

**Division of Educational Psychology, Research
and Evaluation**

educational psychology. The Missouri certificate in school psychology is coordinated through this division.

Faculty

Matthew W. Keefer, Associate Professor and Chair**

Ph.D., University of Toronto

Marvin W. Berkowitz, Sanford N. McDonnell Professor
of Character Education**

Ph.D., Wayne State University

Murray Print, Theresa M. Fischer Endowed Professor* of
Citizenship Education

Ph.D., Ohio State University

Thomas E. Jordan, Curator's Professor* of Child
Development, Professor Emeritus

Ed.D., Indiana University

William L. Franzen, Professor *, Dean Emeritus

Ph.D., University of Wisconsin

Victor A. Battistich, Associate Professor*

Ph.D., Michigan State University

Margaret W. Cohen, Associate Professor**

Interim Associate Vice Chancellor of Academic Affairs,

Director, Center Teaching Excellence

Ph.D., Washington University

Steven D. Spaner, Associate Professor**

Ph.D., Southern Illinois University-Carbondale

Elisha A. Chambers, Assistant Professor*

Ph.D. Southern Illinois University, Carbondale

Cody S. Ding, Assistant Professor*

Ph.D., University of Minnesota

Donald A. Gouwens, Assistant Professor*

Psy.D., Central Michigan University

Clark J. Hickman, Assistant Professor and Associate

Dean of Continuing Education and Outreach*

Ed.D., University of Missouri-St. Louis

Stephen A. Sherblom, Assistant Professor*

Ed.D., Harvard University

* members of Graduate Faculty

** members of Doctoral Faculty

General Information

Faculty in the Division of Educational Psychology, Research, and are housed on the fourth floor of Marillac Hall. Information about course offerings may be obtained in the division office, 402 Marillac Hall.

At the undergraduate level, the division coordinates educational psychology and measurement courses required in the various B.S. in education degree programs.

At the graduate level, the division offers courses in educational psychology and in educational research and evaluation methods required in the various M.Ed. degree programs and in the doctoral programs. Students choosing to pursue a Ph.D. in education may elect an emphasis in

Graduate Certificate in School Psychology

The Graduate Certificate in School Psychology is a 30-hour certificate program designed specifically for students who already possess graduate degrees and wish to work toward certification as a School Psychologist in Missouri. The program consists of a coordinated curriculum of school psychology specialty courses that provide partial completion of the 60 graduate hours required for certification as a School Psychologist in Missouri. Please note that the Graduate Certificate in School Psychology is a university certificate and not state certification; it can be completed en route to state certification, but additional coursework is required (e.g., internship). Applicants should submit official undergraduate and graduate transcripts, current GRE scores, two letters of recommendation, and a personal statement describing professional goals (not to exceed five double-spaced typed pages). The final step of the admission process involves a personal interview with a school psychology faculty member to explore career aspirations, review graduate transcripts, and develop a professional education plan tailored to the individual needs of the student. Graduate coursework completed within six years will be considered for credit toward the certificate and/or certification on an individual basis, but a minimum of 12-hours of graduate coursework must be completed at the University of Missouri-St. Louis to satisfy the university residency requirement. Again, please note that state certification as a School Psychologist typically involves additional coursework beyond the requirements for the Graduate Certificate in School Psychology as outlined below.

Courses:**Foundations (9 hours)**

Ed Psy 6530(430) Foundations of School Psychology

Ed Psy 6550(431) Professional Issues in School Psychology

Ed Psy 6532(432) Psycho-Educational Difference in Children

Psycho-Educational Assessment (6 hours)

Ed Rem 6716(422) Psycho-Educational Assessment I

Ed Rem 6718(423) Psycho-Educational Assessment II

Interventions (9 hours)

