of the BJT and MOSFET in cutoff and saturation regions are used to design digital circuits.

### **JEE 214 Engineering Electromagnetics I: Fundamentals (3)**

Prerequisite: Mathematics 202. Electromagnetic theory as applied to electrical engineering: vector calculus; electrostatics and magnetostatics; Maxwell's equations, including Poynting's theorem and boundary conditions; uniform plane-wave propagation; transmission lines - TEM modes, including treatment of general, lossless line, and pulse propagation; introduction to guided waves; introduction to radiation and scattering concepts.

### **JEE 227 Power, Energy, and Polyphase Circuits (3)**

Prerequisite: JEE 180. Fundamental concepts of power and energy; electrical measurements; physical and electrical arrangement of electrical power systems; polyphase circuit theory and calculations; principle elements of electrical systems such as transformers, rotating machines, control, and protective devices, their description and characteristics; elements of industrial power system design.

### **JEE 262 Digital Computers II: Architecture (3)**

Prerequisite: JEE 160 or equivalent. Study of interaction and design philosophy of hardware and software for digital computer systems: Machine organization, data structures, I/O consideration. Comparison of minicomputer architectures.

## UM-St. Louis/Washington University Joint Undergraduate Engineering Program

### **JEE 279 Signal Analysis for Electronic Systems and Circuits (3)**

Prerequisites: JEE 180 and JEMT 217. Processing of signals in electronic systems and circuits; time-domain methods using impulse response and convolution; frequency-domain methods using Fourier, Laplace, and Z-transforms and frequency-response functions; discrete- and continuous-time models; principles of sampling and modulation. Each student presents both written and oral reports on a subject related to the course material.

### **JEE 280 Network Analysis (3)**

Prerequisite: JEE 279. Theoretical and practical aspects of electrical networks. Loop and nodal analysis of multiport networks. Transfer functions, admittance and impedance functions, and matrices. Magnitude and phase relations. Butterworth, Chebyshev, and other useful network response functions. Network theorems. Computer-aided design. Synthesis of passive (LC, RC, RLC) networks and of active (RC) networks.

### **JEE 290 Principles of Electronic Devices (3)**

Prerequisite: Physics 112. Introduction to the solid-state physics of electronic materials and devices, including semiconductors, metals, insulators, diodes and transistors. Crystal growth technology and fundamental properties of crystals. Electronic properties and band structure of electronic materials, and electron transport in semiconductor materials. Fabrication of pn junction diodes, metal-semiconductor junctions, and transistors and integrated-circuit chips. Fundamental electrical properties of rectifying diodes and light-emitting diodes, bipolar transistors and field-effect transistors. Device physics of diodes and transistors, large-signal electrical behavior and high-frequency properties.

### **JEE 292 Electronic Devices and Circuits (3)**

Prerequisite: JEE 190. Introduction to semiconductor electronic devices: transistors and diodes. Device electrical DC and high-frequency characteristics. Bipolar transistors, field-effect transistors, and MOS transistors for analog electronics applications. Transistors fabrication as discrete devices and as integrated-circuit chips. Large-signal analysis of transistor amplifiers: voltage gain, distortion, input resistance and output resistance. Analysis of multitransistor amplifiers: Darlington, Cascode, and coupled-pair configurations. Half-circuit concepts, differential-mode gain, common-mode gain, and differential-to-single-ended conversion. Transistor current sources, active loads, and power-amplifier stages. Applications to operational amplifiers and feedback circuits.

### **JEE 310 Engineering Electromagnetics II: Applications (3)**

Prerequisite: JEE 214. Study of important applications of electromagnetic theory. Solution of electrostatic and magnetostatic problems involving Laplace and Poisson's equations subject to boundary conditions. Maxwell's equations, including boundary conditions for dielectrics and conductors, reflection and transmission characteristics with effects due to losses. Study of guided waves in rectangular and optical wave guides, including effects of dispersion. S-parameters and transmission networks,

including S-matrix properties, relation to impedance, reflection coefficient, VSWR, and Smith chart. Study of antennas, including exposure to terminology and thinwire antennas.

### **JEE 316 Electrical Energy Laboratory (3)**

Prerequisite: JEE 150 (may be taken concurrently). Experimental studies of principles important in modern electrical energy systems. Topics: power measurement, transformers, power supplies, batteries, static frequency converters, thermoelectric heating and cooling, photovoltaics, electrical lighting, induction machines, commutator machines.

### **JEE 332 Control Systems II (3)**

Prerequisite: JEE 331. The control of physical systems with a digital computer, microprocessor, or special-purpose digital hardware is becoming very common. Course continues JEE 331 to develop models and mathematical tools needed to analyze and design these digital, feedback-control systems. Linear, discrete dynamic systems. The Z-transform. Discrete equivalents to continuous transfer functions. Sampled-data control systems. Digital control systems design using transfer and state-space methods. Systems comprised of digital and continuous subsystems. Quantization effects. System identification. Multivariable and optimum control.

### **JEE 345 Digital Signal Processing (3)**

Prerequisite: JEE 279. Introduction to analysis and synthesis of linear, discrete-time systems with applications in sampled-data and digital signal processing. Time-domain analysis using discrete convolution. Frequency-domain analysis using the Fourier and Z-transforms. Discrete Fourier transforms and fast Fourier transforms. Design of digital filters. Finite-register effects. Hardware architecture for processing implementations.

### **JEE 355 Digital Systems Laboratory (3)**

Prerequisites: JEE 160 and JEE 190. Procedures for reliable digital design, both combinational and sequential; understanding manufacturers' specifications; use of special test equipment; characteristics of common SSI, MSI, and LSI devices; assembling, testing, and simulating design; construction procedures; maintaining signal integrity. Several single-period laboratory exercises, several design projects, and application of a microprocessor in digital design. Microprocessor programs are written in assembly language on a host computer and down loaded to the laboratory station for debugging. One lecture and one laboratory period a week.

### **JEE 358 Computer-Aided Design of Electronic Systems (3)**

Prerequisites: JEE 190 and 279. Introduction to computer-aided techniques in the solution of network and electronic design problems, including filters; analysis of linear and nonlinear circuits; methods for numerical integration, evaluation of the Fourier integral; numerical methods for solving differential equations, automated methods for design; sparse matrix techniques. Use of problem-oriented languages such as SPICE. Methods for the analysis and design of digital circuits and systems.

# UM-St. Louis/Washington University Joint Undergraduate Engineering Program

## **JEE 360 Digital Computers: Switching Theory (3)**

Prerequisite: JEE 160 or equivalent. Advanced topics in switching theory as employed in the analysis and design of various information- and material-processing systems. Combinational techniques; minimization, logic elements, bilateral devices, multiple output networks, symmetrical and iterative functions, threshold logic, state identification and fault detection, hazards, and reliable design. Sequential techniques: synchronous circuits, state tables, machine minimization, state assignment, asynchronous circuits, finite state machines.

## **JEE 368 Applied Optics (3)**

Prerequisite: JEE 214 or equivalent. Topics relevant to the engineering and physics of conventional as well as experimental optical systems and applications explored. Items addressed include geometrical optics, Fourier optics such as diffraction and holography, polarization and optical birefringence such as liquid crystals, and nonlinear optical phenomena and devices.

## **JEE 380 Senior Design Project (3)**

Prerequisite: senior standing. Working in groups of three, students address design tasks assigned by faculty. Each group completes three design projects in a semester. Projects are chosen to emphasize the design process, with the designer choosing one of several paths to a possible result. Collaboration with industry and all divisions of the University is encouraged.

## **Engineering and Policy**

### **JEP 281 Topics in Engineering Management (3)**

Prerequisite: Junior standing. Techniques relating to managing engineering professionals and engineering activities are introduced and discussed. The engineer's transition into project and project team management. Role of engineering and technology in major corporations. Engineering managerial functions, including production and use of financial information in planning, scheduling, and assessing engineering projects. Motivation of individual and group behavior among technical professionals. Macroeconomic factors influencing technical decision-making and engineering project management. Additional topics will vary from year to year, but will typically include government relations, regulation, compensation, ethics, production, operations, the quality function, and technological innovation. Extensive use of case study analysis, including written reports and in-class presentations by students.

### **JEP 337 Environmental Risk Assessment (3)**

Prerequisite: JCE 374. Definition of risk and uncertainty. Common probability models and their application to environmental risk assessment. Principles of epidemiology and toxicology. Bioassays. Exposure characterization and measurement. Qualitative and quantitative evaluation of human and animal studies. Tests of significance. Estimation of response rates. Dose-response models and parameter estimation. Low-dose extrapolation. Prediction error. Estimating individual risk and aggregate risk. Risk assessment methods in regulatory decision making; standard setting.

## **JEP 361 Introduction to Environmental Law and Policy (3)**

Prerequisite: Junior standing. Survey of the most prominent federal laws governing environmental compliance and pollution control. Examines laws applicable to environmental impact statements, air pollution, water pollution, and hazardous waste. Addresses policy concerning the relative merits of using technological capabilities as compared to health risks in setting environmental standards. Discusses the need for environmental regulation to protect societal resources.

## **Engineering Communications**

### **JEC 210 Engineering Communications (3)**

Prerequisite: English 10 or equivalent and junior standing. Persistent concerns of grammar and style. Analysis and discussion of clear sentence and paragraph structure and of organization in complete technical documents. Guidelines for effective layout and graphics. Examples and exercises stressing audience analysis, graphic aids, editing, and readability. Videotaped work in oral presentation of technical projects. Writing assignments include descriptions of mechanisms, process instructions, basic proposals, letters and memos, and a long formal report.

## **Engineering Mathematics**

### **JEMT 217 Engineering Mathematics (4)**

Prerequisite: Mathematics 202 or equivalent. The Laplace transform and applications; series solutions of differential equations, Bessel's equation, Legendre's equation, special functions; matrices, eigenvalues, and eigenfunctions; vector analysis and applications; boundary value problems and spectral representation; Fourier series and Fourier integrals; solution of partial differential equations of mathematical physics.

## **Mechanical Engineering**

### **JME 141 Mechanics of Deformable Bodies (3)**

Prerequisites: Mathematics 175 and Engineering 144. Normal and shear stresses and strains. Stress-strain diagrams. Hooke's law and elastic energy. Thermal stresses. Stresses in beams, columns, torsional members, and pressure vessels. Elastic deflection of beams and shafts. Statically indeterminate structures. Mohr's circle of stress. Stability concepts.

### **JME 218 Elements of Mechanisms (2)**

Prerequisites: Engineering 145 and JCS 36; Mathematics 202 and JME 141 (may be taken concurrently); JME 218 and JME 219 must be taken during the same semester. Kinematic and dynamic principles of simple and complex planar mechanisms. Gear theory and design of gear trains.

### **JME 219 Mechanisms Laboratory (2)**

Prerequisite: JME 218 and JME 219 must be taken during the same semester. Laboratory problems focusing on materials covered in JME 218 and emphasizing utilization of numerical methods of solution and computer programs as design tools.

## UM-St. Louis/Washington University Joint Undergraduate Engineering Program

### **JME 220 Thermodynamics (3)**

Prerequisites: Mathematics 175, Chemistry 11, Physics 111. Classical thermodynamics, thermodynamic properties, work and heat, first and second laws. Entropy, irreversibility, availability. Application to engineering systems.

### **JME 221 Energetics for Mechanical Engineers (3)**

Prerequisite: JME 220. Thermodynamic cycle analysis: vapor power, internal combustion, gas turbine, refrigeration. Maxwell relations and generalized property relationships for non ideal gases. Mixtures of ideal gases, psychrometrics, ideal solutions. Combustion processes, first and second law applications to reacting systems. Chemical equilibrium. Compressible flow in nozzles and diffusers.

### **JME 222 Introduction to Machine Design (2)**

Prerequisites: JCS 36, JME 141, Math 202; JME 222 and JME 223 must be taken during the same semester. Design of machines and machine components using advanced concepts and analytical tools. Overview and definition of feasibility, synthesis, and analysis as used in design. Determination of loads, material properties, factors of safety and their statistical distributions. Analysis of stress and performance. Failure criteria: yielding, fracture, fatigue, stress-corrosion cracking, creep, etc. Formulation of solutions and optimization of design. Applications to design of shafts, springs, fasteners, belts, chains, bearings, gears, and screws. Use of computer techniques to determine velocities, accelerations, and forces in mechanisms and in stress analysis of components.

### **JME 223 Machine Design Laboratory (2)**

Prerequisite: JME 222 and JME 223 must be taken during the same semester. Laboratory problems focusing on materials covered in JME 222.

### **JME 225 Materials Science (4)**

Prerequisite: Chemistry 11. Introduces the chemistry and physics of engineering materials. Emphasis on atomic and molecular interpretation of physical and chemical properties, the relationships between physical and chemical properties, and performance of an engineering material.

### **JME 261 Physical Metallurgy (3)**

Prerequisite: JME 225. Study of structure, constitution, properties of metals and alloys. Theory of alloying and heat treatment. Laboratory applications of atomic and crystal structure and thermodynamics to metallurgy.

### **JME 270 Fluid Mechanics (3)**

Prerequisites: Math 202 and Engineering 145. Fundamental concepts of fluids as continua. Viscosity. Flow field: velocity, vorticity, streamlines. Fluid statics: hydrostatic forces manometers. Conservation of mass and momentum. Incompressible inviscid flow. Dimensional analysis and similitude. Flow in pipes and ducts. Flow measurement. Boundary-layer concepts. Flow in open channels.

### **JME 271 Principles of Heat Transfer (3)**

Prerequisites: JME 220, JME 270, and Math 202. Introductory treatment of the principles of heat transfer by conduction, convection, or radiation. Mathematical analysis of steady and unsteady conduction along with numerical methods.

Analytical and semiempirical methods of forced and natural convection systems. heat exchangers: LMTD and e-NTU analysis. Boiling and condensation heat transfer. Radiation between blackbody and real surfaces. Radiation network analysis.

### **JME 280 Fluid Mechanics Laboratory (1)**

Prerequisite: JME 270. Physical laboratory exercises focusing on fluid properties and flow phenomena covered in JME 270. Calibration and use of a variety of equipment; acquisition, processing, and analysis of data by manual as well as automated methods.

### **JME 281 Heat Transfer Laboratory (1)**

Prerequisite: JME 280 and JME 271. Physical laboratory exercises, including some numerical simulations and computational exercises, focusing on heat-transfer phenomena covered in JME 271. Calibration and use of variety of laboratory instrumentation; acquisition, processing, and analysis of data by manual as well as automated methods; training in formal report writing.

### **JME 316 Advanced Strength and Introductory Elasticity (3)**

Prerequisite: JME 141. Introduction to elasticity; indicial notation, stress and strain, material laws. Plane stress and strain problems and illustrations. Torsion of prismatic bars. Energy principles: virtual work, potential energy and complementary energy theorems, reciprocal theorems. Introduction to plates and shells.

### **JME 317 Dynamic Response of Physical Systems (2)**

Prerequisites: Engineering 145 and JEMT 217; JME 317 and JME 318 must be taken during the same semester. Free and forced vibration of mechanical systems with lumped inertia, springs, and dampers. Methods of Laplace transform, complex harmonic balance, and Fourier series. Electrical analogs. Introduction to Lagrange's equations of motion and matrix formulations. Transient response of continuous systems by partial differential equations, by Rayleigh methods, and by lumped parameters.

### **JME 318 Dynamic Response Laboratory (2)**

Prerequisite: JME 317 and JME 318 must be taken during the same semester. Laboratory problems focusing on materials covered in JME 317.

### **JME 324 Manufacturing Processes (3)**

Prerequisite: senior standing. Introduction to the processes used in making basic components for machines and structures. Emphasis is on the underlying scientific principles for such manufacturing processes as casting, forging, extrusion and machining.

### **JME 325 Materials Selection in Engineering Design (3)**

Prerequisite: senior standing. Analysis of the scientific bases of material behavior in the light of research contributions of the last 20 years. Development of a rational approach to the selection of materials to meet a wide range of design requirements for conventional and advanced applications. Although emphasis will be placed on mechanical properties, other properties of interest in design will be discussed, e.g., acoustical, optical and thermal.

## UM-St. Louis/Washington University Joint Undergraduate Engineering Program

### **JME 326 Experimental Stress Analysis (3)**

Prerequisite: JME 222. Basic methods of experimental determination of stresses in structures and machines. Mechanical, optical, and electrical gauges. Use of brittle lacquer, photoelasticity, moiré methods, and auxiliary techniques for plane and three-dimensional problems.

### **JME 331 Control Systems I (3)**

Prerequisite: JEMT 217. Introduction to automatic control concepts. Block diagram representation of single- and multi-loop systems. Multi-input and multi-output systems. Control system components. Transient and steady-state performance; stability analysis; Routh, Nyquist, Bode, and root locus diagrams. Compensation using lead, lag, and lead-lag networks. Synthesis by Bode plots and root-locus diagrams. Introduction to state-variable techniques, state transition matrix, state-variable feedback.

### **JME 334 Solar Energy (3)**

Prerequisite: JME 220, 270, and 271. Extraterrestrial solar radiation, solar radiation on earth's surface, and weather service bureau data. Review of selected topics in heat transfer. Methods of solar energy collection including flat plate and concentrating collectors. Solar energy storage. Transient and long-term solar system performance.

### **JME 347 Mechanical Metallurgy (3)**

Prerequisite: JME 261. Elastic and plastic properties of metals used in static and dynamic design. Various testing methods correlated with metal properties, statistical analysis of testing methods, fundamentals of mechanical working processes.

### **JME 372 Fluid Mechanics II (3)**

Prerequisites: JME 220 and 270. Mechanics and thermodynamics of incompressible and compressible flows: varying-area adiabatic flow, standing normal and oblique shock waves, Prandtl-Meyer flow, Fanno flow, Rayleigh flow, turbulent flow in ducts and boundary layers.

### **JME 376 The Engineering Properties of Materials (3)**

Prerequisite: junior standing. A detailed look at the mechanical, chemical, and surface properties of materials. Topics include elastic properties; plastic deformation; viscoelastic behavior; chemical resistance; corrosion resistance; and the electromagnetic properties of metal, plastic, ceramic, and composite systems.

### **JME 381 Air-Conditioning Systems and Equipment I (3)**

Prerequisite: senior standing. Survey of air conditioning systems. Moist air properties and conditioning processes. Adiabatic saturation. Psychrometric chart. Environmental indices. Indoor air quality. Heat balances in building structures. Solar radiation. Space heating and cooling loads.

### **JME 382 Air-Conditioning Systems and Equipment II (3)**

Prerequisite: JME 381. Fluid flow, pumps, and piping design. Room air distribution. Fans and building air distribution. Mass transfer and measurement of humidity. Direct control of heat and mass transfer. Heat exchangers. Refrigeration systems. Absorption refrigeration.