Spc Ed 6444(444) Education of Learners with Learning Disabilities

Ed Psy 6540(433) Psycho-Educational Interventions in Childhood

Ed Psy 6545(434) Consultation in Schools and Related Settings

Supervised Experience (6 hours)
Ed Psy 6590(489) School Psychology Practicum

Graduate Certificate in Program Evaluation and Assessment in Education

The Graduate Certificate in Program Evaluation and Assessment in Education provides specialized study in the theory and practice of program evaluation and assessment. The program will build on the content area knowledge base of the individual's bachelors or masters degree. The focus of the Program Evaluation and Assessment in Education certificate will be on the skills delineated in the standards and guidelines of the American Evaluation Association and the Joint committee on Standards in Educational Evaluation. The certificate will consist of 30 hours of core courses and internship experiences. Graduate credits earned in equivalent courses in Education or related Social Science disciplines may meet some of these requirements. Ed Rem 6710(431) Educational Research Methods and Design or its equivalent is prerequisite to all the courses in the Research Methods and Statistics focus area.

Courses:

Program Evaluation (12 credit hours)

Ed Rem 6730(451) Educational Program Evaluation (3)
Ed Rem 6732(455) Advanced Theory and Practice in Educational Program Evaluation (3)
Ed Rem 6990(490) Internship (6)

Testing and Measurement (9 credit hours)

Ed Rem 6707(420) Classroom Measurement and Evaluation (3)
Ed Rem 6709(421) Educational and Psychological Testing (3)
Ed Rem 7711(460) Advanced Test Theory in Education (3)

Research Methods and Statistics (9 credit hours)

Ed Rem 6712(432) Survey Research Methods in Education (3)
Ed Rem 7771(471) Quantitative Research Methods I (3)
Ed Rem 7781(481) Qualitative Methods in Educational Research I (3)

Course Descriptions

Courses in this section are grouped as follows:
Educational Psychology (Ed Psy) and Educational Research and Evaluation Methods (Ed Rem)

Educational Psychology (Ed Psy)

2212(212) Introduction to Learners and Learning (3)
Prerequisite: Psych 1002(3). Same as Tch Ed 2212(212)
Foundational study of development of infants, children and

adolescents focusing on role of appropriate educational environments in fostering positive physical, cognitive, social, and moral outcomes. Reading relevant research will be combined with experiences in the field and technology-based assignments to investigate influences that shape development processes.

3312(312) The Psychology of Teaching and Learning (3)

Prerequisites: Tch Ed 2210(210), Tch Ed 2211(211), Tch Ed 2212(212) or equivalents and admission to Teacher Education program. (Same as Tch Ed 3312(312). 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. Includes a field experience.

3525(325) Education and the Psychology of Human Sexuality (3)

Same as Nursing 4725(325). 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.

6109(409) Learning & Development in Secondary School Settings (4)

Prerequisites: Graduate standing and admission to the secondary teacher education program. Investigation of teaching and learning theories and research on the developmental needs of pre-adolescent and adolescent students. Issues of cognition, moral and social development, motivation, and assessment will be analyzed and debated. Emphasis will be on theoretical and practical approaches to constructing and analyzing a learning system. Includes field experiences.

6111(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.

6113(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.

6210(410) Life-Span: Individual and Family Development (3)

Prerequisites: Graduate standing. Critical analysis of theories of human development including readings from empirical research and cross-cultural comparisons focusing on strategies to enhance developmental outcomes through relationship and environmental opportunity.

6215(416) Psychology of Early Childhood Development (3)

Prerequisite: Ed Psy 6111(411) or consent of instructor. A survey of the theories, concepts, and research which inform the field of early childhood development to help caregivers and teachers understand the cognitive, social, and emotional changes that take place from birth through the primary years of schooling.

6220(417) Psychology of the Elementary School Child (3)

Prerequisite: Ed Psy 6111(411) or consent of instructor. Current research on the psychological changes which occur during the school age years of childhood. Includes attention to how development proceeds and to the processes that may alter its progress.

6225(418) The Psychology of Adolescence (3)

Prerequisite: Ed Psy 6111(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.

6230(419) Adult Learning and Development (3)

Prerequisites: Ed Psy 6210(410) or Ed Psy 6111(411), or Adu Ed 6410(410). Same as Adu Ed 6230(419). Study of how life stage theories and theories of learning pertain to adult learners. Research bases of these theories will be explored in relationship to instructional practice with adult learners.

6310(412) Psychology of Learning Processes (3)

Prerequisite: Ed Psy 6111(411). Advanced study of learning and instructional theories. The historical and theoretical bases of instructional practice are examined

6404(404) Seminar (1-10)

6440(440) Moral Development and Education (3)

Prerequisites: Ed Psy 6210(410) or Ed Psy 6220(417) or Ed Psy 6225(418) or consent of the instructor. An introduction and overview of moral psychology and its implications for creating learning environments. Questions of human morality are by nature cross-disciplinary, and readings and discussions will involve questions of epistemology, human nature, conceptions of "the good life," evidence for the malleability of human development, and research regarding the foundation, nature, and complexity of moral development.

6444(444) Cognition and Technology (3)

Prerequisites: Ed Psy 6111(411) or consent of instructor. (same as Ed Tec 6444(444)). Examines cognitive theories and computer-based tools for learning. Students will gain a critical understanding of the relationship between the design of technological tools, the use of those tools in educational settings, and their implications for learning.

6445(441) Character Education and Development (3)

Prerequisites: Ed Psy 6111(411) and Ed Psy 6220(417) or Ed Psy 6225(418). Critical survey of theories of character development and models for character education in childhood and adolescence. Includes empirical and conceptual study of the nature of moral character, how it develops, and how it can be fostered in schools.

6448(448) Technology-Supported Inquiry Learning (3)

Prerequisites: Ed Tec 5340(340) & Ed Psy 6310(412), or consent of instructor. Educational technology such as networked computers and software can play a supportive role in inquiry-based learning. Students will explore the theoretical background, design issues, and pragmatic realities of technology-supported inquiry learning environments. Such learning environments are best understood as systems involving social, cultural, material and psychological aspects. Consideration will be given to the important properties of settings, activities and technologies, as well as to the role of instructors. (Same as Ed Tec 448)

6450(446) Advanced Methods in Character Education (3)

Prerequisite: Ed Psy 6445(441). Advanced exploration of methods for promoting character development in schools: class meetings, democratic processes, cross-age learning and character curriculum development. Methods will be critically examined for their empirical and theoretical justifications.

6497(497) Problems (1-10)

6530(430) Foundations of School Psychology (3)

Prerequisites: Graduate standing and consent of the instructor. Focus on educational foundations of school psychology including the organization and operation of schools. The historical and emerging roles, responsibilities, and functions of a school psychologist are analyzed.

6532(432) Psycho-Educational Differences in Childhood (3)

Prerequisite: Ed Psy 6210(410) or Ed Psy 6220(417) or Ed Psy 6225(418) or consent of instructor. Examination of educational and mental health challenges first seen in childhood, with an emphasis on understanding both educational and mental health classification systems.

6534(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.

6536(421) Biological Factors Influencing Human Behavior (3)

Prerequisite: Ed Psy 6111(411) or Ed Psy 6310(412) or consent of instructor. Examination of biological factors affecting human behavior. Includes an overview of neuroscience, developmental psychophysiology, and basic psychopharmacology. Implications for psychological and educational interventions are considered.

6540(433) Psycho-Educational Interventions in Childhood (3)

Prerequisites: Ed Psy 6530(430) and Ed Psy 6532(432) or Cns Ed 6000(410) or consent of instructor. Examination and evaluation of educational and mental health interventions delivered in schools and related settings, with emphases on primary prevention and systems perspectives.