### **JME 390 Senior Design Project (4)**

Prerequisite: senior standing. Working in small groups, students address design tasks assigned by faculty. Each group completes three design projects in a semester. Projects are chosen to emphasize the design process, with the designer choosing one of several paths to a possible result. Collaboration with industry is encouraged.

## UM-Rolla Engineering Education Center

### Faculty

**James H. Hahn, P.E.**, Associate Professor; Director

Ph.D., University of Missouri-Rolla

**C. Ben Basye, P.E.**, Professor Emeritus

Ph.D., Iowa State University

**Victor Birman**, Associate Professor

Ph.D., Israel Institute of Technology

**Anton de S. Brasunas, P.E.**, Professor Emeritus

Sc.D., Massachusetts Institute of Technology

**Chaman L. Sabharwal**, Professor

Ph.D., University of Illinois-Urbana

**Daniel C. St. Clair**, Professor

Ph.D., University of Missouri-Rolla

**David A. Shaller**, Assistant Professor

J.D., Cleveland State University

### General Information

The UM-Rolla Engineering Education Center; UM-Rolla Engineering Education Center was started in 1964 at the request of St. Louis industry and with the encouragement of local universities. It offers Master of Science degrees in the following areas:

Aerospace Engineering

Civil Engineering

Computer Science

Electrical Engineering

Engineering Management

Engineering Mechanics

Environmental Engineering

Mechanical Engineering

Admission to candidacy for these degrees is granted by the University of Missouri-Rolla. Normally admission is granted to persons holding B.S. degrees in engineering from ABET-accredited schools (this does not apply to Computer Science) and whose undergraduate GPA places them in the upper third of their graduating class.

An appropriately selected program of 30 credit hours is required for the Master of Science degree with thesis, and a 33 credit hour program is required for the nonthesis Master of Science degree.

### Course Listings

Course listings for the various semesters may be obtained by writing or phoning the Engineering Education Center. Course descriptions are listed in the UMR graduate catalog.

The Engineering Education Center also provides information to St. Louis area residents about UMR programs in Rolla. The Center can assist area pre-engineering students with transfer to the Rolla campus and with entry into the Cooperative Training Programs that exist between UMR and numerous U.S. industries. This co-op program allows engineering students to gain valuable industrial experience during their school years and to be partially or totally self-supporting.

### Fees

Fees for Engineering Center programs are different from those on the UM-Rolla or UM-St. Louis campus. For information about the Engineering evening program on the UM-St. Louis campus, write to Engineering Education Center, University of Missouri, 8001 Natural Bridge Road, St. Louis, Missouri 63121, or phone (314) 516-5431.



## ROTC

Students interested in Reserve Officer Training Corps (ROTC) programs may enroll in either the Army ROTC program at UM-St. Louis or the Air Force ROTC program sponsored at UM-St. Louis through Parks College of St. Louis University. These programs provide undergraduate and graduate students with the opportunity to combine academic study with a military officer training program.

For further information concerning the Army ROTC program, contact the ROTC department at Washington University, telephone 935-5546. For information on the Air Force ROTC program, contact the Air Force ROTC Department at Parks College of St. Louis University, telephone (800) 851-3048, Ext. 311. In Illinois, call (800) 851-7878, Ext. 311.

### Army ROTC

The purpose of the Military Science Department is to develop young men and women into junior commissioned officers for positions of responsibility in the Army Reserve, Army National Guard, or Active Army.

#### Benefits

Army ROTC offers UM-St. Louis students:

- 1) A challenging, important, well-paid job at graduation in one of the many professional fields that the modern Army has to offer. Army officers serve in such fields as aviation, procurement, personnel management, intelligence, military police, communications, engineering, transportation management, finance, combat arms, hospital administration, nursing, and research and development. Starting salary with allowances of an active duty Second Lieutenant is approximately \$26,000. Within four years he/she should be promoted to Captain with a salary with allowances of nearly \$45,000. Reserve officers attend one weekend per month and an annual two-week training camp.
- 2) College financing. All students receive \$150/month during the final two years of college (up to \$3,000), plus another \$750 for attendance at summer camp. Also, advanced course students may join the Reserves as an officer trainee and receive pay (currently \$147/month) while in college.
- 3) Fully enrolled students may compete for the many ROTC scholarships available every year. These scholarships pay for tuition, fees, and books, and also provide \$150/month.
- 4) Option of two careers. Upon graduation and commissioning as officers in the U.S. Army, students may fulfill their obligation by serving on active duty or be guaranteed reserve duty if requested. This is an important option for those students who want to pursue a civilian career but would like to serve as reserve officers. Officers who serve on active duty receive 30 days paid vacation every year, free medical and dental care, travel, and the opportunity to pursue advanced degrees with educational assistance from the Army on a fully funded or partially funded basis.

#### The Program

College students who complete the Reserve Officer Training Corps program will earn commissions as Second Lieutenants in the U.S. Army. The ROTC program may be completed in several different ways as outlined below.

- 1) **Four-Year Program.** The Military Science program is traditionally offered as a four-year program. It is best to start as a freshman, but special arrangements can be made for those who start as sophomores. The first two years of Military Science are voluntary without service obligation, and are designed to give the student a perspective of their leadership ability and what the Army can offer them. The student who decides to continue in ROTC and pursue a commission signs an agreement with the Department of the Army to accept a commission upon completion of the last two years of Military Science. In return the Army agrees to provide a subsistence allowance (up to \$3,000) and to provide all necessary uniforms and Military Science books.
- 2) **Two-Year Program.** The two-year program is designed to provide greater flexibility in meeting the needs of students desiring commissions in the U.S. Army. UM-St. Louis students who did not participate in the four-year program and junior college transfer students are eligible for enrollment. Basic prerequisites for entering the two-year program are:
  - A) Students must be in good academic standing (minimum 2.0 GPA) and pass an Army medical examination; and
  - B) The student must have two academic years of study remaining (undergraduate, graduate, or combination). The student will attend a six-week summer camp to catch up with the students in the four-year program. Attendance at the basic camp does not obligate the student in any way and is only intended to give the student a look at Army life and opportunities. The student will be paid approximately \$750 for attendance at basic camp.

#### Veterans

Veterans of any of the Armed Forces may qualify for advanced placement and should contact the Military Science Department for details.

#### Scholarships

The Army Reserve Officer Training Corps currently has 12,000 scholarships in effect, which pay toward tuition, fees, and books, and provide \$150/month for the academic year. These scholarships cover periods of four years, three years, and two years. UM-St. Louis freshmen and sophomores should apply in January for the two and three-year scholarships. Special consideration for scholarships is given to students in engineering, nursing, business, and any physical science. Scholarship students may incur a four-year active duty obligation; however, they may request reserve duty to serve with the National Guard or Army Reserve.

## ROTC

### Qualifications

All students who desire to enter the Army Reserve Officer Training Corps must be United States citizens, in good physical condition, and have high moral character. Students must be at least 17 years old to enroll and not over 30 when they receive their commission. Additional qualifications to be admitted into the advanced course include an academic average of C or better, and passing an Army medical examination.

### Academics

UM-St. Louis Army Reserve Officers' Training Corps academics consists of two parts:

- 1) earning a degree in the student's chosen academic subject, and
- 2) completing 18 credit hours (four-year program) or 12 credit hours (two-year program) of the Military Science curriculum. The courses in Military Science are college-level academic courses which receive full academic credit toward the student's elective degree requirements in the Business School and the School of Education. The curriculum consists of classroom instruction and a leadership laboratory in which students receive leadership experience.

### Leadership Laboratory

Leadership Laboratory is required of all students enrolled in Military Science courses. Classes are two hours every week and are held on Thursday afternoon from 4 p.m. to 6 p.m., unless otherwise designated. In addition, students attend one Field Training Exercise (FTX) each semester. Leadership Laboratory develops individual military skills and leadership ability through participation in drill and ceremonies, survival training, mountaineering, field-training exercises, and exposure to progressively greater responsibilities within the Cadet Corps organization.

### Graduate Study

The Army realizes the importance of a graduate degree for its personnel. There are several programs available to assist ROTC graduates in obtaining an advanced degree. The Army sends selected Second Lieutenants immediately to graduate school (with full pay and allowances) to pursue advanced degrees in engineering and the physical sciences. Other officers may postpone active duty for two years to continue graduate study. Students who are accepted into medical school may take up to four years to complete their studies. There are numerous opportunities for an officer to complete a master's degree in service and receive financial assistance from the Army.

### Special Training

Selected volunteers may attend one of several special schools during the summer: the Airborne Course at Fort Benning, GA; Air Assault School at Fort Campbell, KY; or the Northern Warfare School in Alaska. Successful course completion earns the coveted badge (such as the jump wings or air assault wings) associated with each school. Special Cadet Troop Leadership Training is available on a limited basis. Students participating in the program live and work with an active Army unit during part of one summer.

### Cadet Activities

Army ROTC students may participate in many extra-curricular activities during the year. Social activities include the Army Military Ball, a fall canoe trip down the Meramec River, picnics, and informal parties. Army ROTC students also support various campus and community service activities. Interested students also participate in the Raider Club, Drill Team, Color Guard, and Marksmanship Team.

The mission of the Army Reserve Officer Training Corps is to commission the future officer leadership of the United States Army. While there is much to be learned in the classroom, at leadership laboratories and during summer camp, there are still other opportunities for self-enrichment and personal satisfaction to be found through active participation in the various extracurricular activities sponsored by ROTC and through interaction and association with fellow cadets and cadre. Cadre instructors are active Army officers and noncommissioned officers working full time as instructors and mentors at the University. To inquire about ROTC and apply for a scholarship call the Military Science Department at Washington University; 935-5546 or 263-6780.

## Air Force ROTC

The objective of the Air Force Reserve Officer Training Corps (AFROTC) is to qualify students for appointment as active duty second lieutenants in the United States Air Force. However, any student may enroll in the freshman/sophomore-level aerospace studies courses, and students may also enroll in the junior/senior-level courses with permission of the professor of Aerospace Studies.

UM-St. Louis offers the two- and four-year AFROTC programs through an agreement with Parks College of St. Louis University.

The four-year program is tailored for students with three or more years of undergraduate studies remaining. Student with junior standing or above may apply for entry into the two-year program. Entry into the two-year program is competitive and is based on standardized test scores, academic major, grade-point average, physical examination, personal interview with the professor of Aerospace Studies, and successful completion of a summer field training session at an Air Force base. Applicants must be full-time students and must remain in good academic standing.

### Reserve Officer Training Corps

The AFROTC Program is divided into the General Military Course (GMC), the freshman/sophomore level curriculum; and the Professional Officer Course (POC), the junior/senior level curriculum. The GMC covers two main themes: The Air Force Today and The Air Force Way. The courses of the POC emphasize the professional development of the future Air Force officer. The curriculum covers Air Force Leadership and Management and Preparation for Active Duty. Field trips to Air Force bases supplement classroom instruction and familiarize the cadet with Air Force operations and organization.

## ROTC

### To be commissioned, AFROTC students/cadets must:

- Pass a medical exam at a military medical facility.
- Obtain a favorable evaluation on an Armed Forces personal history security investigation.
- Flying applicants must complete commissioning requirements before age 26-1/2, and nonflying applicants must complete commissioning requirements by age 30. However, the age limit for nonflying applicants may be extended to age 35 for outstanding individuals.
- Be of good character (as determined by a favorable record with law enforcement authorities).
- Successfully complete all AFROTC course requirements.
- Complete at least a baccalaureate degree.

Air Force ROTC textbooks are loaned to all AFROTC students without charge. Students in the POC will receive a monthly subsistence allowance of \$150 per month for a maximum of 20 months, an Air Force uniform, in excess of \$700 for the summer field training course, and a travel allowance to and from the training location.

In addition to the AFROTC courses offered for academic credit, the Aerospace Studies Department sponsors the Arnold Air Society and Angel Flight. Arnold Air Society is a national honorary service organization, and membership is open to anyone interested in bringing to the local community a better understanding of the Air Force mission and its leaders.

**Field Training** AFROTC Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Students in the four-year program participate in four weeks of field training. Major areas of study include junior officer training, aircrew/aircraft orientation, career orientation, survival training, base functions and Air Force environment, and physical training.

Students applying for entry into the two-year program must successfully complete six weeks of Field Training prior to enrollment in the Professional Officer Course. The major areas of study included in the six-week Field Training Program are essentially the same as those conducted at four-week field training, plus the academic curriculum of the General Military Course including Leadership Laboratory. POC cadets are eligible for a \$1000 per semester Federal AFROTC Scholarship.

**Leadership Laboratory** Leadership Laboratory is taken once per week throughout the student's enrollment in AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. It also includes field trips to Air Force installations throughout the United States.

**Other Training** Volunteers may attend various special cadet training programs such as light aircraft training, parachute jump training, and advance cadet training. Students participating in the latter, work with an Air Force unit during part of the summer.

**Air Force Scholarships** The Air Force offers four-, three-, and two-year scholarships to qualified students. These scholarships pay tuition, certain fees, and textbook cost. Scholarship recipients receive \$150 per month subsistence allowance.

For further information on the Air Force ROTC program at UM-St. Louis, call (618) 337-7575, ext 328, or 800-851-3048, ext 328. In Illinois call 800-851-7878, ext 328, or at Southern Illinois University at Edwardsville (SIUE), call (618) 692-3180.

# ROTC

## Course Descriptions

### Military Science

#### 101 Introduction to Military Science (1)

Provides an overview of the organization and role of the U.S. Army and the Army ROTC. Initiates an appreciation of the military profession and its customs, traditions, and courtesies. Introduces the student to the responsibilities and obligations of an Army officer. Develops leadership and managerial abilities. Provides fundamentals of military history, customs and traditions, and training of the U.S. Army.

#### 102 Introduction to Military Operations (1)

Prerequisite: Military Science 101, equivalent, or consent of Professor of Military Science (PMS). Provides an introduction to theoretical and practical aspects of supervision. Emphasizes the need for proper motivation and cooperative attitudes as they pertain to both individual and group interaction. Continues development of leadership and managerial abilities and provides fundamentals of common military training and tasks that are essential at the tactical level of military operations. Tasks performed as an individual are emphasized.

#### 201 Small Unit Leadership (2)

Prerequisite: Military Science 101, Military Science 102, equivalent, or consent of Professor of Military Science (PMS). Provides basic background in the skills necessary for military map reading and land navigation to include: (1) military grid reference system; and (2) map scale, distance, elevation, and relief. Continues development of leadership and managerial skills. Provides fundamentals of orienteering. Introduces the student to basic communication skills and develops basic awareness on how these skills affect other people.

#### 202 Small Unit Leadership II (2)

Prerequisite: Military Science 201, equivalent, or consent of Professor of Military Science (PMS). Develops principles and techniques of applied leadership through discussion of some of the processes and procedures used by the leader to accomplish organizational objectives to include: (1) decision making; (2) communication; and (3) counseling. Provides practical experience in leadership of small units in the military environment. Examines principles and techniques of small-unit military tactical patrolling operations with emphasis on development of pre-planning and execution concepts. Applies concepts practiced through in-class map exercises and field training practicum. Provides an overview of the Army ROTC advanced course. Continues development of leadership and managerial abilities. Provides fundamentals of marksmanship.

#### 301 Military Leadership and Management I (3)

Prerequisite: Military Science 101 through Military Science 202 or equivalent and selection by Professor of Military Science (PMS). Covers the functional roles of the military leader and basic principles of management with emphasis on problem analysis and decision making, span of control, delegation of authority and responsibility, planning and

coordinating. Provides fundamentals of effective methods of instruction and includes practical exercises where each student plans, prepares, and presents part of instruction. Continues to develop the student's ability to communicate orally and in writing. Provides additional insight into areas of Army officer specialization. Stresses practical application in the development of leadership abilities in that students are placed in positions of leadership within the ROTC student structure.

#### 302 Advanced Leadership and Management II (3)

Prerequisite: Military Science 301. Provides a review of basic military land navigation and map-reading techniques. Examines more advanced principles and techniques of small unit military offensive and defensive tactical operations with concentrated study of such factors as command and control, communications, weapons systems, and military geography. Continues emphasis on practical application exercises to develop students' leadership abilities. Solidifies student's preparation for attendance at the ROTC advanced camp during the upcoming summer.

#### 401 Military Administration (3)

Prerequisites: Military Science 301 and Military Science 302. Explores the practical aspects of military law. Examines the organization, responsibilities, and management of the military unit staff. Provides a working knowledge of proper staffing procedures. Continues development of leadership and managerial abilities through placement of students into key leadership positions within the ROTC student organizational structure. Students plan and conduct the majority of leadership practicum for all ROTC students.

#### 402 Seminar in Leadership and Ethics (3)

Prerequisite: Military Science 401. Examines military professional ethics and the ideal American values as a basis for military values. Examines techniques of resource management with particular emphasis on the military environment. Teaches proper application of tactical military doctrine at the company/team level and the planning necessary between elements of the team. Reviews the various roles of the newly commissioned Army officer. Students continue to be assigned positions of leadership within the ROTC student organizational structure.

These courses are taught at Parks College, St. Louis University, Washington University, or University of Missouri-St. Louis. Students should check the *Schedule of Courses* each semester for locations.

## AFROTC

### AEROSPACE STUDIES

The Aerospace Studies program (AFROTC) is divided into two parts; The General Military Course (GMC), the freshman/sophomore level curriculum, and the Professional Officer Course (POC), the junior/senior level curriculum. The GMC covers two main themes: The Air Force Today and The Air Force Way. The courses of the POC emphasize the professional development of the future Air Force Officer. The curriculum covers Air Force Leadership and Management and Preparation for Active Duty. Field trips to Air Force bases supplement classroom instructions and familiarizes the cadet with Air Force operations and organizations.

Leadership laboratory is taken two hours per week throughout the student's enrollment in the AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. The first two years of the Leadership Laboratory includes a study of Air Force customs and courtesies, drill and ceremonies, issuing military commands, instructing, directing and evaluating the preceding skills, studying the environment of an Air Force officer and learning about areas of opportunity available to commissioned officers. The last two years of LLab consist of activities classified as advanced leadership experiences. They involve the planning and controlling of military activities of the cadet corps, the preparation and presentation of briefings and other oral and written communications; and the providing of interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets.

AFROTC cadets must also successfully complete supplemental courses to enhance their utility and performance as commissioned officers. These include university courses in English composition and mathematical reasoning. Specific courses are designated by the Professor of Aerospace Studies.

**Field Training (FT):** Cadets in the four-year program participate in four weeks of field training. Cadets in the two or three year programs (exception for prior AF service) must attend the six week FT session, which is identical to the four week program plus 90 hours of GMC curriculum. Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Major areas of study include: Air Force Orientation, Officer Training, aircrew/aircraft orientation, survival training, base functions and physical training.