6545(434) Consultation in Schools and Related Settings (3)

Prerequisite: Ed Psy 6530(430) or Cns Ed 6000(410) or consent of instructor. An examination of theoretical principles, research, and legal and ethical issues as applied to consultation practices in schools and related settings.

6550(431) Professional Issues in School Psychology (3)

Prerequisites: Ed Psy 6530(430). Advanced examination of professional issues facing school psychologists including legal and ethical considerations, standards of practice, and alternative models of service delivery.

6590(489) School Psychology Practicum (3-6)

Prerequisites: Grade B- or better in Ed Rem 6718(423), Ed Psy 6550(431), Ed Psy 6532(432), and consent of instructor. Supervised experience in psycho-educational assessment, intervention, consultation, and instructional strategies in schools and related settings. Settings and responsibilities to be determined in consultation with site supervisor and program faculty. May be repeated.

6990(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.

7640(445) Changing Perspectives in Educational Psychology (3)

Prerequisites: Ed Psy 6111(411) and doctoral standing or consent of instructor. The advanced exploration of foundational issues in educational psychology. Topics include theoretical perspectives of modes analysis used in the investigation of psychological theories and concepts in education.

7642(442) Sociocultural Perspectives in Education (3)

Prerequisites: Doctoral standing or consent of instructor. Investigation of sociocultural theory with a focus on educational applications. Topics include the social formation of mind, language as cultural tool, methodological issues in social science research, and dialogic inquiry as pedagogy.

7644(443) Motivation Theory in Education (3)

Prerequisites: Ed Psy 6111(411) and doctoral standing or consent of instructor. Focuses on the social and cognitive aspects of contemporary theories of motivation and examines supporting research. Participants will apply theory to settings of teaching and learning, training, and counseling relevant to their interests.

7647(447) Teaching for Learning in the Univ. (3)

Prerequisites: Graduate standing and consent of the instructor. An examination of current research in learning, motivation, and assessment as it pertains to teaching and learning in post-secondary settings. Designed to guide graduate students to promote active and meaningful learning in college classrooms to develop college students' critical thinking skills. Graduate students across the disciplines may enroll.

Educational Research and Evaluation Methods (Ed Rem)

3720(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.

3721(321) Interpretation of Educational Tests and Measurements (3)

Prerequisite: Meet the university standard for proficiency in basic mathematical skills. A study of the principles of test theory with emphasis on standardized aptitude, behavioral, and achievement tests; the interpretation of individual and group performance; and application within classroom settings. Required of all majors in special education.

5730(330) Educational Statistics (3)

Prerequisite: Meet the university standard for proficiency in basic mathematical skills. Statistical methods for advanced undergraduate and beginning graduate students: descriptive statistics, probability and sampling, and introduction to hypothesis testing and inferential statistics.

6404(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.

6497(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.

6705(412) Evaluation of Data Analysis Programs (3)

Prerequisite: Graduate admission and an introductory statistics course or consent of instructor. Principles and procedures for assessing the quality and effectiveness of data analysis computer programs and packages in educational research. Review and evaluation of various computer programs and packages used in educational research.

6707(420) Classroom Measurement and Evaluation (3)

Prerequisites: Graduate admission or consent of instructor. An introductory graduate course to classroom testing and evaluation. Topic areas include 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; performance evaluations, and portfolio rubrics.

6709(421) Educational and Psychological Measurement (3)

Prerequisite: Graduate admission or consent of instructor. An introductory graduate course in testing and measurement theory: reliability, validity, and associated descriptive statistics; correlation and simple regression; derived and transformed scores; interpretation of test scores; measurement of aptitude, vocational interests, and personal-social adjustment.

6710(431) Educational Research Methods and Design (3)

Prerequisite: An introductory statistics course or Ed Rem 6707(420), or 6709(421), or consent of instructor. An introductory course in educational research methodology: comparison of various types of qualitative and quantitative educational research, threats to internal/external validity, sampling methods, data analysis, and components of research reports.

6712(432) Survey Research Methods in Education (3)

Prerequisite: An introductory statistics course and Ed Rem 6710(431) or consent of instructor. Same as Political Science 6406(406) and Soc 5432(432). A course on the principles and procedures for conducting survey research. Topics include forming questions and scales, survey design, sampling methods, data preparation and analysis, and presentation of results.

6714(441) Action Research in Education (3)

Prerequisite: Ed Rem 6710(431) or consent of instructor. A course that engages the participants in systematic qualitative inquiry into their own practice: framing appropriate questions; gathering and interpreting data; analyzing culture, subjectivity and multiple perspectives; and reporting the results ("telling the story"). Readings will address the methods, politics, and ethics of action research. Enrollment requires access to a field setting.

6716(422) Psycho-Educational Assessment I (3)

Prerequisite: Ed Rem 6707(420) or Ed Rem 6709(421), or Ed Rem 3721(321), and consent of instructor. Instruction is provided in the administration, scoring, interpretation, and reporting of results of individual and group tests of psychomotor ability, academic achievement, and oral language skills.

6718(423) Psycho-Educational Assessment II (3)

Prerequisites: Ed Psy 6716(422), or Cns Ed 6050(414), and consent of instructor. An advanced assessment course for school psychologists that provides training in the administration and use of individual tests of cognitive abilities, diagnostic interviewing, functional assessment, and social-emotional assessment with an emphasis on writing integrated reports with meaningful recommendations.

6720(442) Nonparametric Statistics in Education (3)

Prerequisite: Ed Rem 6710(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.

6730(451) Educational Program Evaluation (3)

Prerequisites: Admission to doctoral education and Ed Rem 6710(431) or consent of instructor. A course on the principles and procedures for assessing the quality and effectiveness of programs, projects, and materials related to planned interventions and system changes in educational settings.

6732(455) Advanced Theory and Practice in Educational Program Evaluation (3)

Prerequisites: Ed Rem 6730(451) or consent of the instructor. Extension of the principles, attributes, and practices of program evaluation to contemporary problems and settings. Study will include the comparison of examples of the program evaluation process. Focus will be on adherence to the Program Evaluation Standards endorsed by leading professional research and evaluation associations.

6990(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

7711(460) Advanced Test Theory in Education (3)

Prerequisite: Admission to doctoral education and Ed Rem 6707(420), or Ed Rem 6709(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 in the development and analysis of test structure and validity; introduction to item response theory for the improvement of educational testing and research.

7771(471) Quantitative Research Methods I (3)

Prerequisites: Admission to doctoral education and Ed Rem 6710(431) or consent of instructor. An advanced educational research methods course: hypothesis testing using factorial analysis of variance; analysis of covariance; and the general linear model.

7772(472) Quantitative Research Methods II (3)

Prerequisite: Ed Rem 7771(471) or consent of instructor. An advanced educational research methods course: multivariate analysis of variance; canonical correlation, discriminant function analysis, factor analysis; cluster analysis; advanced topics in multiple linear regression; and associated research design issues.

7773(473) Quantitative Research Methods III (3)

Prerequisite: Ed Rem 7772(472). An advanced educational research methods course using multiple linear regression models, path analysis, and structural equation modeling. Focus is on the theory, issues, and application of these advanced data analysis techniques.

7781(481) Qualitative Methods in Educational Research I (3)

Prerequisites: Admission to doctoral education and Ed Rem 6710(431) or consent of instructor. An introductory qualitative research methods course in education to develop skill in forming research questions, writing field notes, and collecting, organizing, and analyzing a variety of data. Philosophical and ethical issues in qualitative research are presented.

7782(482) Qualitative Methods in Educational Research II (3)

Prerequisite: Ed Rem 7781(481) or consent of instructor. An advanced qualitative educational research methods course to address the issues of sampling strategies, observational and interview techniques, and data analysis. Requires access to a field setting to conduct a qualitative research study.