Students applying for entry into the two or three year program must successfully complete six weeks of field training prior to enrollment in the Professional Officer Course. The major areas of study included in the six week Field Training program are essentially the same as those conducted at four-week Field Training, plus the academic curriculum of the General Military Course including Leadership Laboratory. No direct academic credit is awarded for Field Training.

Federal scholarships are available for AFROTC cadets—any academic major may apply. Applications are to be submitted by detachment personnel to Head Quarters Reserve Officers Training Corps (AFROTC), Maxwell Air Force Base, AL.

Participation in AFROTC is not required to take Aerospace courses.

#### Lower Division (General Military)

Aerospace Studies courses (AS-101 through AS-202) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average, but credit hours for these courses will not be included in the total hours for graduation.

#### AS-101/102 The Air Force Today (2)

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

#### AS-201/202 The Air Force Way (2)

Survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

#### Upper Division (Professional Officer) Courses

Aerospace Studies courses AS-301 through AS-402 are advanced courses designed to improve communication and management skills required of Air Force officers. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

#### AS-301/302 Air Force Leadership and Management (3)

The study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical

## AFROTC

application of the concepts being studied. A mandatory leadership laboratory complements this course by providing advanced leadership experiences in officer type activities, giving students the opportunity to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week, each semester.

### **AS-401/402 Preparation For Active Duty (3)**

Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week, each semester.

### **Field Training**

Field Training provides leadership and officership training in a military environment, which demands conformity to high physical and moral standards. Within this structured environment, cadets are screened for officer potential as measured against field training standards. Motivation and professional development is achieved through various programs such as flight orientation, marksmanship, and survival training. Students in the four-year program participate in four weeks of field training. Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Major areas of study include: Air Force Orientation, Officer Training, aircrew/aircraft orientation, survival training, base functions and physical training.

## Programs at Other Universities

### Reciprocal Programs

Unless otherwise stated, students interested in one of the following programs should contact the admissions office at the school where the program is offered.

#### Nebraska

The University of Nebraska in Lincoln offers programs for a limited number of Missouri residents in architecture, community and regional planning, construction management, and actuarial science where students may pursue bachelor's degrees.

#### Illinois

A cooperative agreement exists between Southern Illinois University-Edwardsville and UM-St. Louis which permits students of one institution to take courses at the other institution as a regular part of their academic program. For further information consult the registrar's office or the dean's office.

#### Kansas

The following programs are offered to Missouri residents at various Kansas universities:

**Humanities** University of Kansas, Lawrence, with an M.A. in Oriental languages and literature, and a B.A. and M.A. in Slavic languages and literature (not Russian). A Ph.D. in Slavic languages and literature is also offered.

**Grain milling and technology** Kansas State University, Manhattan, with a B.S., M.S., or Ph.D. in bakery science and management, feed science and management, or milling science and management.

**Horticulture** Kansas State University, Manhattan, with a B.S. in horticulture therapy.

### Joint Programs in Law and Dentistry

The University of Missouri-St. Louis and the University of Missouri-Kansas City provide joint programs in law and dentistry for academically able students who are committed to public service. These special programs are designed to serve students seeking a career in public-service law or students who wish to practice dentistry in medically underserved communities.

UM-Kansas City will hold a reserved seat in its School of Law or in the School of Dentistry for qualified UM-St. Louis entering freshmen and make it available to them after they complete the required undergraduate studies at UM-St. Louis.

### Study Abroad Programs

The University of Missouri-St. Louis is committed to broadening students' understanding of different cultures and preparing them for the global community in which we

live. One of the most successful ways of achieving this "global mindset" is to study at an overseas location for a year, semester or summer. Spending time abroad as a student is an enriching experience both academically and personally, providing students with the opportunity to study within a different culture, and to grow individually through the challenges and adventures of life in another country.

The Center for International Studies provides UM-St. Louis students with opportunities to study at over 60 different universities in more than 20 countries around the globe. Through individual advising at the Center's Study Abroad Office, students can find the program best suited to their personal, academic and career goals. Internship possibilities are also available for qualified students. The Study Abroad Office is a resource library where students can research the thousands of different programs available to them through UM-St. Louis and other institutions.

#### Fees and Financial Aid

The cost of the program depends on the services provided and the country and city of study. For most programs, participants continue to pay UM-St. Louis fees plus airfare, room & board and spending money. Few programs require an additional fee. Students are usually housed in dormitories or are assisted in finding apartments. In most cases, students are able to apply financial aid to a Study Abroad program. Study Abroad Scholarships are available for qualified applicants through the Center for International Studies.

#### Application

Priority consideration is given to students who apply before February 1 for most programs in the following academic year. Students should plan to spend at least several weeks researching a program before applying. Some programs will allow late applicants.

Participants are chosen based on academic achievement, faculty recommendations, approval of the proposed course of study via the department/divisional advisory process, and familiarity with or willingness to learn the foreign language of instruction. Most programs are designed for undergraduate students in their junior or senior years of study; however, a limited number of programs for freshmen, sophomores and graduate students are available.

For further information contact the Study Abroad Office, Center for International Studies, 349 SSB, 516-6497.

#### Study Abroad Programs and Exchange Partners

##### Australia

University of Southern Queensland

##### Austria

Karl-Franzens-University Graz

##### Belgium

University of Antwerp

## Programs at Other Universities

### Canada

Carleton University  
McMaster University  
Technical University of Nova Scotia  
Universite Laval  
Universite de Montreal  
University of Waterloo  
York University  
Saint Mary's University  
Simon Fraser University  
Universite du Quebec a Montreal  
University of Alberta  
University of Manitoba  
University of Ottawa

### Denmark

Aarhus University

### Finland

University of Helsinki

### France

University Jean Moulin, Lyon (3)  
Ecole Superieure de Commerce de Saint Etienne  
University of Sciences and Technologies de Lille  
University Louis Pasteur, Strasbourg (1)  
University of Human Sciences, Strasbourg (2)  
University Robert Schuman, Strasbourg (3)

### Germany

University of Stuttgart  
Ruhr University Bochum  
University of Leipzig  
Fachhochschule Jena

### Ghana

University of Ghana

### Greece

Aristotle University of Thessaloniki

### Hungary

Kossuth Lajos University

### Iceland

University of Iceland

### Ireland

University College Cork  
University College Galway

### Italy

University of Bologna  
University of Parma

### Japan

Obirin University  
Semester in Japan Program  
Toyo University

### Mexico

El Colegio de Jalisco  
Universidad de Guadalajara

### ITESM-Guaymas Campus

Universidad Autonoma de Baja California  
Universidad Nacional Autonoma de Mexico  
Unviersidad of San Luis Potosi  
Instituto del Estudios Superiores de Tamaulipas  
Instituto Tecnologico Autonoma de Mexico (ITAM)  
Instituto Tec. y de Est. Sup. de Monterrey (ITESM)  
Universidad Autonoma de Guadalajara  
Universidad Autonoma de Querataro  
Universidad de las Americas Puebla  
Universidad Iberoamericana  
Universidad La Salle

### The Netherlands

Hogeschool Holland Business School  
Hogeschool voor de Kunsten  
University of Utrecht

### Northern Ireland

University of Ulster, Magee College

### Norway

University of Bergen

### Portugal

University of Coimbra

### Spain

Universidad Autonoma de Madrid  
Unviersidad Complutense de Madrid

### Sweden

Lund University

### Switzerland

University of Basel

### United Kingdom

University of Hull  
University of East Anglia  
Missouri London Program  
Business Internship in London Program

The Center is also currently developing programs in Taiwan.



## Programs at Other Universities

### CBHE Articulation Agreement

The Coordinating Board of Higher Education Articulation Agreement outlines statewide undergraduate general education requirements which satisfy the general requirements for students transferring into UM-St. Louis and students transferring out of UM-St. Louis to other public higher education universities in the state.

- 1) Communication skills in the English language, three (3) courses—at least two (2) of which must be written; one (1) oral communication course is recommended;
- 2) Humanities, three (3) courses from at least two (2) disciplines;
- 3) Physical and/or biological sciences, two (2) courses including at least one (1) with its associated laboratory component;
- 4) Mathematics, one (1) course—college algebra, an alternative course that includes a significant component of college algebra, or a course which has college algebra as a prerequisite; and
- 5) Social and behavioral sciences, three (3) courses from at least two (2) disciplines.

All institutions shall recognize the validity of other institutions' general education requirements when the minimum requirements as specified above are met. However, some foreign language and/or upper division general education courses or upper division graduation requirements may be required by the receiving institution whenever all native students are obligated to satisfy the same requirements.

Baccalaureate professional schools or programs may specify exceptions to the credit hour and course distribution minimums established in this section by promulgating these exceptions and by establishing specialized articulation programs related to associate of science degrees as detailed in that section of these transfer guidelines. In these instances, transferring students are not exempted from satisfying the specialized lower division requirements of departments or divisions of an institution into which a student wishes to transfer.

## Video Instructional Program

The Video Instructional Program offers flexible, self-paced learning for students who are far from campus or whose schedules make it difficult to attend regular classes. Video lessons for various courses are available for viewing over cable television stations. Tapes are available in UM-St. Louis libraries.

### St. Louis Area Cable Stations

Crown Media I, II, and III (formerly Cencom I, II, and III), Continental Cable, American, and United Video in St. Louis County; STL Cable and City Cable in the city will air courses over the Higher Education Channel (HEC).

### Course Listings

The following courses from the UM-St. Louis curriculum are offered:

## History

### 100 Topics in History: Science and Culture in the Western Tradition (3)

This course deals with history, philosophy, religion, art, architecture, mathematics, technology, and other topics to explain the unique contributions of science to Western civilization. The BBC programs, "The Day the Universe Changed," have received international acclaim. The series' host is James Burke, Professor Emeritus of History, UCLA. Discussion programs are hosted by Benjamin Dunlap with content consultants expanding on the concepts and issues presented by Burke. Programs identify key figures and describe their contributions to the development of Western Civilization; social and cultural conditions during periods; prevalent ideas, attitudes, and views; related factors that contributed to the development of new knowledge, discoveries, and technologies; and significant turning points in the development of science and knowledge in Western culture. History is not offered over cable. Tapes are available in the library.

## Philosophy

### 210 Significant Figures in Philosophy (3)

This course offers a survey of the development of philosophy through a study of seven major thinkers: Plato, Aristotle, Aquinas, Descartes, Locke, Kant and Nietzsche. Each author is considered not only a product of his own time and culture, but also the creator of ideas of enduring relevance. Topics include Plato's theory of forms and his delineation of an ideal state, Aristotle's formulation of an all-embracing scientific and metaphysical view, Aquinas' adaptation of Aristotle to a Christian framework, Descartes' inauguration of a new approach to philosophy, Locke's attempt to base all our ideas in experience, Kant's attempt to redeem philosophy from the extremes of dogmatism and skepticism, and Nietzsche's radical rejection of the values that had prevailed until his time.

### 290 Philosophical Issues in Other Disciplines: Humanities in the Arts (3)

An examination of selected philosophical issues in film, drama, music, literature, painting, sculpture, and architecture. The historical development of each of these

art forms is presented, and then excerpts and examples are provided, together with analysis and interpretation. For each art form, there is a program on critical evaluation in which the series host and established artists and critics apply their particular areas of expertise. The series also includes an introduction, which explains the approach taken by the academic designers, and an epilogue that retrospectively examines the knowledge acquired.

## Political Science

### 11 Introduction to American Politics (3)

Introduction to basic concepts of government and politics with special reference to the United States, but including comparative material from other systems. Course fulfills the state requirement.

## Psychology

### 245 Abnormal Psychology (3)

Ten of the 13 programs feature specific disorders, including anxiety disorders, personality disorders, the schizophrenias, sexual disorders, substance abuse, and the disorders of childhood. The first program concerns assessment, while the last two provide information on treatment and prevention. The telecourse introduces the major theoretical models for explaining and treating disorders—psychodynamic, behavioral, cognitive, and biological. This approach serves the introductory abnormal- psychology student, while allowing individual faculty latitude to underscore the approach to which they subscribe.

## Education

### 308 Foundations of Adult Basic Education (3)

This course considers problems which are characteristic of the adult learner, needs and interests, physiological factors affecting the adult learner, and interpersonal relations and communications. The video demonstrations, produced by Maryland Public Television, focus on modern teaching practices in adult basic education. The course will focus on topics in teaching basic reading, word recognition, comprehension, writing from the point of view of the student's needs, selection and use of materials, learning contracts, learning styles, and other methods to individualize instruction. Methods are presented to develop basic and intermediate mathematics skills, recruit and retain students, and manage corporate classrooms.

### 340 Selection and Utilization of Educational Media (3)

This telecourse trains teachers in the selection and use of media for learning. It includes all forms of media, with on-location segments showing the proper use for each. Topics include an introduction to media, discussion of learning and communications, learning management, instructional environments, and trends in instructional technology. Graphic design, graphics utilization, and lettering are covered. Specific instructional media covered include overhead transparencies, display devices, photography, audio, planning and producing multimedia programs, film and video, motion picture,

## Video Instructional Program

TV, models, demonstrations, game simulations, computers, print, copyright, and community resources.

**341 Teaching Science in the Elementary School (3)**

**Prerequisites:** Completion of science requirements in general education, ED FND 111, and consent of instructor. In this course, students will apply the methods, materials, and strategies for teaching science in the elementary classroom. Science is presented as a dynamic process developing knowledge about observable phenomena. Piaget's work on the cognitive growth of learners is discussed and related to the need to teach science as a "hands-on" subject. In addition to a review of the psychological and philosophical bases for teaching science, methods for teaching inquiry science are explored—such as questioning techniques.

# Appendix

## Contents

Code of Student Conduct	466
Student Disciplinary Matters	467
Appeals Procedures	470
Policy on Student Organizations	471
University of Missouri Plan for Equal Opportunity and Affirmative Action	472
Other Procedures or Regulations	475
Index	483

## Code of Student Conduct

**200.010 Standard of Conduct Amended March 20, 1981; August 3, 1990; May 19, 1994**

A student enrolling in the University assumes an obligation to behave in a manner compatible with the University's function as an educational institution.

### A. JURISDICTION OF THE UNIVERSITY OF MISSOURI

generally shall be limited to conduct which occurs on the University of Missouri premises or at University-sponsored or University-supervised functions. However, nothing restrains the administration of the University of Missouri from taking appropriate action, including, but not limited to, the imposition of sanctions under Section 200.020(C), against students for conduct on or off University premises in order to protect the physical safety of students, faculty, staff and visitors.

**B. CONDUCT** for which students are subject to sanctions falls into the following categories:

1. Academic dishonesty, such as cheating, plagiarism or sabotage. The Board of Curators recognizes that academic honesty is essential for the intellectual life of the University. Faculty members have a special obligation to expect high standards of academic honesty in all student work. Students have a special obligation to adhere to such standards. In all cases of academic dishonesty, the instructor shall make an academic judgment about the student's grade on that work and in that course. The instructor shall report the alleged academic dishonesty to the Primary Administrative Officer.
  - a. The term **cheating** includes but is not limited to (i) use of any unauthorized assistance in taking quizzes, tests, or examinations; (ii) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (iii) acquisition or possession without permission of tests, or other academic material belonging to a member of the University faculty or staff; or (iv) knowingly providing any unauthorized assistance to another student on quizzes, tests, or examinations.
  - b. The term **plagiarism** includes, but is not limited to: (i) use by paraphrase or direct quotation of the published or unpublished work of another person without fully and properly crediting the author with footnotes, citations or bibliographical reference; (ii) unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials; or (iii) unacknowledged use of original work/material that has been produced through collaboration with others without release in writing from collaborators.
- c. The term **sabotage** includes, but is not limited to, the unauthorized interference with, modification of, or destruction of the work or intellectual property of another member of the University community.
2. Forgery, alteration, or misuse of University documents, records or identification, or knowingly furnishing false information to the University.
3. Obstruction or disruption of teaching, research, administration, conduct proceedings, or other University activities, including its public service functions on or off campus.
4. Physical abuse or other conduct which threatens or endangers the health or safety of any person.
5. Attempted or actual theft of, damage to, or possession without permission of property of the University or of a member of the University community or of a campus visitor.
6. Unauthorized possession, duplication or use of keys to any University facilities or unauthorized entry to or use of University facilities.
7. Violation of University policies, rules or regulation or of campus regulations including, but not limited to, those governing residence in University-provided housing, or the use of University facilities, or the time, place and manner of public expression.
8. Manufacture, use, possession, sale or distributor of alcoholic beverages or any controlled substance without proper prescription or required license or as expressly permitted by law or University regulations.
9. Disruptive or disorderly conduct or lewd, indecent, or obscene conduct or expression.
10. Failure to comply with directions of University officials acting in the performance of their duties.
11. Illegal or unauthorized possession of firearms, explosives, other weapons, or dangerous chemicals.
12. Actual or attempted theft or other abuse of computer time, including but not limited to:
  - a. Unauthorized entry into a file to use, read, or change the contents, or for any other purpose.
  - b. Unauthorized transfer of a file.
  - c. Unauthorized use of another individual's identification and password.
  - d. Use of computing facilities to interfere with the work of another student, faculty member or University official.
  - e. Use of computing facilities to interfere with normal operation of the University computing system.
  - f. Knowingly causing a computer virus to become installed in a computer system or file.

# Student Disciplinary Matters

**Rules of Procedures in Student Disciplinary Matters  
Adopted November 8, 1968, Amended March 20, 1981;  
December 8, 1989; and May 18, 1994**

## 200.020 RULES OF PROCEDURES IN STUDENT CONDUCT MATTERS

**A. PREAMBLE.** The following rules of procedure in student conduct matters are hereby adopted in order to insure insofar as possible and practicable (a) that the requirements of procedural due process in student conduct proceedings will be fulfilled by the University, (b) that the immediate effectiveness of Article V of the Bylaws of the Board of Curators relating to student conduct and sanctions may be secured for all students in the University of Missouri, and (c) that procedures shall be definite and determinable within the University of Missouri.

**B. DEFINITIONS.** As used in these rules, the following definitions shall apply:

1. **Primary Administrative Officers.** As used in these procedures, "Primary Administrative Officer" is charged with the responsibility for the administration of these student conduct procedures and refers to the person or persons on each campus designated.
2. **Student Panel.** A panel of students appointed by the Chancellor, from which shall be selected by the Chair, upon the request of a student charged before the Student Conduct Committee, not more than three students to serve with the Student Conduct Committee.
3. **Student.** A person having once been admitted to the University who has not completed a course of study and who intends to or does continue a course of study in or through one of the campuses of the University. For the purpose of these rules, student status continues whether or not the University's academic programs are in session.
4. **Student Conduct Committee.** As used in these procedures, "Student Conduct Committee," hereinafter referred to as the Committee, is that body on each campus which is authorized to conduct hearings and to make dispositions under these procedures or a Hearing Panel of such body as herein defined.