Division of Teaching and Learning

Faculty

Scot Danforth, Chair, Associate Professor**
Ph.D., University of South Florida-Tampa

Philip Ferguson, E. Desmond Lee Professor
in Education of Children with Disabilities
Ph.D., Syracuse University

Carl Hoagland, Emerson Electric Company Professor in
Technology and Learning
Ed.D., University of Massachusetts

William C. Kyle, E. Desmond Lee Family Professor of
Science Education**
Ph.D., University of Iowa

Louis Lankford, Des Lee Foundation Endowed Professor
in Art Education*
Ph.D., Florida State University

Wendy Saul, Dr. Allen B. and Mrs. Helen S. Shopmaker
Endowed Professor for Education in collaboration with
Springboard to Learning
Ph.D., University Wisconsin-Madison

James Shymansky, E. Desmond Lee Family Professor of
Science Education
Ph.D., Florida State University

Patricia Simmons, E. Desmond Lee Professor in Life-
Long Learning for the Sciences
Ph.D., University of Iowa

Douglas Turpin, E. Desmond Lee and Family Fund
Endowed Professor in Music Education
Ed.D., Washington University

Richard W. Burnett, Professor Emeritus*
Ed.D., Indiana University

Richard J. Friedlander, Professor**
Ph.D., University of California-Los Angeles

Charles Granger, Professor**
Ph.D., University of Iowa

Kathleen M. Haywood, Associate Dean for Graduate
Education, Professor**
Ph.D., University of Illinois-Urbana-Champaign

Wallace Z. Ramsey, Professor Emeritus*
Ed.D., University of Missouri-Columbia

Blanche M. Touhill, Professor*; Chancellor
Ph.D., Saint Louis University

Paul D. Travers, Professor Emeritus**
Ed.D., George Peabody College

Doris A. Trojcek, Professor Emerita*
Ed.D., Indiana University

Harold E. Turner, Professor Emeritus*
Ed.D., George Peabody College

Judith Walker de Felix, Professor*, Associate Vice
Chancellor for Academic Affairs; Dean of Graduate
School
Ph.D., University of Florida

Huber M. Walsh, Professor Emeritus*
Ed.D., University of California-Los Angeles

Fred Willman, Professor*
Ph.D., University of North Dakota

Jane Zeni, Professor**
Ed.D., University of Missouri-St. Louis

Bruce A. Clark, Associate Professor Emeritus*
Ph.D., University of Illinois

Dianne Ferguson, Associate Professor
Ph.D., Syracuse University

Harold Harris, Associate Professor*
Ph.D., Michigan State University

Allison K. Hoewisch, Associate Professor*
Ph.D., University of Southern Mississippi

Thomas J. Loughrey, Associate Professor*
Ph.D., University of Iowa

Helene J. Sherman, Associate Dean, Associate
Professor**
Ed.D., University of Missouri-St. Louis

Charles G. Smith, Associate Professor; Athletic Director
Emeritus, M.S., Washington University

Gwendolyn Turner, Associate Professor**
Ed.D., University of Arkansas

Cathy Vatterott, Associate Professor*
Ph.D., Saint Louis University

Gayle Wilkinson, Associate Professor**
Ed.D., University of Illinois

George J. Yard, Associate Professor Emeritus*
Ph.D., Saint Louis University

Pamela C. Ashmore, Assistant Professor
Ph.D., Washington University

Corey Drake, Assistant Professor
Ph.D., Northwestern University

Kevin Fernlund, Assistant Professor
Ph.D., University of New Mexico

Jane Fleming, Assistant Professor
Ph.D., Northwestern University

Karen Hagrup, Assistant Professor
Ph.D., University of North Carolina

Virginia L. Navarro, Assistant Professor**
Ph.D., Washington University

Joseph L. Polman, Assistant Professor
Ph.D., Northwestern University

Kim Song, Assistant Professor
Ed.D. Southern Illinois University-Edwardsville

Laura Westhoff, Assistant Professor
Ph.D., Washington University

Sheridan Wigginton, Assistant Professor
University of Missouri-Columbia

Linda Cason, Lecturer; Director, Gateway Writing
Project;
M.Ed. Webster University

Jacquelyn A. Lewis-Harris, Lecturer
M.A., Washington University

Lynn Navin, Lecturer; Director, University Child
Development Center
M.Ed., Michigan State University

* members of Graduate Faculty

** members of Doctoral Faculty

General Information

The faculty of the Division of Teaching and Learning has their offices on the 2nd and 3rd floors in Marillac Hall and in the Mark Twain Building. Information about course offerings and related matters on all programs except physical education may be obtained in 369 Marillac Hall. The physical education offices are located at 234 Mark Twain Building.

The division coordinates programs leading to a B.S. in education degree in:

Early Childhood Education
Elementary Education
Physical Education
Secondary Education
Special Education

And the B.E.S. degree in:

Early Childhood Education
Exercise Science Education
Professional Education

Programs leading to the M.Ed. in elementary education, secondary education, and special education also are coordinated in the Division of Teaching and Learning.

The **early childhood** undergraduate 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.

The graduate program is designed to develop master-level educators through a common core of essential knowledge and experiences drawn from current research and practice in the field of early childhood education. Through this program, candidates are able to further their competencies as educators, directors, program planners, and curriculum developers in various early childhood settings. Students can complete additional course work to receive certification.

The **elementary education** program prepares students to teach in grades one through six. Students may also tailor a program leading to a 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.

The graduate program strives to develop and refine the concept of the "teacher as researcher" or the "teacher as reflective decision maker or problem solver." It is based on the premise that as professionals, teachers must understand both the products and findings of research and the underlying processes that influence their professional practice.

Students may choose a program leading to the M.Ed. in education, generalized or specialized elementary education or elementary education with Missouri certification in reading.

The **physical education** program coordinates work in physical education, which leads to a B.S. in education degree with certification to teach either PK-9 or K-12.

The elementary education and secondary education graduate programs provide courses for graduate students who choose physical education as their teaching field

The **secondary education** program prepares students for teaching these subjects in secondary schools (grade 9-12): biology, business, 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.

Students may also choose to pursue the bachelor's degree in the College of Arts and Sciences plus certification, or the B.S. in education degree, which includes Missouri certification. Business education students have only the College of Education option.

At the graduate level, the division provides a program leading to an M.Ed. in 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 graduate degree work and advanced certification studies in elementary and secondary school administration, special education administration, and the school superintendency.

The **special education** program prepares students to teach learners with developmental disabilities, emotional/behavioral disorders, learning disabilities, or in early childhood special education settings. Students also receive certification as regular elementary school teachers upon completion of the curriculum. Missouri certification standards require a student teaching experience in each area of special education.

At the graduate level, requisite course work for Missouri certification in special education is available, as is the M.Ed. Degree.

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.

Bachelor of Educational Studies

Admission Requirements

To be admitted to the Bachelor of Educational Studies Program an applicant must:

- Be regularly admitted to the College of Education.
- Have a UM and overall cumulative grade point average of 2.5 on a 4.0 scale.
- Have a 20 on the ACT or 800 on the SAT
- Have a 235 on each subtest of the CBASE.
- Complete English 10(1100) with a C or better.
- Complete Mathematics 30(1030) with a C or better
- Have at least 45 hours of college credit.
- Complete an application for the Bachelor of Educational Studies and secure appropriate signatures.

The B.E.S. is professional degree designed for individuals who wish to study education as a scholarly discipline but who do not wish to prepare for the professional practice for education in the K-12 schools of this state or nation. Three emphasis areas are available: early childhood education; exercise science; and professional education studies.

General Education Requirements

Students entering college first time Fall 2002 should refer to the Introductory section of this bulletin for their General Education Requirements.