### C. SANCTIONS.

1. The following sanctions may be imposed upon any student found to have violated the Student Conduct Code; more than one of the sanctions may be imposed for any single violation:
  - a. **Warning.** A notice in writing to the student that the student is violating or has violated institutional regulations.
  - b. **Probation.** A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe sanctions if the student is found to be violating any institutional regulation(s) during the probationary period.
  - c. **Loss of Privileges.** Denial of specified privileges for a designated period of time.
  - d. **Restitution.** Compensation for loss, damage or injury to the University or University property. This may take the form of appropriate service and/or monetary or material replacement.

- e. **Discretionary Sanctions.** Work assignments, service to the University or other related discretionary assignments.
  - f. **Residence Hall Suspension.** Separation of the student from the residence halls for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.
  - g. **Residence Hall Expulsion.** Permanent separation of the student from the residence halls.
  - h. **University Dismissal.** An involuntary separation of the student from the institution for misconduct apart from academic requirements. It does not imply or state a minimum separation time.
  - i. **University Suspension.** Separation of the student from the University for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.
  - j. **University Expulsion.** Permanent separation of the student from the University.
2. **Temporary Suspension.** The Chancellor or designee may at any time temporarily suspend or deny readmission to a student from the University pending formal procedures when the Chancellor or designee finds and believes from available information that the presence of a student on campus would seriously disrupt the University or constitute a danger to the health, safety or welfare of members of the University community. The appropriate procedure to determine the future status of the student will be initiated within seven calendar days.

**D. RECORDS RETENTION.** Student conduct records shall be maintained for five years after University action is completed.

### E. POLICY AND PROCEDURES.

1. **Primary Administrative Officers.** The Chief Student Affairs Administrator on each campus or designee is the primary officer except in cases of academic dishonesty, where the Chief Academic Administrator responsible for administering the Student Conduct Code or designee is the primary administrative officer.
2. **Preliminary Procedures.** The Primary Administrative Officer shall investigate any reported student misconduct before initiating formal conduct procedures and give the student the opportunity to present a personal version of the incident or occurrence. The Primary Administrative Officer may discuss with any student such consultation as requested by the Primary Administrative Officer. The Primary Administrative Officer, in making an investigation and disposition, may utilize student courts and boards and/or divisional deans to make recommendations.
3. **Informal Dispositions.** The Primary Administrative Officer shall have the authority to impose appropriate sanctions and shall fix a reasonable time within which the student shall accept or reject a proposed informal disposition. A failure of the student either to accept or reject within the time fixed shall be deemed to be an acceptance and, in such event, the proposed disposition shall become final upon expiration of such time. If the student rejects informal disposition it must be in writing

## Student Disciplinary Matters

and shall be forwarded to the Committee. The Primary Administrative Officer may refer cases to the Committee without first offering informal disposition.

### 4. Formal Procedure and Disposition.

#### a. Student Conduct Committee:

- (1) The Committee shall be appointed by the Chancellor and shall have the authority to impose appropriate sanctions upon any student or students appearing before it.
- (2) The Committee, when appropriate or convenient, may be divided by the Chair of the Committee into Hearing Panels, each panel to be composed of at least five Committee members, which may include a maximum of two students, present at the hearing, including a designated chair. A Hearing Panel has the authority of the whole Committee in those cases assigned to it. The Chair of the Committee or of a Hearing Panel shall count as one member of the Committee or Hearing Panel and have the same rights as other members.

- (3) Each Chancellor shall appoint a panel of students, to be known as the Student Panel. Upon written request of a student charged before the Committee, made at least seventy-two (72) hours prior to the hearing, the Chair of the Committee or Hearing Panel shall appoint from the Student Panel not more than three students to sit with the Committee or two students to sit with the Hearing Panel (as stated in 4.a.(2)) for that particular case. When students from the Student Panel serve at the request of a student charged, they shall have the same rights as other members of the Committee or Hearing Panel.

b. **General Statement of Procedures.** A student charged with a breach of the Student Conduct Code is entitled to a written notice and a formal hearing unless the matter is disposed of under the rules for informal disposition. Student conduct proceedings are not to be construed as judicial trials and need not wait for legal action before proceeding; but care shall be taken to comply as fully as possible with the spirit and intent of the procedural safeguards set forth herein. The Office of the General Counsel shall be legal adviser to the Committee and the Primary Administrative Officer.

c. **Notice.** The Primary Administrative Officer shall initiate student conduct proceedings by arranging with the Chair to call a meeting of the Committee and by giving written notice by certified mail or personal delivery to the student charged with misconduct. The notice shall set forth the date, time and place of the alleged violation and the date, time and place of the hearing before the Committee. Notice by certified mail may be addressed to the last address currently on record with the University. Failure by the student to have a current correct local address on record with the University shall not be construed to invalidate such notice. The notice shall be given at least seven (7) consecutive days prior to the hearing, unless a shorter time be fixed by the Chair for good cause. Any request for continuance shall be made in writing

to the Chair, who shall have the authority to continue the hearing if the request is timely and made for good cause. The Chair shall notify the Primary Administrative Officer and the student of the new date for the hearing. If the student fails to appear at the scheduled time, the Committee may hear and determine the matter.

### 5. Right to Petition for Review (other than University expulsion, University dismissal or University suspension).

a. In all cases where the sanction imposed by the Committee is other than University expulsion, University dismissal, or University suspension, the Primary Administrative Officer or the Student may petition the Chancellor or designee in writing for a review of the decision within five (5) calendar days after written notification. A copy of the Petition for Review must also be served upon the nonappealing party within such time. The Petition for Review shall state the grounds or reasons for review, and the nonappealing party may answer the petition within five (5) calendar days.

b. The Chancellor or designee may grant or refuse the right of review. In all cases where the Petition for Review is refused, the action of the Committee shall be final. If the Chancellor or designee reviews the decision, the action of the Chancellor shall be final unless it is to remand the matter for further proceedings.

### 6. Right of Appeal (University expulsion, University dismissal or University suspension only).

a. When a student is expelled, dismissed or suspended from the University by the Committee, the Primary Administrative Officer or the student may appeal such decision to the Chancellor or designee by filing written notice of appeal with the Chancellor within ten (10) calendar days after notification of the decision of the Committee. A copy of the Notice of Appeal will contemporaneously be given by the student to the Primary Administrative Officer or by the Primary Administrative Officer to the student. The appealing party may file a written memorandum for consideration by the Chancellor with the Notice of Appeal, and the Chancellor may request a reply to such memorandum by the appropriate party.

b. The Chancellor or designee shall review the record of the case and the appeal documents and may affirm, reverse or remand the case for further proceedings and shall notify each party in writing of the decision on the appeal. The action of the Chancellor shall be final unless it is to remand the matter for further proceedings.

### 7. Status During Appeal. In cases of suspension, dismissal or expulsion where a Notice of Appeal is filed within the required time, a student may petition the Chancellor in writing for permission to attend classes pending final determination of appeal. The Chancellor may permit a student to continue in school under such conditions as may be designated pending completion of appellate procedures, provided such continuance will not seriously disrupt the University or constitute a danger to the health, safety or welfare of members of the University community. In such event, however, any

## Student Disciplinary Matters

final sanctions imposed shall be effective from the date of the action of the Committee.

8. Student Honor System. Forums under the student honor systems established for investigating facts, holding hearings, and recommending and imposing sanctions are authorized when the student honor code or other regulations containing well defined jurisdictional statements and satisfying the requirements of Article V of the Bylaws of the Board of Curators have been reduced to writing and have been approved by the Chancellor and the Board of Curators and notice thereof in writing has been furnished to students subject thereto. Procedures shall satisfy the requirements of the Board of Curators' Bylaws, Article V, and shall contain procedures herein before stated insofar as appropriate and adaptable to the particular situation and shall be approved by the Chancellor and the General Counsel. Students subject to student honor systems shall have the rights of appeal as set forth in Section 200.020 E.6 and 7.

### F. HEARING PROCEDURES.

1. Conduct of Hearing. The Chair shall preside at the hearing, call the hearing to order, call the roll of the Committee in attendance, ascertain the presence or absence of the student charged with misconduct, read the notice of hearing and charges and verify the receipt of notices of charges by the student, report any continuances requested or granted, establish the presence of any adviser or counselor of the student, and call to the attention of the student charged and the advisor any special or extraordinary procedures to be employed during the hearing and permit the student to make suggestions regarding or objections to any procedures for the Conduct Committee to consider.
  - a. Opening Statements
    - 1) The Primary Administrative Officer shall make opening remarks outlining the general nature of the case and testify to any facts the investigation has revealed.
    - 2) The student may make a statement to the Committee about the charge at this time or at the conclusion of the University's presentation.
  - b. University Evidence.
    - 1) University witnesses are to be called and identified or written reports of evidence introduced as appropriate.
    - 2) The Committee may question witnesses at any time.
    - 3) The student or, with permission of the committee, the adviser or counselor may question witnesses or examine evidence at the conclusion of the University's presentation.
  - c. Student Evidence.
    - 1) The student shall have the opportunity to make a statement to the Committee about the charge.
    - 2) The student may present evidence through witnesses or in the form of written memoranda.
    - 3) The Committee may question the student or witnesses at any time. The Primary Administrative Officer may question the student or witnesses.
  - d. Rebuttal Evidence. The Committee may permit the University or the student to offer a rebuttal of the other's presentation.
  - e. Rights of Student Conduct Committee. The Committee shall have the right to:
    - 1) Hear together cases involving more than one student which arise out of the same transaction or occurrence, but in that event shall make separate findings and determinations for each student;
    - 2) Permit a stipulation of facts by the Primary Administrative Officer and the student involved;
    - 3) Permit the incorporation in the record by a reference of any documentation, produced and desired in the record by the University or the student charged;
    - 4) Question witnesses or challenge other evidence introduced by either the University or the student at any time;
    - 5) Hear from the Primary Administrative Officer about dispositions made in similar cases and any dispositions offered to the student appearing before the Committee;
    - 6) Call additional witnesses or require additional investigation;
    - 7) Dismiss any action at any time or permit informal disposition as otherwise provided;
    - 8) Permit or require at any time amendment of the Notice of Hearing to include new or additional matters which may come to the attention of the Committee before final determination of the case; provided, however, that in such event the Committee shall grant to the student or Primary Administrative Officer such time as the Committee may determine reasonable under the circumstances to answer or explain such additional matters;
    - 9) Dismiss any person from the hearing who interferes with or obstructs the hearing or fails to abide by the rulings of the Chair of the Committee;
    - 10) Suspend summarily students from the University who, during the hearing, obstruct or interfere with the course of the hearing or fail to abide by the ruling of the Chair of the Committee on any procedural question or request of the Chair for order.
2. Rights of Students Upon Hearing. A student appearing before a Committee shall have the right to:
  - a. Be present at the hearing;
  - b. Have an adviser or counselor and to consult with such adviser or counselor during the hearing;
  - c. Have students from the Student Panel sit with the Committee or Hearing Panel;
  - d. Hear or examine evidence presented to the Committee;
  - e. Question witnesses present and testifying;
  - f. Present evidence by witnesses or affidavit;
  - g. Make any statement to the Committee in mitigation or explanation of the conduct in question;
  - h. Be informed in writing of the findings of the Committee and any sanctions it imposes; and
  - i. Request review or appeal to the Chancellor as herein provided.

## Appeals Procedures

3. Determination by the Student Conduct Committee. The Committee shall then make its findings and determinations in executive session out of the presence of the Primary Administrative Officer and the student charged. Separate findings are to be made:
  - a. As to the conduct of the student, and
  - b. On the sanctions, if any, to be imposed. No sanctions shall be imposed on the student unless a majority of the Committee present is reasonably convinced by the evidence that the student has committed the violation charged.
4. Official Report of Findings and Determinations. The Committee shall promptly consider the case on the merits and make its findings and determination and transmit them to the Primary Administrative Officer and the student charged forthwith.
5. Other Procedural Questions. Procedural questions which arise during the hearing not covered by these general rules shall be determined by the Chair, whose ruling shall be final unless the Chair shall present the question to the Committee at the request of a member of the Committee, in which event the ruling of the committee by majority vote shall be final.
6. General Rules of Decorum. The following general rules of decorum shall be adhered to:
  - a. All requests to address the Committee shall be addressed to the Chair.
  - b. The Chair will rule on all requests and points of order and may consult with Committee's legal adviser prior to any ruling. The Chair's ruling shall be final and all participants shall abide thereby, unless the Chair shall present the question to the Committee at the request of a member of the Committee, in which event the ruling of the Committee by majority vote shall be final.
  - c. Rules of common courtesy and decency shall be observed at all times.
  - d. An adviser or counselor may be permitted to address the Committee at the discretion of the Committee. An adviser or counselor may request clarification of a procedural matter or object on the basis of procedure at any time by addressing the Chair after recognition.
7. Record of Hearing. A taped or stenographic record of the hearing shall be maintained. The notice, exhibits, hearing record and the findings and determination of the Committee shall become the "Record of the Case" and shall be filed in the Office of the Primary Administrative Officer and for the purpose of review or appeal be accessible at reasonable times and places to both the University and the student.
8. Sexual Assault. In cases of alleged sexual assault:
  - a. The accuser and the accused are entitled to the same opportunities to have others present during a campus disciplinary proceeding;
  - b. The accuser and the accused shall be informed of the outcome of any campus disciplinary proceeding brought alleging a sexual assault.

## Financial Aid Appeals

The University of Missouri-St. Louis has an established financial aid appeals procedure. An aid applicant can raise questions or appeal the offer, or lack of an offer, of financial aid if not satisfied. The general provisions for appeals procedures are as follows:

- 1) An aid applicant who is not satisfied with the fact that no aid was offered, or was not pleased with the type and/or amount of aid that was offered, may make a written appeal to the Student Financial Aid Appeals Committee for reconsideration of the aid request and/or ask for a personal hearing.
- 2) If on review of all the facts of the case, including any new information which the applicant may provide, the Committee can (a) approve an exception to University policy; (b) deny the request; (c) approve a modified version of the request.
- 3) If the Appeals Committee cannot provide a satisfactory solution, he/she may refer the written appeal with all pertinent information to the Director of Financial Aid. Where academic progress is an issue, the student may ask an academic adviser or counselor to write or speak in the student's behalf. If a satisfactory solution is worked out, the case is closed.
- 4) If step three did not solve the problem, it is referred to the campus Faculty-Student Committee on Student Aid. In ordinary practice it is rare for a case to be appealed beyond this step.
- 5) If, however, the applicant is still not satisfied after review by committee, the case is to be referred to the Chancellor.
- 6) The next appeal is the President.
- 7) The final University appeal would be for the President to refer a case to the Board of Curators.

## Grievance About Grade

### Recourse for a Student Who Has a Grievance About a Given Grade

The following grievance procedure is to be followed by any student who believes he/she has received an unjustified grade in a course and wants a review of the matter. It is to be understood that the establishment of criteria for grades is the responsibility of the instructor. The purpose of this grievance procedure is to determine whether the criteria for grading were fairly applied. If these procedures lead to the conclusion that the grading criteria were improperly applied, then the instructor is to be requested to reconsider the grade.

- 1) The student's first recourse is to review the issue fully with the instructor involved and then with the department chairperson. This must be done within, at most, one month after the beginning of the succeeding regular academic semester.
- 2) If the issue has not been resolved within, at most, two weeks, the student should bring the matter to the dean of the College or School for adjudication by whatever appeals committee the dean's office has established. It is anticipated that nearly all cases would be settled at the department or College or School level.
- 3) A student may take his/her case to the Chancellor.



# Student Organization Policy

## Policy on Student Organizations

The University recognizes that the acquisition of knowledge is not confined to the formality of the classroom and that much can be gained through the activities of student organizations. To assure maximum freedom for students and to assure that organizational activities are orderly, responsible, and appropriate to the mission of the University, certain principles and procedures are established through which organizations gain University recognition.

### I Procedures for Recognition

- A. To obtain recognition or to register, an organization shall submit to the Vice Chancellor for Student Affairs, through the Office of Student Activities, a recognition or registration form which shall include:
- 1) The name of the organization.
  - 2) A statement of the general purpose of the organization and the means for accomplishing it. The statement should demonstrate that the organization's purpose is to broaden the scope of general learning, extend knowledge of specialized areas, or to serve the professional, cultural, social or recreational interests of the University community, consistent with the educational goals of the University. The statement must not conflict with policies governing recognized organizations as listed below.
  - 3) The names of at least three officers or responsible representatives, including student numbers, addresses and telephone numbers; these persons must be students registered at the University of Missouri-St. Louis.
  - 4) A statement of any affiliation with any other organization not registered with the University, and a copy of the organization's constitution.
  - 5) Organizations seeking recognition must include a copy of their constitution and/or by-laws, the name of a UM-St. Louis faculty or staff member who agrees to serve as an advisor, and the name of a student member of the organization who will serve as the organization's representative on the Student Government Association.
  - 6) Upon submission of the recognition or registration form, the organization shall be granted temporary privileges until the request for recognition is acted upon by the Senate Student Affairs Committee or the request to register is approved by the Director of the University Center or his/her designee.
- B. To maintain recognition or registration, an organization must update their recognition form or reregister with the Office of Student Activities no later than two weeks following the beginning of the fall semester.

### II Privileges of Recognized Organizations

- 1) Use of campus facilities and services for organizational activities as provided in the University regulations.
- 2) Use of the University name in connection with publicity, but only for identification purposes, and in no way to imply support of the University for any position of the organization.
- 3) Participation in University-sponsored events.
- 4) Application for supplemental financial assistance.
- 5) Participation as a voting member of Student Government Association. Organizations who register may not apply for supplemental assistance and may not be voting members of Student Government Association.

### III Policies Governing Recognized or Registered Organizations

- 1) Organizations shall comply with the Rules and Regulations of the University of Missouri and the St. Louis campus.
- 2) Organizations' membership policy shall not discriminate for reasons of color, creed, national origin or sex. Any organization may petition to the Vice Chancellor for Student Affairs for exemption from the requirement as it applies to sex. Academic and professional organizations which have discriminatory membership policy based on sex shall not be recognized.
- 3) Organizations' membership shall not be subject to approval by anyone other than the local campus membership.
- 4) Organizations are expected to maintain fiscal responsibility.
- 5) Registered organizations are encouraged to seek the advice of faculty and other members of the University community.
- 6) Recognized organizations are required to seek the advice of faculty and other members of the community.
- 7) Recognized organizations are required to participate in the Student Governance process.

### IV Procedure for Review of Grievances

- A. Any member of the University community may bring charges against a recognized organization for breach of the above policies or procedures.
- B. Such charges, except those pertaining to discrimination, are brought initially to the Vice Chancellor for Student Affairs, who may:
- 1) Dismiss the charges, in which case an appeal may be made to the Senate Student Affairs Committee.
  - 2) Settle the charges in a way acceptable to both parties or,
  - 3) Refer the charges to the Senate Student Affairs Committee.
- C. Penalties may range from withdrawals of one or more privileges to withdrawal of recognition or registration. Assessment of penalties shall also provide for the conditions leading to reinstatement of such privileges for recognition.
- D. Either party to the charges may appeal the decision of the Senate Student Affairs Committee to the Chancellor.

### Policy on Hazing

Hazing, defined by the Fraternity Executive Association and accepted by the University of Missouri-St. Louis, is any intentional action taken or situation created, whether on or off University premises, that produces mental or physical discomfort, embarrassment, harassment, or ridicule. This includes but is not limited to: paddling in any form, creation of excessive fatigue, physical or psychological shocks, wearing apparel publicly which is conspicuous and not normally in good taste, engaging in public stunts and buffoonery, morally degrading or humiliating games and activities, involuntary labor, or any activity not consistent with the University of Missouri Board of Curators Standard of Student Conduct.

The University of Missouri-St. Louis does not condone or tolerate hazing of any type by an organization, or by an individual against another individual.

# Equal Opportunity Policy

The Office of Student Activities will investigate any incident in which a charge of hazing has been made. University recognition may be temporarily withdrawn pending hearings and due process procedures.

Should it be determined that a student organization or any of its members is guilty of hazing as previously defined, sanctions may include but are not limited to:

- A. automatic and indefinite suspension of campus recognition or registration with an accompanying loss of all campus privileges (i.e. use of facilities, student services, etc.);
- B. disciplinary action against those members involved in the incident(s) including suspension or expulsion from the university.

**Implementation:** Each organizational president (or equivalent officer) is required to read and sign the University's Policy on Hazing at the first regular meeting at which he or she presides. This policy, signed by the incoming president (or equivalent officer), must accompany any notification of a change in officers submitted to the Office of Student Activities. Failure to do so will result in the automatic imposition of inactive status on the organization with an accompanying loss of all university privileges until such time as the signed policy is submitted.

## Equal Opportunity Policies of the University of Missouri-St. Louis

The University of Missouri-St. Louis is an affirmative action/equal opportunity employer committed to excellence through diversity.

Therefore, the University enthusiastically complies with and vigorously enforces each Federal and State Executive Order, law and regulation, University of Missouri Rules and Regulations and University of Missouri-St. Louis directive that prohibits discrimination against employees, students, and others based upon age, ancestry, color disability, national origin, race, religion, sex, or veteran status.

The above compliance is established upon, but not limited to, the following employment and education related equal opportunity laws:

- Civil Rights Act of 1964, Title VII, as amended
- Executive Order 11246, Equal Employment Opportunity Equal Pay Act of 1963, as amended
- Age Discrimination in Employment of 1967, as amended
- Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended
- Executive Order 11141, Age Discrimination Rehabilitation Act of 1973, Section 503, as amended
- Rehabilitation Act of 1973, Section 504, as amended
- Civil Rights Act of 1964, Title VI, as amended
- Education Amendments of 1972, Title IX
- Americans with Disabilities Act of 1990

Based upon the foregoing documents, the Board of Curators of the University of Missouri has adopted the appropriate equal opportunity policies and procedures.

The Chancellor is responsible for the implementation of equal opportunity at UM-St. Louis. Assisting the Chancellor and each Vice Chancellor is the Office of Equal Opportunity (OEO). All equal opportunity functions for the campus are centralized in the OEO.

## Equal Opportunity Policies of the University of Missouri-St. Louis

The following University policies govern the Office of Equal Opportunity (OEO):  
 Equal Employment/Educational Opportunity Policy--The Curators of the University of Missouri do hereby reaffirm and state the policy of the University of Missouri on Equal Employment/Educational Opportunity, Sexual Harassment.

- Equal Opportunity is and shall be provided for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of their race, color, religion, sex, national origin, age, disability, or status as a Vietnam era veteran.
- Equal opportunity is and shall be also provided for all students and applicants for admission in compliance with existing legislation.

## University of Missouri Equal Opportunity Statement

The University of Missouri-St. Louis is committed to equal employment and educational opportunities without regard to conditions of race, color, sex, religion, national origin, age, physical ability, veteran status, or individuals with HIV, AIDS, or ARC.

Each administrative unit of the University employing personnel, admitting students, or entering into contracts is charged with implementation of the University's commitments, and maintenance of records to demonstrate good faith efforts, in admission and training, recruiting and hiring, compensating and promoting, layoff and dismissal, granting of tenure, contracting and purchasing, and access to facilities and programs.

As an employer of persons and as an institution accountable to taxpayers and the general public, the University must have administrative and management practices that are designed for the best use of talent for operational effectiveness and efficiency.

### (1) Recruitment and employment of personnel

- a. Recruitment of professors and academic personnel in research and continuing education/extension is primarily the responsibility of deans, directors, chairpersons, and department heads.
- b. Recruitment of administrative, service, and support staff, except for top-ranking administrative personnel, is primarily the responsibility of the personnel office of each campus, and the director of Human Resources for the University of Missouri-St. Louis administration. Selection is the responsibility of the administrative head of the employing unit.
- c. Administrative efforts are made to recruit and employ minorities, women, the handicapped, and members of protected age groups.
- d. The University maintains relationships with governmental

# Equal Opportunity Policy

agencies, community groups, and other organizations which may be of assistance in furthering recruitment and employment of minority groups, handicapped persons, and women into departments and units which have imbalances. Personnel sources are advised of the University's commitment to equal opportunity and affirmative action.

- e. Imbalances exist when available talent among specified minorities, women, handicapped, or protected age group members is proportionately underrepresented in a particular personnel category in the University. Underrepresentation is determined by an analysis of the appropriate employment market which is generally national or regional for major administrators, professors, and academic personnel in research and continuing education/extension. The appropriate employment market is generally the state or local community for most administrative positions and for service and support staff.
- f. Advertisement and notices of employment opportunities indicate a filing date for consideration.
- g. Notice of employment and training opportunities are made to existing personnel.
- h. Employment applications meet federal and state requirements relating to equal opportunity.
- i. The Office of Affirmative Action maintains records to demonstrate efforts and results of efforts to achieve equity and to act affirmatively and reasonably to correct imbalances.

## (2) Salaries, wages, and benefits

- a. University compensation and benefit programs are administered without regard to conditions of race, color, sex, religion, national origin, age, physical ability, or veteran status.
- b. The salary range for academic positions is determined in advance of recruitment on the basis of prevailing national levels and departmental scales for the educational attainment, experience, and specialty desired.

## (3) Facilities, activities, and working conditions

- a. University facilities are maintained on an equitable and nondiscriminatory basis.
- b. Physical facilities have been adapted within the limits of the financial resources available to insure access to the University by the physically handicapped.
- c. Opportunities for involvement in University activities are provided on an equitable or nondiscriminatory basis.

## (4) Promotion and training

- a. Promotions, contract renewals, the granting of tenure, and reductions in force of academic personnel are handled in accordance with established University procedures and qualification criteria for all persons and free of discrimination.
- b. University policy requires that promotions, demotions, layoffs, recalls from layoffs, transfers, and temporary hires for service and support personnel are determined without regard to conditions of race, color, sex, religion, national origin, age, physical ability, or veteran status.
- c. Participation in training and educational programs

sponsored by the University, including apprenticeships, is open to all employees within eligible job classifications.

- d. The University offers developmental programs for professional and personal growth to enhance promotion potential.

## (5) Student admission and retention

- a. The University gives students equal access to its academic programs without regard to conditions of race, color, sex, religion, national origin, age, or physical ability. Furthermore, the University seeks to recruit, enroll, retain, and graduate minority group members and women in those fields in which they are underrepresented.
- b. The University of Missouri has a unique responsibility for graduate and professional public higher education in the state of Missouri. Therefore, academic departments offering doctoral and/or advanced professional programs in disciplines and professions in which there is a deficiency of minorities and women have adopted methods to encourage enrollment, retention, and graduation of minority group members and women.
- c. Affirmative action is taken to offer graduate teaching and research assistantships to minorities and women.
- d. Business, government, industry, and labor are solicited to assist and provide support to minorities and women through financial aid and by providing work experiences as they pursue academic objectives.
- e. Personnel representatives of prospective employers using University services and facilities to interview and recruit students must be equal opportunity employers, and must give all qualified students equal opportunity for interviews, without regard to conditions of race, color, sex, religion, national origin, age, disability, or veteran status.

## (6) Appeal and grievance procedures

- a. Grievance procedures are available for the processing of complaints and grievances of alleged discrimination based on conditions of race, color, sex, religion, national origin, age, physical ability, or veteran status.
- b. A student grievant has access to the student grievance procedures through the Office of Student Affairs, the school or college, the campus, and central administration.
- c. The Office of Equal Opportunity currently provides advice and information to grievants on the grievance procedures.

## (7) Records and reports

- a. The administrative head of each University unit must be prepared to demonstrate that equal opportunity is practiced and that affirmative action is taken in recruiting and employment of full-time and part-time personnel, admission and retention of students, provision of facilities and programs, and purchasing and contracting.
- b. Each responsible administrative unit of the University must be prepared to show that procedures followed and selections made are in compliance with policies on equal employment and affirmative action. Admissions applications are retained for one year and employment

## Equal Opportunity Policy

applications are retained for one year. University business involving contracts and bids for various services are retained in compliance with University of Missouri record management policies.

- c. Those responsible for recruiting, admitting, and retaining students—undergraduate, graduate and professional—maintain files and records documenting efforts to provide equal opportunity and act affirmatively to attract and retain minority group members, women, and older and handicapped persons. A report is made annually to the appropriate administrative committee.
- d. Campus administrative officers have records demonstrating efforts to provide equal opportunity and show affirmative action in the interests of minority group members, women, and handicapped and older persons in the availability and use of University facilities, including recreational facilities.
- e. Those responsible for personnel recruitment and employment personnel, including graduate teaching and research assistants, have records that reflect their adherence to equal opportunity and affirmative action practices.
- f. Academic or administrative units receiving complaints or grievances based on allegations of discrimination report those cases to the Affirmative Action Office.

### (8) Reviewing and monitoring

- a. A University Committee on Equal Employment Opportunity and Affirmative Action (EEO/AA) is appointed annually by the Chancellor.
- b. EEO/AA committee membership includes a reasonable cross section of personnel, including a representation of women, minorities, and the handicapped.
- c. The EEO/AA committee advises the Director of Affirmative Action on matters relating to affirmative action and University equal employment policy.
- d. Administrative officers (chancellor, vice chancellors, deans, directors, department chairpersons, and all other supervisory personnel) are responsible for implementation of equal opportunity and affirmative action policies and practices within their areas of jurisdiction, and the effectiveness of implementation will be an element in the evaluation of the performance of each officer.

### (9) Dissemination

- a. Equal opportunity and affirmative action policies and programs are disseminated throughout the University and discussed at appropriate school, college, departmental, management, and supervisory meetings. The subjects covered include attraction, admission, and retention of students; recruitment, employment, training, promotion, and transfer of employees.
- b. University employees, faculty, staff, and students are kept informed of equal opportunity programs and affirmative action goals through campus publications and communications, the Personnel Policy Manual, the Faculty Handbook, divisional and departmental meetings, staff orientation programs, and posters.

- c. Copies of the Equal Employment and Affirmative Action policies are available to a cross section of community organizations, news media, area colleges, secondary schools and recruiting sources.
- d. Copies of the Affirmative Action Policy will be made available on request to employees, applicable governmental agencies, and contractors or subcontractors.
- e. University invitations to bid, purchase orders, and specifications to architects and engineers contain the University's equal opportunity policy.
- f. University correspondence, employment notices and advertising, academic information, and other public notices contain the University's equal opportunity phrase.

- Sexual Harassment

This University of Missouri policy aims for an increased awareness regarding sexual harassment by making available information, education and guidance on the subject for the University community.

- A. Policy Statement—It is the policy of the University of Missouri, in accord with providing a positive discrimination-free environment, that sexual harassment in the work place or the educational environment is unacceptable conduct. Sexual harassment is subject to discipline, up to and including separation from the institution.
- B. Definition—Sexual harassment is defined for this policy as either:
  - (i) unwelcome sexual advances or requests for sexual activity by a University employee in a position of power or authority to a University employee or a member of the student body, or
  - (ii) other unwelcome verbal or physical conduct of a sexual nature by a University employee or a member of the student body to a University employee or a member of the student body, when:
    - 1. Submission to or rejection of such conduct is used explicitly or implicitly as a condition for academic or employment decisions; or
    - 2. The purpose or effect of such conduct is to interfere unreasonably with the work or academic performance of the person being harassed; or
    - 3. The purpose or effect of such conduct to a reasonable person is, to create an intimidating, hostile, or offensive environment.
- C. Non-Retaliation—This policy also prohibits retaliation against any person who brings an accusation of discrimination or sexual harassment or who assists with the investigation or resolution of sexual harassment. Notwithstanding this provision, the University may discipline an employee or student who has been determined to have brought an accusation of sexual harassment in bad faith.
- D. Redress Procedures—Members of the University community who believe they have been sexually harassed may seek redress, using the following options:
  - 1. Pursue appropriate informal resolution procedures as defined by the individual campuses. These procedures are available from the campus Affirmative Action/Equal Opportunity Officer.

## Equal Opportunity Policy

2. Initiate a complaint or grievance within the period of time prescribed by the applicable grievance procedure. Faculty are referred to Section 370.010, "Academic Grievance Procedures"; staff to Section 380.010, "Grievance Procedure for Administrative, Service and Support Staff" and students to Section 390.010, "Discrimination Grievance Procedure for Students".

Pursuing a complaint or informal resolution procedure does not compromise one's rights to initiate a grievance or seek redress under state or federal laws.

- E. Discipline—Upon receiving an accusation of sexual harassment against a member of the faculty, staff, or student body, the University will investigate and, if substantiated, will initiate the appropriate disciplinary procedures. There is a five-year limitation period from the date of occurrence for filing a charge that may lead to discipline.

An individual who makes an accusation of sexual harassment will be informed:

1. at the close of the investigation, whether or not disciplinary procedures will be initiated; and
2. at the end of any disciplinary procedures, of the discipline imposed, if any.

- **Auxiliary Aids for Students w/Disabilities**

The University maintains its commitment to the education of qualified handicapped students by providing them an equally effective opportunity to participate in or benefit from its educational programs as afforded non-handicapped students.

As a part of this commitment and upon the request of a qualified disabled student, the Vice Chancellor for Student Affairs or designee will arrange for an assessment of the student's abilities and his or her need for some type of auxiliary aid.

This assessment will include an evaluation of the extent of the student's disability and the requirements of the particular course or education program in which the student is enrolled or plans to be enrolled.

If after the assessment of the student and the course, the University determines that some type of auxiliary aid is required, it will assist the qualified disabled student in obtaining the necessary auxiliary aid from other sources. If the necessary auxiliary aid is not available from other sources, the University, at its option, shall provide the necessary auxiliary aid or reimburse the student for the reasonable cost of the necessary auxiliary aid.

Requests by students for such assessments must be made no later than six weeks prior to the beginning of the next semester in order to provide sufficient time for the assessment and for obtaining any necessary auxiliary aid. Unfavorable determinations made pursuant to this policy may be appealed by the handicapped student through the University of Missouri Discrimination Grievance Procedures for Students, a copy of which will be provided to any student whose request for auxiliary aid is denied. (Additional resource materials are available through the Office of Equal Opportunity.)

- **AIDS Policy Statement**

Current knowledge indicates college and university students or employees with AIDS, ARC, or a positive antibody blood test do not pose a health risk to either

students or employees in a usual academic or residential setting. The policy of the University of Missouri is to permit students and employees with AIDS to continue to engage in as many of their normal pursuits as their condition allows. Managers should be sensitive to the medical problem and ensure that such employees are treated consistent with the treatment of other employees. Students will be allowed to continue their enrollment and activities (including continued residency in student housing) as long as they continue to meet academic standards and medical evidence indicates their conditions are not a threat to themselves or others. Every effort will be made to maintain confidentiality at all times.

The University also has a legitimate interest in the welfare of all students, employees, and visitors to the campus. Every reasonable precaution will be taken to minimize the risk that an employee's or student's condition will present a health and/or safety hazard to others.

The University will not discriminate against individuals with HIV infection, AIDS or ARC, but this protection does not include individuals with secondary infections or diseases that would constitute a direct threat to the health or safety of others or who may because of the disease or infection be unable to perform duties of their employment. In such cases, the appropriate University personnel or student policy will determine what changes, if any, will be made in the student's or employee's academic or work program.

In the event of public inquiry concerning AIDS on campus, the Chancellor or the Chancellor's designee will provide appropriate information on behalf of the University. Existing policies regarding confidentiality of employee and student records will be followed.

Consistent with its concern for students and employees with AIDS, the University offers a range of resources through the AIDS Task Force on each campus and through other campus services.

- a. Student, employee, and management education and information;
- b. Referral to agencies and organizations that offer supportive services for life-threatening illnesses;
- c. Consultation to assist employees in effectively managing health, leave, and other benefits.

The AIDS Task Force on each campus will continue to meet periodically to review and update policy and to make recommendations as new medical facts become available. Each Task Force will continue to encourage programs to educate all members of the campus community about the reality of AIDS.

To address specialized needs, each campus is authorized to adopt and implement special policies related to AIDS which are consistent with this policy statement.

The Affirmative Action Office is located in 414 Woods Hall. The telephone number is 516-5695.

- **Affirmative Action on Committee Appointments Policy**—As a part of the implementation of the Affirmative Action Plan of the University of Missouri, any person appointing any committee for the University or any campus, in selecting the membership, shall give due consideration to the inclusion in such membership of women and minorities unless membership thereon is ex-officio.

## Other Procedures or Regulations

### Discrimination Grievance Procedure for Students

390.010

December 17, 1982, and January 25, 1990

#### A. GENERAL

1. It is the policy of the University of Missouri to provide equal opportunity for all enrolled students and applicants for admission to the University on the basis of merit without discrimination on the basis of their race, color, religion, sex, national origin, age, or disability, or Vietnam era veteran status. Sexual harassment shall be considered discrimination because of sex.
2. To insure compliance with this policy, all University of Missouri prospective or enrolled students shall have available to them this student discrimination grievance procedure for resolving complaints and/or grievances regarding alleged discrimination.
3. This grievance procedure neither supersedes nor takes precedence over established University procedures of due process for any and all matters related to Academic Dishonesty, Grade Appeals, Traffic Appeals, Disciplinary Appeals, or other specific campus procedures which are authorized by the Board of Curators and deal with faculty/staff responsibilities.
4. These proceedings may be terminated at any time by the mutual agreement of the parties involved.

NOTE: A grievance concerning specific incidents filed under this discrimination grievance procedure shall not be processed on behalf of any student who elects to utilize another University grievance procedure. In addition, the filing of a grievance under these procedures precludes the subsequent use of other University grievance or appeals procedures for the same incident.

#### B. DEFINITIONS

1. A complaint is an informal claim of discriminatory treatment. A complaint may, but need not, constitute a grievance. Complaints shall be processed through the informal procedure herein set forth.
2. A grievance is the written allegation of discrimination which is related to:
  - a. Recruitment and admission to the institution.
  - b. Admission to and treatment while enrolled in an education program.
  - c. Employment as a student employee on campus.
  - d. Other matters of significance relating to campus living or student life, including, but not limited to:
    - Assignment of roommates in resident halls
    - Actions of fraternities and sororities
    - Membership in and/or admission to clubs/organizations
    - Student Health Services
    - Financial aid awards
3. A student is any person who has applied for admission or readmission, or who is currently enrolled, or who was a student of the University of Missouri at the time of the alleged discrimination.
4. Persons with disabilities—For the purpose of this student discrimination grievance procedure, a

"person with a disability" has been substituted for "handicapped individual" (Section 504, Rehabilitation Act of 1973) and shall be defined as "...any person who

- a. Has a physical or mental impairment which substantially limits one or more of such person's major life activities,
- b. Has a record of such impairment, or
- c. Is regarded as having such an impairment."

For purpose of this definition, "major life activity" means any mental or physical function or activity which, if impaired, creates a substantial barrier to employment and/or education.

Any reference in this document to written materials or to written or oral presentations within the student discrimination grievance procedure may be adjusted to accommodate persons with disabilities for whom the stated materials or required presentations would not be appropriate. Cost of such accommodation will be borne by the University, with no charge to the individual.

5. Appropriate Administrative Officer—The primary administrative officer on the staff of the Chancellor (in the area of Student Affairs/ Services, Administrative Services, Development, and Academic Affairs) having administrative responsibility for the unit in which the discrimination is alleged to have occurred.
6. Grievance Consultant—At any step the Director of Equal Opportunity or of Affirmative Action may be asked to serve as a consultant by any of the parties involved in this grievance procedure.

#### C. COMPLAINTS

1. Policies and Procedures—A student with a complaint will be provided with copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief Student Personnel Administrator or his/her designee and the Office for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an advisor participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.
2. Joint Complaint—If more than one student is aggrieved by the same action, these students may, by mutual written agreement among themselves, file with the Chief Student Personnel Administrator a complaint and pursue their complaints jointly under this grievance procedure. If the number of students in such a case is so large as to make it impracticable for them to be heard individually in a joint proceeding, they may, by mutual agreement, elect one or more of their number to act on behalf of them all.
3. Students may informally discuss a complaint with the relevant supervising administrator. Every reasonable effort should be made to resolve the matter informally at this administrative level. If a satisfactory resolution is not reached, the student may pursue the matter through each level of administrative jurisdiction up to and including the Appropriate Administrative Officer, or file a grievance within the time specified in D.1.b.
4. Complaints Involving Recruitment
  - a. Undergraduate applicants must first present

## Other Procedures or Regualtions

- complaints about recruitment to the Director of Admissions. If a satisfactory resolution is not reached, the applicant may appeal the matter to the immediate supervising officer of the Director of Admissions.
- b. Applicants for graduate study may request a meeting with the academic department head and the Dean of the College, or their designees, who are actually involved in the recruitment effort to discuss the matter informally. If a satisfactory resolution is not reached, the applicant may appeal to the Dean of the Graduate School and finally to the Appropriate Administrative Officer.
5. **Complaints Involving Admissions (Undergraduate or Professional)**
- a. Undergraduate and professional student applicants shall present complaints to the Director of Admissions or to the Dean of the School or College, depending upon where the application was originally filed.
- b. This University official shall compare the person's academic qualifications against the official University admissions criteria and review the denial. If the denial is sustained, the applicant may appeal this decision to the official's immediate supervisor or to the appropriate admissions committee.
6. **Complaints Involving Admissions (Graduate)—** Applicants to the Graduate School may ask for a meeting with the academic department head of the program to which the applicant was seeking admission. This official shall explain the reasons for the denial of recommendation for admission. If a satisfactory resolution is not reached, the applicant may then appeal to the Dean of the Graduate School or to the appropriate admissions committee. If the denial is upheld, the applicant may appeal the decision to the appropriate administrative officer.
7. **Complaints Involving Admissions to or Treatment in an Educational Program or in the Granting of Assistantships—**An undergraduate or graduate student enrolled at the institution who has a discrimination complaint involving admission to or treatment in an educational program or in the granting of assistantships may request a conference with the appropriate department head and with the Dean of the School or College (or the Dean's designee) to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 F.
8. **Complaints Involving Nonacademic Matters Related to Campus Living and Student Life—**A currently enrolled student who has a University-related complaint concerning discrimination in nonacademic matters including but not limited to assignment of roommates, actions of fraternities and sororities, membership in and/or admissions to clubs/organizations, student health services and financial aid awards may request a conference with the appropriate administrative supervisor, department head and/or director to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 D.
9. **Complaints Involving Student Employment on Campus—**A student enrolled at the University who alleges that discrimination occurred either in applying for work or while working as a student employee at a University job may request a conference with the supervisor, department head or director of the employing unit to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 D.
10. **Complaints Involving Financial Aid (Undergraduate, Graduate, Professional):**
- a. Undergraduate, graduate, and professional student aid applicants shall present complaints to the Director of Student Financial Aid where the application was originally filed or the award originally made.
- b. This University official shall compare the person's financial and academic qualifications against the official University financial aid criteria and review the award, amount, or denial of the aid. If the original judgment is sustained, the applicant may appeal this decision to the official's immediate supervisor or to the appropriate financial aid committee.

### D. INITIATING A GRIEVANCE

1. **Policies and Procedures—**A student with a grievance will be provided copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief of Student Personnel Administrator or designee and the Office for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an advisor participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.
- a. **Joint Grievance—**If more than one student is aggrieved by the same action, these students may, by mutual written agreement among themselves, file with the Chief Student Personnel Administrator a grievance and pursue their grievances jointly under this grievance procedure. If the number of students in such a case is so large as to make it impractical for them to be heard individually in a joint proceeding, they may, by mutual agreement, elect one or more of their number to act on behalf of all of them.
- b. Regardless of their nature, all discrimination grievances are to be filed with the Chief Student Personnel Administrator. A grievance must have been filed by a student within one-hundred-eighty (180) calendar days of the date of the alleged discriminatory act.
2. **Filing a Grievance**
- a. All grievances must be presented in writing and contain the following information:
- 1) A clear concise statement of the grievance which includes the name of the person(s) against whom the grievance is made, the date(s) of the alleged discrimination and a statement describing the specific supporting evidence;
  - 2) A brief summary of the prior attempts to resolve the matter which includes the names of persons with whom the matter was discussed and the results of those previous discussions;

## Other Procedures or Regualtions

- 3) A specific statement of the remedial action or relief sought.
- b. Within seven (7) working days, the original grievance form with an explanation will be returned to the student if, in the judgment of the Chief Student Personnel Administrator, the statements are vague or do not meet the above requirement. The student may make the necessary corrections and resubmit the grievance within seven (7) days.
3. Any grievance not filed within the time limits specified in Section 390.010 D.1.5 shall be deemed waived by the grievant. The Chief Student Personnel Administrator may extend the time limits only if adequate cause for an extension of the time limits can be shown by the student.
4. For informational purposes, copies of the grievance shall be forwarded to the Appropriate Administrative Officer and the Director of Equal Employment and/or Affirmative Action.
5. Within fifteen (15) working days of receipt of a grievance that satisfies the requirement of Section 390.010 D.1.b, the Appropriate Administrative Officer with the consent of the parties involved may establish an informal hearing with the aggrieved student, the responding faculty/staff/organization, the respondent's supervisor and the Appropriate Administrative Officer's designee. The Appropriate Administrative Officer shall not involve himself/herself in this meeting. If this informal means of resolving the grievance fails, a grievance committee will be impaneled as called for in Section 390.010 E.1.

### E. FORMATION OF GRIEVANCE COMMITTEE

1. It is the Appropriate Administrative Officer's responsibility to initiate the selection of the grievance committee within fifteen (15) working days after the request for the formation of a grievance committee or after the completion of the informal hearing provided for in Section 390.010 F.5 without satisfaction to the grievant.
2. A grievance hearing panel shall be established by October 1 of each year from which a grievance committee should be constituted. The panel shall consist of ten (10) faculty, ten (10) staff and ten (10) students. Selection of the panel will be made by the Chief Student Personnel Administrator from recommendations by the appropriate faculty, staff and student associations. Selection of membership will consider sex, race, disability, academic rank, student classification and employee classification. Membership on the hearing panel shall be for two years. A member's term shall expire on September 30 of the second year unless he/she is serving at that time on a hearing committee still in the process of reviewing an unresolved grievance. In such case, the member's term shall expire as soon as the committee has submitted a written report of its findings and recommendations to the Appropriate Administrative Officer.
3. A hearing committee shall be composed of five (5) members. The grievant shall select two (2) members from the grievance hearing panel provided by the Chief Student Personnel Administrator. The responding faculty/staff/organization shall select two (2) members from the grievance hearing panel. Both parties should have their selections made within 15 working days of the receipt of the request. The four committee members shall then select an additional member from the grievance hearing panel to serve as chair. Neither members of the immediate departmental unit nor student members of pertinent student organizations involved in the grievance shall be eligible to serve on the committee.

4. Any person selected to a grievance committee will be expected to serve on such committee and to be present at all sessions. If a member is absent from a single session, he/she will be required to review all tapes or transcribed proceedings of that session prior to the next meeting of the committee. Should a member be absent from two sessions or should a member request to be excused from service for reasons of illness, necessary absence from the campus or other hardship, then that member shall be replaced in the same manner used in the original selection (see Section 390.010 E.3). If a member is unable or ineligible to serve for whatever reason, the replacement shall review all tapes or written transcripts and all submitted evidence prior to service on the committee. Five members of the hearing committee, duly selected as in Sections 390.010 E.3 and E.4 must attend the opening and closing session of the hearing.

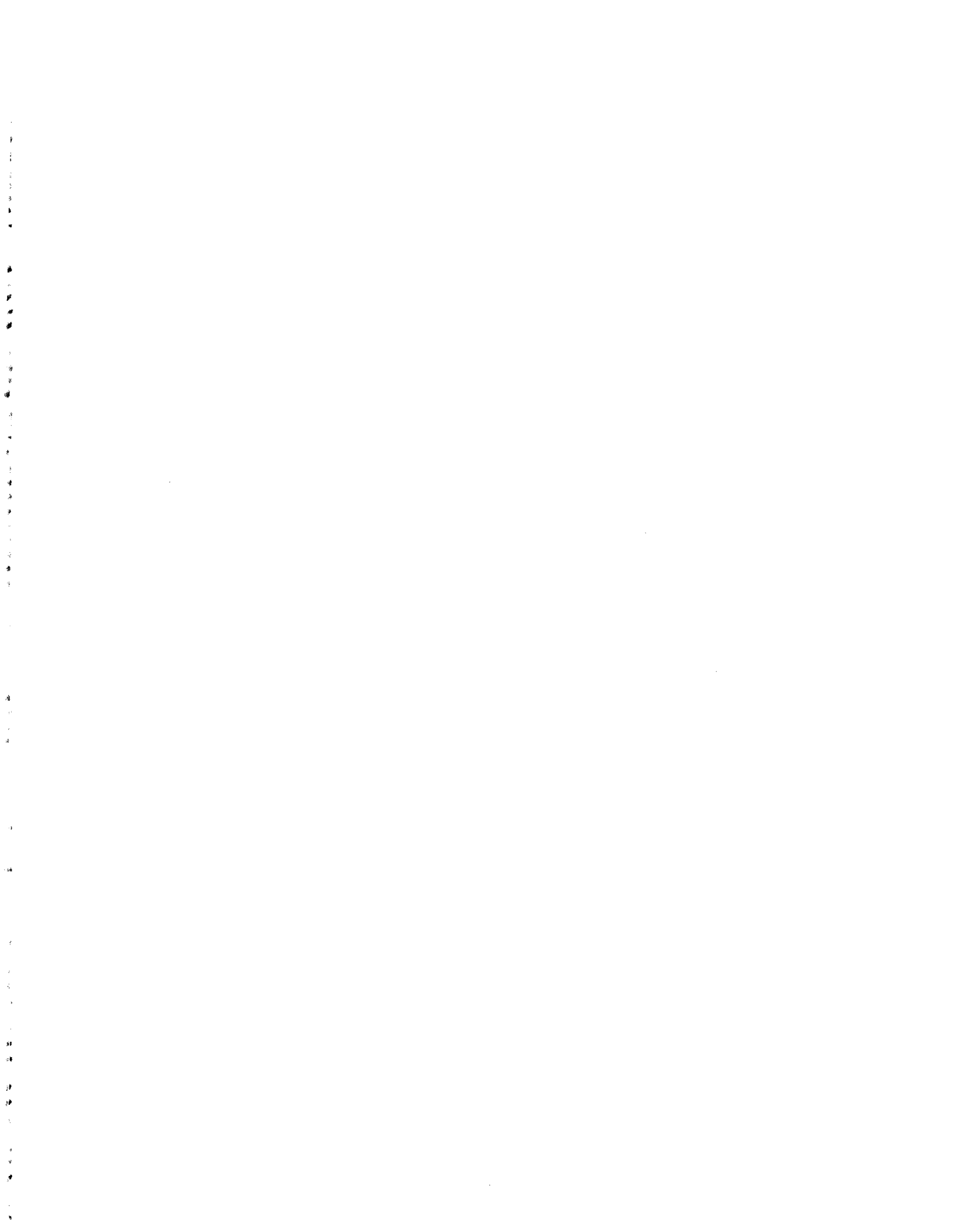
### F. HEARING PROCEDURES FOR FORMAL GRIEVANCES

1. It shall be the responsibility of the Appropriate Administrative Officer to coordinate the procedures contained herein, to make provisions for hearing rooms, to coordinate secretarial and recording services and to otherwise serve the grievance committee as needed.
2. At the first organizational meeting of the grievance committee, the committee shall elect a chairperson from among the members to preside over subsequent meetings. Then the chairperson shall schedule a hearing at the earliest convenient time when all affected parties can be present.
3. A quorum consists of a minimum of four members of the committee except as provided by Section 390.010 E.4.
4. The grievance committee shall invite the grievant and the responding person to all hearings. Attendance at the hearings shall be limited to persons who have an official connection with the case as determined by the chairperson. The grievant and the responding person may choose to be accompanied by an advisor. Others whose participation in the hearing is considered essential in order to assist the committee in establishing the facts of the case shall appear before the committee only long enough to give testimony and to answer questions of committee members.
5. It is within the duties and responsibilities of all members of a grievance committee to commit themselves to observe procedures consistent with fairness to all parties concerned. For example, it is a matter of principle that members of the grievance committee will not discuss a case with anyone outside of the hearing process and that their finding will not be



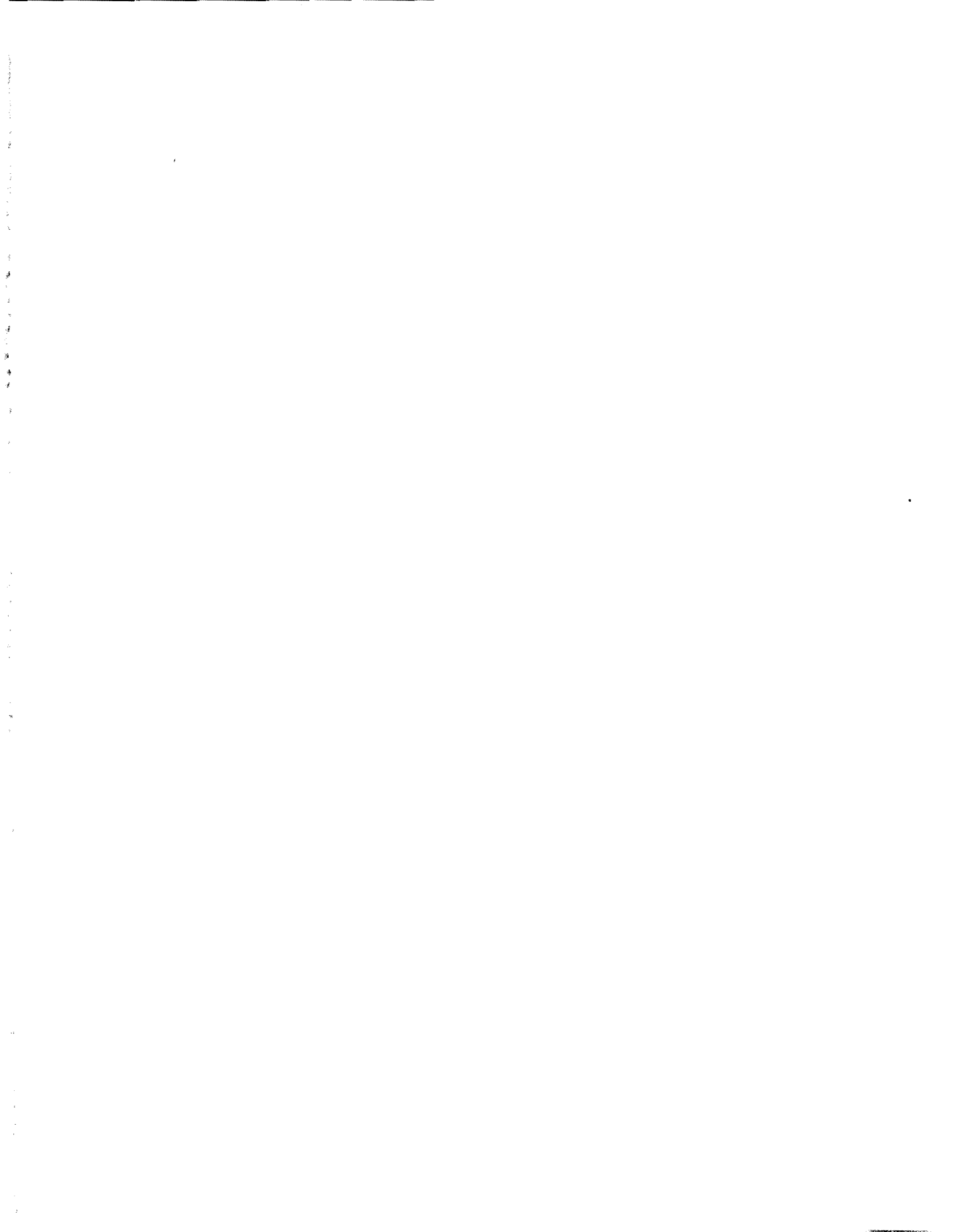
## Other Procedures or Regulations

- influenced by anything other than the evidence presented to them in meetings in which all affected parties are present.
6. The grievance committee shall set forth the rules of procedure for the hearing within the guidelines set forth herein. The chairperson may, for good cause and with the concurrence of a majority of the entire committee, authorize deviation from the suggested format, in which case the principal parties shall be notified.
    - a. The grievant shall be heard first in all phases of a grievance hearing and shall be primarily responsible for the presentation of his/her position.
    - b. The advisor of the grievant or respondent may advise that person and may briefly explain his or her position but shall not be permitted to testify or to cross-examine.
    - c. A reasonable time limit should be established for opening and closing statements and shall be announced prior to the hearing.
    - d. Length of hearing sessions may be established in advance; every effort should be made to conduct the hearing as expeditiously as possible, with equal fairness to both parties.
    - e. The interested parties shall provide the chairperson with the names of the advisor and potential witnesses at least forty-eight (48) hours prior to the hearing. It is the responsibility of the interested party, working with the chairperson, to ensure the presence of these individuals in a timely manner.
    - f. After initial witnesses for both parties have been heard, such witnesses may be recalled for additional questioning if requested by either party or the grievance committee. The committee may call new witnesses whose testimony it deems relevant or helpful.
    - g. In order to promote the truthful, unfettered exchange of information and ideas, all testimony pertaining to the grievance hearing shall be held in confidence.
    - h. Only evidence relevant to the grievance may be introduced. Questions regarding the admissibility of evidence shall be decided by the chairperson.
  7. At any point in the proceedings prior to the time at which the committee reaches its final decision, the grievant may withdraw any portion or all of the grievance with the consent of a majority of the committee members and of the respondent. In all cases of withdrawal at the consent of the committee and of the respondent, the grievant shall not have the privilege of reopening the same grievance at any time in the future. In the event that the student refuses to participate further in the committee hearing, the committee may choose to continue the case or to move to closure with an appropriate closing statement as per Section 390.010 F.9.
  8. A confidential tape recording of the grievance hearing shall be made and will be accessible to the parties involved, the committee, the Appropriate Administrative Officer, the Chancellor, the President, members of the Board of Curators and authorized representatives on a need-to-know basis. Either party to the grievance may request that the committee provide a written transcript of testimony. The cost of preparation of such a transcript is to be paid by the party making such request unless Section 390.010 B.4 is applicable. After the report of the grievance committee has been prepared, the tapes and relevant materials will be sealed and filed in the Appropriate Administrative Office. Unless extraordinary circumstances apply, these materials will be destroyed at the end of five years.
  9. At the conclusion of the grievance hearing, the members of the grievance committee shall meet in closed session to deliberate upon their findings. A majority vote of the entire committee shall be required on all decisions. The grievance committee shall make a written report on findings and recommendations to the Appropriate Administrative Officer of the University, with copies to the grievant(s) and the responding person(s). The written report will contain:
    - a. A statement of the purpose of the hearing,
    - b. Issues considered,
    - c. A summary of the testimony and other evidence presented,
    - d. Findings of fact as developed at the hearing, and
    - e. Recommendations for final disposition of the case.
  10. The Appropriate Administrative Officer will make his/her decision. This decision and the actions that have been taken shall be presented to both parties in writing. If the administrative officer does not accept the recommendations of the grievance committee, a written statement of the reasons for so ruling must be given to both parties and to the chairperson of the committee.
  11. If requested by the grievant or the responding party, normally within seven (7) calendar days of the notification of the decision, the decision of the Appropriate Administrative Officer may be subject to a review of the records by the Chancellor. Any review and decision by the Chancellor shall be made normally within thirty (30) calendar days. The decision of the Chancellor can be appealed to the President, who shall have thirty (30) calendar days in which to make a decision, which shall be final.
  12. Grievances shall receive prompt attention. The hearing and the report of the grievance committee shall normally be completed within sixty (60) calendar days of the formation of the grievance committee, and a final decision shall be made by the Appropriate Administrative Officer normally within ten (10) calendar days thereafter. In any case in which these time schedules should prove to be inadequate, the committee shall present, in writing, an amended time schedule to all parties involved.



# INDEX

UM-St. Louis 1996-97 Bulletin



# Index

- A.B. degree. *See* Bachelor of Arts
- Absence regulations, 24
- Academic Calendar, 12
- Academic Development Center for, 88
- Academic Dishonesty, 25
- Academic Honors. *See* Honors
- Academic policies, Undergraduate, 22-24, Graduate, 32-33, College of Arts and Sciences, 99-100
- Academic probation, suspension, and dismissal, 25, 31-32
- Academic standing, as a course prerequisite, 24
- Access to Success Program, 87
- Accounting, scholarships. *See* Business Administration and/or Financial Aid
- Accreditation, of the University, 6
- Activities fee, student, 27, 36
- Administration, University, 10-11
- Admission requirements and procedure, undergraduate study, 16-19 Graduate School, 29-30 *See also* individual College departments and/or Schools
- Adult Education (ADU ED), 337, 357-358 certification in, 358. *See also* Continuing Education & Outreach
- Advanced placement, tests for, 17 transfer students, 18. *See also* College level examination program
- Advance registration, undergraduate students, 19 graduate students, 29
- Advising, Academic, Evening College, 21, 305 undergraduate students, 20-21 *See also* Center for Academic Development individual departments and/or Schools and Preprofessional Programs
- Aerospace studies. *See* Air Force ROTC
- Affirmative Action policies, 472-475
- Aging, Adult Development and *See* Gerontology Studies
- AIDS Policy Statement, 475
- Air Force Reserve Officers Training (ROTC), 455-457
- Alpha Sigma Lambda, Evening College scholastic society, 385
- Alumni Association, UM-St. Louis, 84
- American history/government requirement, 22
- American Studies minor in, 291-292
- Anthropology Department of, 102-103 career outlook, 103 faculty, 102 minor in, 103 undergraduate studies, 103
- Appeals procedures, 470
- Application for admission, graduate study, 29-30 undergraduate study, 16-19
- Application for candidacy for doctoral degree, 34 *See also* individual degree programs
- Application for financial aid *See* Financial Assistance
- Applied art. *See* Studio Art
- Applied mathematics Bachelor of Science in, 211
- Applied music (private lessons) credit for, 100, 222
- Applied (Industrial/Organizational) Psychology, psychology degree focus area, 265
- Aptitude tests required, 16
- Archaeology. *See* Anthropology
- Architecture, degree programs for Missouri residents at other universities, 113, 304
- Archives and manuscripts collections, 78
- Army Reserve Officers Training (ROTC), 455-457. *See also* Financial Aid
- Art Department of, 110-113 career outlook, 113 faculty, 110 undergraduate studies, 110-112
- Art gallery. *See* Gallery 210
- Art and art history, minor in, 112-113
- Arts and Sciences College of, 14, 97-306 academic advising, 20 certificate programs, 100-101, 296-303 Continuing Education & Outreach, 90-91 general information on degree requirements, 99-101 preprofessional programs, 304-307 *See also* names of individual departments
- Asian studies, East Asian certificate program, 85, 403. *See also* History, Department of
- Assessment, 22
- Assistantships Graduate, 37 in biology, 121 in chemistry, 145 in English, 179 in mathematical sciences, 214 in political science, 252 *See also* Internships
- Astronomy. *See* Physics and Astronomy
- Astrophysics, Bachelor of Science in physics option, 241
- Athletic Coaching, minor in, 379
- Athletics, 15. *See also* Physical education
- Atmospheric science. *See* Physics and Astronomy
- Attendance regulations, 24
- Auditor, 19
- Auxiliary aids and services, 80-81
- B.A., B.G.S., B.M., B.S., B.S.W. degrees. *See* Bachelor of: individual name of degree
- Baccalaureate (bachelor's degrees) College of Arts and Sciences requirements, 99-101 degrees offered (list), 95-96 University requirements, 21-22
- Bachelor of Arts degree, 95 anthropology, 103 art history, 111 biology, 121 chemistry, 143 communication, 152 economics, 168 English, 177 Evening College, 385 history, 200 mathematics, 211 foreign languages and literatures, 189-190 music, 222 philosophy, 234 physics, 240 political science, 249 psychology, 264 sociology, 280 with teacher certification, 339, 355-357
- Bachelor of General Studies degree, 14, 95, 385-386
- Bachelor of Music degree, 95, 100, 221-226
- Bachelor of Science degree, 95, 100 applied mathematics, 211 biology, 122 chemistry, 144 computer science, 212 economics, 168 Evening College, 385 physics, 241 sociology, 280
- Bachelor of Science in Business Administration degree, 312
- Bachelor of Science in Criminology and Criminal Justice degree, 160
- Bachelor of Science in Education degree, 337, 355-358 early childhood education, 370 elementary education, 370 secondary education with biology major, 123 chemistry major, 144 English major, 178 history major, 201 mathematics major, 211 foreign language (French, German, or Spanish) major, 189 physical education emphasis, 343-344 physics major, 241 social studies major, 201 special education emphasis, 344-345 *See also* Certification Education, School of Teacher Education
- Bachelor of Science in Nursing degree, 410
- Bachelor of Science in Public Administration degree, 250
- Bachelor of Social Work degree, 274 in Evening College, 385

# Index

- Basic skills requirement, 21  
 Behavioral disorders  
   emphasis in, 344-345  
   recommended curriculum, 344-345  
   *See also* Special Education  
 Behavioral Studies  
   Department of, 344-347  
   career outlook, 347  
   faculty, 344  
   graduate studies, 345-347  
   undergraduate studies, 344-345  
 Biochemistry, certification, 122, 144-145, 296  
 Biology  
   Department of, 120-128  
   career outlook, 128  
   faculty, 120  
   graduate studies, 125-128  
   minor in, 123  
   undergraduate studies, 121-125  
 Biotechnology, certification, 124, 296  
 Black Culture Room, 79  
 Black Studies, minor in, 292  
 Bookstore, UM-St. Louis, 79  
 Botany research, 86  
 Breadth of study requirement, 22  
 Bridge Program, 87  
 Bush, Sr., James T., Center, 88  
 Business Administration  
   School of, 311-322  
   admission to, 312  
   advising, 20  
   career outlook, 322  
   Continuing Education & Outreach, 90  
   cooperative program  
   with chemistry, 142, 144  
   degree requirements, 313-314  
   faculty, 311-312  
   graduate studies, 318-321  
   minor in, 317-318  
   undergraduate studies, 312-317  
   *See also* Business Development Center  
 Business and Industrial Studies,  
   Center for, 85  
 Business education, major in, 356  
 Business option with chemistry  
   degree, 142, 144  
 Calendar, Academic, 12  
 Campus  
   directory, map, 6-7  
   offices, 8-9  
 Career Services Office, 80  
 CBHE Articulation Agreement, 18, 463  
 Center for Academic Development, 80  
 Center for Business and  
   Industrial Studies, 85  
 Center for Entrepreneurship and  
   Economic Education, 85  
 Center for Excellence in  
   Urban Education, 87  
   Access to Success, 87  
   Bridge Program, 87  
   Engelmann Institute, 87  
   Junior Science, Engineering, and  
   Humanities Symposium, 87  
 Center for International Studies, 85  
 Center for Metropolitan Studies, 88  
 Center for Molecular Electronics, 85  
 Center for Science and  
   Technology, 85, 90  
 Centers, Specialized, 86-89 *See also*  
   name of individual center  
 Certificate programs, 101, 296-303  
   africana studies, 301-302  
   biochemistry, 124, 144-145, 296  
   biotechnology (graduate), 300-301  
   biotechnology, 124, 296  
   tropical and conservation biology  
   (undergraduate), 301, (graduate) 301  
   with communication, 152  
   gerontological studies, 397-398  
   international studies, 402-404 (grad),  
   405-406 (undergraduate)  
   photographic studies, 296-297  
   with political science major, 249  
   studies in religions, 297  
   trauma studies, 299-300  
   women's and gender studies, 299  
   (graduate), 297-299 (undergraduate)  
   non-profit organization management  
   and leadership (undergraduate),  
   302-302, (graduate), 303  
   writing, 178, 299  
 Certification  
   adult education, 357  
   educational administration, 359  
   reading, 358, 371-372  
   school counseling, 310-312  
   teaching, 337-340  
   with M.Ed. degree, 357-360, 371-372  
   *See also* Education, School of and  
   Teacher education  
 Chemistry  
   Department of, 142-146  
   career outlook, 146  
   faculty, 142  
   graduate studies, 145-146  
   minor in, 144  
   undergraduate studies, 143-145  
 Child care and development,  
   psychology degree focus area, 264  
 Child Development Center. *See*  
   University Child Development Center  
 Chinese, 188. *See* Foreign Languages  
 Classical Studies, minor in, 292  
 Clinical Psychology, Ph.D. in, 263, 266  
 College Level Examination Program  
   (CLEP), 17, 386  
 College of Arts and Sciences. *See* Arts  
   and Sciences, College of  
 Commencement, 26  
 Communication  
   Department of 152-154  
   career outlook, 154  
   faculty, 152  
   minors in, 154  
   undergraduate studies, 153-154  
 Communication Theory  
   *See* Communication  
 Communicative skills requirement, 21  
 Community education  
   emphasis in education degree, 338  
   M.Ed. program in, 360  
 Community mental health, psychology  
   degree focus area, 264  
 Community Psychological Service, 266  
 Community Services, 90-91  
   projects in, 386. *See also* Continuing  
   Education & Outreach  
 Comparative politics. *See also*, Political  
   Science  
 Composition, English. *See* English  
   Department  
 Comprehensive Examinations, for  
   doctoral degree, 34  
 Computing, Office of, 86, 249, 391  
 Computer Science  
   Bachelor of Science in, 214-214.  
   *See also* Mathematics and Computer  
   Science, Management Information  
   Systems, UM-Rolla Engineering  
   Education Center  
 Confidentiality Policy, 39  
 Concerts. *See* Music, Department of  
 Continuing Education & Outreach 90-91  
   in graduate study, 31  
 Cooperative Programs  
   biology, 121  
   chemistry, 142  
   criminology and criminal justice, 160  
   doctoral degree programs, 34  
   economics, 167  
   engineering, 304  
   foreign language study, 188  
   history, 200  
   political science, 249  
   public policy administration, 391  
   secondary education programs, 355  
   business, 311  
 Counseling, degree programs in, 337,  
   346-347. *See also* Behavioral Studies  
 Counseling service, 80, 264, 266  
 Counselor Education (CNS ED), 337, 345  
 Course-load regulations  
   graduate students, 31  
   undergraduate students, 24  
 Course numbering system, 5  
   in education, 337  
 Course prerequisite, explanation of, 24  
 Credit for experience, 17, 386  
 Credit hours, explanation of, 23  
 Criminal justice courses. *See*  
   Criminology and Criminal Justice  
 Criminology and Criminal Justice  
   Department of, 160-162  
   career outlook, 162  
   faculty, 160  
   graduate studies, 161-162  
   minor in, 161  
   undergraduate studies, 160-161  
 Cultural Diversity Requirement, 100  
 Cultural opportunities  
   *See* Art, Communication, Music  
 Curators, Board of, 10  
   Award Program *See* Financial Aid  
 Dean's list, 25  
 Degree programs, list of, 95-96  
 Degree requirements. *See* name of

# Index

- individual degree
- Delayed grade, 23, 35
- Diploma. *See* Commencement
- Directory
  - University Programs and Offices, 8-9
  - campus map, 6-7
- Disabled students, auxiliary aids and services to, 39, 475
- Discrimination Grievance Procedure for Students, 476-479
- Dissertation, academic policies on, 34-35
- Doctoral degrees
  - academic policy on, 34-35
  - degrees offered (list), 96
  - biology, 126
  - chemistry, 146
  - nursing, 412
  - optometry, 425
  - physics, 242
  - physiological optics, 426
  - political science, 252
  - psychology, 266
- Doctor of Education degree, 340-341
- Doctor of Optometry degree, 425
- Double major degree program, in philosophy, 234-235
- Dropping/adding courses
  - graduate students, 31
  - undergraduate students, 24
- Drug and Alcohol Prevention Program, 81
- Dual high school/University enrollment, 17
- Dual master's degrees, 33
- Early Childhood Education (ECH ED), 337
  - B.S.Ed. degree program, 370
  - M.Ed. emphasis in Early Childhood-Special Education, 340
- East Asian Studies Certificate, 85, 403
- Economics
  - Department of, 167-170
  - career outlook, 170
  - faculty, 167
  - graduate studies, 169-170
  - minor in, 168-169
  - undergraduate studies, 167-169
- Ed.D. degree. *See* Doctor of Education
- Educational Administration (ED ADM), 337
  - Advanced Certification Studies, 359
  - Ed.D. degree, 340
  - M.Ed. program, 359-360
- Educational Fees. *See* Fees
- Educational Foundations (ED FND), 337. *See* Educational Studies
- Educational Psychology (ED PSY), 337. *See* Behavioral Studies
- Educational Research and Evaluation Methods (ED REM), 337. *See* Behavioral Studies
- Educational Studies
  - Department of, 355-360
  - career outlook, 360
  - faculty, 355
  - graduate studies, 357-360
  - undergraduate studies, 355-357
  - See also* Education, School of
- Educational Support Services, 341
- Educational Technology (ED TEC), 337. *See* Educational Studies
- Education courses,
  - abbreviations used, 337
- Education, School of, 14, 337-382
  - admission to, 337-338
  - advising, 21
  - Continuing Education & Outreach, 90
  - graduate studies, 340-341
  - undergraduate studies, 337-339
  - See also* Behavioral Studies, Educational Studies, Elementary and Early Childhood Education, and Physical Education
- Eldercare Center, 87, 90
- Elementary and Early Childhood Education Department of, 369-372
  - career outlook, 372
  - faculty, 369
  - graduate studies, 371-372
  - undergraduate studies, 369-371
- Elementary Education (ELE ED), 337
  - B.S. degree program in, 370-371
  - M.Ed. degree program in, 371-372
- Employee Training and Development, minor in, 353
- Employment. *See* Career Placement Services
- Engelmann Institute, 87
- Engineering, 88, 443-446, 454
  - astrophysics option, 241
  - engineering physics option, 241
  - general physics option, 241
  - pre-engineering program, 304
  - graduate studies in, 454
  - See* Physics and Astronomy
- Engineering Program
  - UM-St. Louis/Washington University Joint Undergraduate, 443-446
- Engineering Education Center, UM-Rolla, 88, 454
- English as a second language, 21
- English composition requirement, 21
- English
  - Department of, 176-179
  - career outlook, 179
  - faculty, 140
  - graduate studies, 179
  - minor in, 178
  - undergraduate studies, 176-179
- Enrollment information
  - graduate studies, 31-32
  - undergraduate studies, 24-25
- Entrepreneurship and Economic Education, Center for, 85
- Equal Educational Opportunity. *See* Affirmative Action Policies
- Evening College, 14, 385-386
  - admission to, 385
  - advising, 21
  - Bachelor of General Studies degree, 385-386
- Evening College Council, 83
- Examinations
  - academic policy on, 23
  - aptitude tests for admission, 16
  - for graduate study, 29, 318
  - proficiency in basic skills, 22
  - proficiency in foreign language, 100
  - Test of English as a Foreign Language, (TOEFL), 19, 29
- Excellence in Urban Education, Center for, 87
- Excused grade, 23-24
- Eye Protection Law, 5
- Faculty. *See* individual department or School sections
- Fees
  - graduate study, 35-36
  - parking, 27, 36
  - refund of, 28, 36
  - School of Optometry, 433
  - undergraduate study, 26-28
  - See also* Financial Aid
- Fellowships, 37
- Finance courses
  - See* Business Administration
- Financial Aid, 40-77
- Financial aid appeals, 470
- Financial assistance, 37
  - optometry, 433.
  - See also* Financial Aid
- Food Services, 79
- Former students, re-enrollment, 19
- Foreign language requirement
  - College of Arts and Sciences, 100
  - Graduate School degree programs, 96
- Foreign Languages and Literatures Department of, 188-191
  - career outlook, 191
  - faculty, 188-190
  - minors in, 190
  - undergraduate studies, 188-190
- Foreign students, admission requirements, 19, 29
- Foreign Study
  - foreign language students, 188
  - Study Abroad programs, 85, 461-463
- French, Degree program in, 189
- Gallery 210, 84, 110
- General education requirements, University, 21-22
- General Studies, Bachelor of, 14, 385-386
- Geography. *See* Economics
- Geology. *See* Physics and Astronomy
- German, Degree program in, 188-189
- Gerontology, 396-398
- Government courses
  - See* Political Science, Department of and also Political Science
- Grade modification, 24
- Grade-point Average
  - Calculation of, 23, 32
  - requirements for graduation: University, 22
  - College of Arts and Sciences, 99
- Grading system
  - graduate study, 32
  - undergraduate study, 24
- Graduate Management Admission

# Index

- Test, 29, 317  
 Graduate Record Examination, 29  
 Graduate School, The, 14.  
   *See also* Graduate Study  
 Graduate study, 14, 29-37  
   academic policy, 32-33  
   admission to, 29-30  
   degrees offered (list), 96  
   enrollment in, 31-32  
   doctoral program, 34-35  
   fees and financial assistance, 35-37  
   master's degree program, 33  
   registration, 31  
 Greek, 188. *See* Foreign Languages  
 Grievance procedure on a grade, 470  
 Guidance and counseling, 340  
   degree programs in 346-347. *See also*  
   Behavioral Studies, Department of  
 Handicapped students  
   services for, 39, 80, 472  
 Hazing, Policy on, 471  
 Health Certificate for student  
   teaching, 337  
 Health Fee, 27, 36, 433  
 Health Sciences. *See* Nursing and  
   Optometry  
 Health Services, 81  
 Hebrew, 188. *See* Foreign Languages  
 High school equivalency, basis for  
   admission, 17  
 High school/University, Dual  
   enrollment in, 17  
 History  
   Department of, 200-202  
   career outlook, 202  
   faculty, 200  
   graduate studies, 201-202  
   minor in, 201  
   undergraduate studies, 200-201  
 History of UM-St. Louis, 13  
 Home economics. *See* Economics  
 Honor Societies, 25  
 Honors, 25  
   Pierre Laclade Honors College, 14, 21,  
   25, 437-441  
 Horizons, 80  
 Horticulture, 461  
 Hotline phones, 79  
 Housing Information, 79  
 Incomplete grade. *See* Delayed grade,  
   Y grade  
 Institute and workshop courses, 32  
   Continuing Education  
   & Outreach, 90-91  
 Instructional Computing Fee, 27, 36  
 Instrumental music  
   *See* Music, Department of Applied  
   Music  
 Insurance, Student, 28  
 Intercampus exchange students, 30  
 Interdisciplinary Courses. *See*  
   Interdisciplinary Courses  
 Interdisciplinary studies  
   gerontology certificates, 396-397  
   interdisciplinary minors, 291-292  
   Master of Public Policy Administration  
   degree, 391  
   International Center for Tropical  
   Ecology, 86  
   International Relations. *See* Political  
   Science  
   International Studies  
   Center for, 85, 402  
   certificate programs, 85, 402-406  
 Internships  
   art, 110  
   business, 312  
   criminology and criminal justice, 160  
   education programs, 327, 360  
   political science, 248  
   psychology, 266  
   public policy administration program, 391  
   radio and television stations, 152  
   sociology, 279, 284  
 Inter-campus Exchange Program, 30  
 Inter-School studies, 391-405  
 Inter-University Consortium for Political  
   and Social Research, 87, 249, 351  
 Introduction to UM-St. Louis, 13-15  
 Italian, 188. *See* Foreign Languages  
 Japanese, 188. *See* Foreign Languages  
 Journalism courses. *See*  
   Preprofessional Programs,  
   Interdisciplinary Studies, and also  
   English Composition  
 Journalism, School of, (UMC), 305  
 Junior college students. *See* Transfer  
   Students  
 Junior Science, Engineering, and  
   Humanities Symposium, The, 87  
 KWMU radio, (FM91), 87  
 Language and grammar. *See* Certificate  
   in Writing and also English, Language  
   courses  
 Latin, 188. *See* Foreign Languages  
 Latin American Studies Certificate, 87, 369  
 Latin honors at graduation, 26  
 Law School preparation, 305  
 Learning Disabilities  
   M.Ed., program emphasis, 344, 347.  
   *See also* Special Education  
 Leave of absence in graduate study, 34  
 Legal Studies, minor in, 292-293  
 Libraries, UM-St. Louis, 78  
 Lindbergh, UM-St. Louis, extension  
   programs, 91  
 Literature in Translation courses. *See*  
   Foreign Languages  
 Loans  
   *See* Financial Aid  
 M.A., MAcc, MBA, M.Ed., MPPA, or M.S.  
   degrees. *See* Master of: individual  
   name of degree  
 Major, change of, 25  
 Management courses, graduate level.  
   *See* Business Administration,  
   Management (400-level)  
 Map, campus, 6-7  
 Marketing courses, graduate level. *See*  
   Business Administration, Marketing  
   (400-level)  
 Mark Twain Building, 15, 82  
 Master of Accounting, 320-321  
 Master of Arts  
   degrees offered (list), 96  
   criminology and criminal justice, 161  
   economics, 169  
   English, 179  
   history, 201  
   mathematics, 214  
   political science, 252  
   psychology, 265  
   sociology, 283  
   *See also* Master's Degree, general  
   information  
 Master of Business Administration  
   degree, 33, 318-319. *See also* Master's  
   Degree, general information  
 Master of Education degree, 340  
   counseling, 346-347  
   educational administration, 359-360  
   elementary education, 369, 371-372  
   secondary education, 355, 357-360  
   special education, 346-347  
   *See also* Master's Degree, general  
   information  
 Master of Public Policy Administration  
   degree, 249, 322, 357-359. *See also*  
   Master's Degree, general information  
 Master of Science  
   degrees offered (list), 96  
   biology, 125  
   chemistry, 145  
   gerontology, 396  
   management information systems, 319  
   nursing, 411  
   physics, 242  
   physiological optics, 426  
   *See also* Master's Degree, general  
   information  
 Master's degree, general information, 33  
 Math, tutoring in, 88  
 Mathematical skills requirement, 21  
 Mathematics and Computer Science,  
   Department of, 210-214  
   career outlook, 214  
   faculty, 210  
   graduate studies, 214  
   minor in, 213  
   undergraduate studies, 211-213  
 Mathematics and Science Education  
   Center, 87  
 Matriculating students  
   Graduate School, 29  
 Medical school preparation, 306  
 Mental Retardation, M.Ed. program  
   emphasis, 344, 347. *See also* Special  
   Education  
 Metropolitan Studies, Center for, 88, 391  
 Middle School, teacher certification,  
   369, 370-371  
 Military Science. *See* ROTC  
 Military service, credit for, 17  
 Minority students, 80  
 Minors, 101  
   American studies, 291  
   anthropology, 104  
   art history, 112



## Index

- athletic coaching, 379  
 biology, 123-124  
 black studies, 292  
 business administration  
   (two areas), 317, 387  
 chemistry, 144  
 classical studies, 292  
 communication (four areas), 152  
 computer science, 313  
 criminology and criminal justice, 161  
 economics, 167  
 English, 178  
 French, 190  
 German, 190  
 history, 201  
 jazz studies, 224  
 legal studies, 292-293  
 mathematics, 213  
 music and music education, 222  
 philosophy, 234  
 physics, 240  
 political science (seven areas), 249  
 psychology, 265  
 public affairs journalism, 293  
 social work, 274  
 sociology, 281  
 Spanish, 190  
 statistics, 213  
 studio art, 112  
 urban studies, 293  
 Mission Statement, 13-14  
 Molecular Electronics, Center for, 85  
 Music  
   Department of, 221-226  
   career outlook, 226  
   faculty, 221  
   graduate studies, 225  
   minors in, 224-225  
   undergraduate studies, 221-225  
 Non-degree-credit courses, 22  
 Nonmatriculating students  
   graduate study, 30  
 Nonresident students  
   undergraduate study, 17, 27  
   graduate study, 35  
 Nontraditional study, 385  
 North Central Association, 5  
 Nursing, Barnes College of,  
   15, 21, 409-412  
   admission to, 410  
   B.S.N. degree requirements, 410  
   faculty, 409  
   graduate studies, 411-412  
 Office of Computing, 86, 249, 390  
 Office of Research, 86  
 Optometry, School of, 14, 91, 422-428  
   admission to, 423  
   career outlook, 428  
   college-level prerequisite courses, 426  
   faculty, 422  
   fees, 425  
   financial aid, 390  
   graduate program in  
   physiological optic, 425  
   See Financial Aid  
 Organizations  
   Student, 15, 79  
   Evening College, 385  
   policies on, 471  
 Out-of-state students. *See* Nonresident  
   Students  
 Parking fees, 27, 36  
 Pass-Fail option. *See* Satisfactory/  
   Unsatisfactory option, 23  
 Penney, J.C., Building, 91  
 Petitioning, for dropping/adding  
   courses, 24, 31  
 Ph.D. programs. *See* Doctoral degrees  
 Philosophy  
   Department of, 234-235  
   faculty, 234  
   minor in, 235  
   undergraduate studies, 234-235  
 Photographic Studies  
   certificate in, 296-297. *See* Art and Art  
   History, Educational Technology  
   (ED TEC), and Interdisciplinary  
 Physical Education  
   Department of, 378-379  
   career outlook, 379  
   undergraduate studies, 378-379  
   M.Ed. with physical education  
   teaching field, 379  
 Physics and Astronomy  
   Department of, 240-242  
   career outlook, 242  
   faculty, 240  
   graduate studies, 242  
   minors in, 241-242  
   undergraduate studies, 240-241  
 Pierre Laclede Honors College, 14, 21,  
   25, 437-438  
 Placement Office, 80  
 Plagiarism. *See* Academic Dishonesty  
 Police administration. *See* Criminology  
   and Criminal Justice  
 Police, Campus, 9, 84  
 Political research, 249  
 Political Science  
   Department of, 248-253  
   career outlook, 253  
   faculty 248  
   graduate studies, 252-253  
   minors in, 251-252  
   undergraduate studies, 249-250  
 Portuguese, 188. *See* Foreign Languages  
 Post-doctoral study, 30  
 Pre-Architecture program, 113, 304  
 Pre-Engineering program, 304  
 Prejournalism program, 305  
 Prelaw program, 305  
   with philosophy major, 235  
 Premedical sciences program, 306  
 Pre-Optometry, 88, 306  
 Prepharmacy program, 306-307  
 Preprofessional programs, 266-269  
 Preregistration, 19  
 Prerequisites, for a course, 24  
 Probability and statistics courses. *See*  
   Mathematics and Computer Science  
 Probation, suspension,  
   and dismissal, 25  
 Proficiency examinations  
   in basic skills, 22  
   in foreign language, 100  
 Programs at other universities, 461-463  
 Provisional students, 30  
 Psychology  
   Department of, 263-266  
   career outlook, 266  
   faculty, 263  
   graduate studies, 265-266  
   minor in, 265  
   undergraduate studies, 264-265  
 Psychology Office, undergraduate, 227  
 Public Affairs Journalism, minor in 293  
 Public Administration degrees. *See*  
   Bachelor of Science in Public  
   Administration and Public Policy  
   Administration degree program  
 Public Policy Administration, degree  
   program, 170, 251-252, 286  
 Public Policy Research Centers, 87  
   James T. Bush, Sr., Center, 88  
   Center for Metropolitan Studies, 87  
   Public Policy Extension/Survey and  
   Applied Research, 88  
 Radio Station KWMU, 87  
 Radio/Television Studies.  
   *See* Communication  
 Reading, M.Ed. program emphasis, 358,  
   371-372  
 Recreational facilities, 82  
 Refund of fees, 28, 36  
   for registration cancellation, 19  
 Registration  
   undergraduate, 27  
   late registration 31  
   graduate 31  
 Religions studies, certificate, 297  
 Repeating courses, 23  
 Research assistantships, 37  
   in chemistry, 143  
   in political science, 252  
 Research, Office of, 86  
 Reserve Officer Training Corps (ROTC),  
   22, 30-31, 455-457  
 Residence requirement for degree, 22, 34  
 Residency Requirements, Arts and  
   Sciences, 100  
 Restricted students in graduate study, 29  
 Russian, 188. *See* also Foreign Languages  
 Safety glasses, 5  
 Satisfactory/Unsatisfactory option, 24  
 Scholarships, 37, 188, 437, 421, 455  
   *See* also Financial Aid  
 School administration, 337  
   master's degree program, 359-360.  
   *See* also Educational Studies  
 Science and Technology, Center  
   for, 85, 90  
 Scientific Language Option, 100. *See*  
   also German or Russian  
 Secondary Education (SEC ED)  
   master's degree program 337, 355-357.  
   *See* also Educational Studies  
 Section change, 24  
 Senate, 83

## Index

- Smoke-Free Campus Policy, 82
- Social sciences requirement. *See*  
American history and government
- Social Work,  
Department of, 274-275  
career outlook, 275  
faculty, 274  
in Evening College, 385  
minor in, 275  
undergraduate studies, 274-275
- Sociology, Department of, 279-284  
career outlook, 284  
faculty, 279  
graduate studies, 283-284  
minor in, 283  
undergraduate studies, 280-283
- Spanish, degree program in, 190
- Special Education (SPC ED), 337  
degree programs 344-347  
career outlook, 347
- Sports, 82. *See also* Physical Education,  
Department of
- Statistics, Probability and, 211. *See also*  
Mathematics and Computer Science
- Student Activities, fee for, 27, 36  
Office of, 79
- Student Affairs, Office of, 80-82
- Student Association, 83
- Student Conduct, Code of, 466
- Student Court, 48
- Student Disciplinary Matters, 467
- Student Employment Program, 80-81
- Student Facilities, fee for, 27, 36
- Student government, 83
- Student Health Services, 81
- Student Organization Policy, 471
- Student records, privacy of.  
*See* Confidentiality Policy
- Student teaching, 338-339.  
*See also* Education, School of
- Studio art, BFA, 111-112  
Minor in, 113
- Study Abroad Programs, 85, 188,  
461-462
- Teacher certification, 337  
biology, 123  
chemistry, 144  
communication, 152  
English, 178  
foreign languages, 189  
history, 201  
mathematics, 211  
music education, 223-236  
physics, 241  
sociology, 282
- Teacher education, 20, 90  
admission to, 337-339  
Support Services, 341  
*See also* Education, School  
of Teacher certification
- Teaching assistantships  
graduate, 37  
biology, 121  
chemistry, 145  
English, 179  
mathematics, 214  
political science, 252.  
*See also* Research assistantships
- Test of English as a Foreign Language  
(TOEFL), 19, 29
- The Junior Science, Engineering, and  
Humanities Symposium, 87
- Thesis, in master's program, 35.  
*See also* Dissertation
- Time limitation in graduate degree  
programs, master's degree, 34  
doctoral degree, 34
- Transcripts  
UM-St. Louis, 26  
high school transcript, 16  
transfer students, 17  
foreign students, 19
- Transfer students, within University of  
Missouri system, 18  
scholarships for, *See* Financial Aid
- Trauma Studies, certificate program,  
299-300
- Trial admission, 17
- Tuition. *See* Fees
- Tutorial lab and service, 89
- UM-St. Louis Lindbergh, 91
- UM-Rolla Engineering Education Center,  
89, 454
- UM-St. Louis/Washington University  
Joint Undergraduate Engineering  
Program, 443-446
- Unclassified students, 33
- Undergraduate Studies in Education,  
Office of, 337
- Undergraduate study, 16-28  
academic policy, 22-25  
admission to, 16-19  
degrees offered (list), 95  
enrollment and advising, 20-21  
fees 26-28 *See also* Financial Aid  
College of Arts and Sciences, 99
- University Center, 79  
funding for, 27
- University Child Development Center,  
87, 305
- University Eye Center, 88
- University Scholars Program, 29
- University Senate, 83
- Urban Information Center, 86
- Urban problems, Metropolitan Studies,  
Center for, 88. *See also* Political  
Science, Department of Social Work,  
Department of Sociology, Department  
of
- Urban Studies, minor in, 293
- Veterans, 17, 26, 385
- Video Instructional Program, 464-465
- Visiting students, 19
- Vocal Instruction. *See* Music,  
Department of
- Western Historical Manuscript  
Collection, 78
- Who's Who Among Students in  
American Universities and Colleges, 26
- Withdrawal from the University, 25
- Women's Center, 45
- Women's and gender studies, graduate  
and undergraduate, certificate  
programs, 297-299  
Writing certificate program, 178, 289  
Writing lab, 88  
Y grade, 23