Communicative Skills (2 requirements)

- All students must complete a freshman English composition course with a grade of C- or better.
- All students must complete English 3100(210) Advanced Expository Writing, or its equivalent, with a grade of C- or better.

Mathematical Skills

- A grade of C- or better in a college-credit mathematics course having at least intermediate algebra as a prerequisite, or
- A satisfactory score on the university's Mathematics Proficiency Test.

Breadth of Study (minimum 42 hours in the following three areas with at least three courses in each area)

- Humanities
- Natural sciences and mathematics
- Social sciences

Other Requirements

- American History or Government (course taken at the University of Missouri or at other colleges or universities in Missouri)

Degree Requirements

Cultural Diversity Requirement (3 hours)

- **Ed Psy 3312(312)/Tch Ed 3312(312)**, The Psychology of Teaching and Learning (3 hours)

- **Communication 1040(40)**, Introduction to Public Speaking (3 hours)
- **6 hours in Psychology or Educational Psychology numbered 3000(200) or higher**
- **Ed 2290(290)**, Internship (6 hours)
- **Ed 2291(291)**, Internship (6 hours)
- At least one of the following:
- **Phy Ed 3282(282)**, Physical Growth and Motor Development (3 hours)
- **Ed Psy 211**, Growth and Development, **Ed Psy/Tch Ed 2212(212)**, (3 hours), Introduction to learners and Learning (3 hours), or equivalent
- **Psy 2272(272)**, Adult Development and Aging (3 hours; same as Gerontology 2272(272))

Emphasis in Early Childhood

One of the following two:

- **Tch Ed 2211(211)**, Introduction to American Schools (3 hours or equivalent)
- **Phy Ed 3282(282)**, Physical Growth and Motor Development (3 hours)
All of the following:
- **Tch Ed 3313(313)**, Introduction to Learners with Disabilities and Inclusive Education. (3 hours) or equivalent
- **Ech Ed 3303(303)**, Curriculum and Practice Laboratory: Infant/Toddler (1 hour)
- **Ech Ed 3304(304)**, Curriculum and Practice Laboratory: Preschool (1 hour)
- **Ech Ed 3312(312)**, Introduction to Early Childhood Education (3 hours)
- **Ech Ed 3313(313)**, Curriculum and Practice: Infant/Toddler (2 hours)
- **Ech Ed 3314(314)**, Curriculum and Practice: Preschool (2 hours)
- **Ech Ed 4317(317)**, Assessing Individual Needs for Early Childhood Instruction (3 hours)
- **Ech Ed 4331(331)**, Language Acquisition and Development in Early Childhood (3 hours)
- **Ech Ed 3332(332)**, Literacy (3 hours)
- **Ech Ed 4346(346)**, The Acquisition of Mathematical Concepts (3 hours)

Total: 27 hours

Second Concentration: Electives to total 12 hours to be chosen from Ech Ed, Ele Ed, Spc Ed, Ed Tec, Ed Rem, or an area chosen in consultation with the adviser.

Emphasis in Exercise Science

All of the following:

- **Bio 1131(113)**, Human Physiology and Anatomy I (4 hours)
- **Bio 1141(114)**, Human Physiology and Anatomy II (4 hours)
- **Phy Ed 3204(204)**, Special Topics in Physical Education (1-3 hours)

- **Phy Ed 3283(283)**, Kinesiology (3 hours)
- **Phy Ed 3284(284)**, Physiology of Human Exercise (3 hours)
- **Phy Ed 3285 (285)**, Sports Medicine (3 hours)
- **Phy Ed 287**, Seminar in Exercise Science (3 hours)
At least 6 credits from the following:
- **Phy Ed 3261(261)**, Physical Activity for the Exceptional Learner (2 hours)
- **Phy Ed 3275(275)**, Psychological Aspects of Physical Education
- **Phy Ed 5330(330)**, Prescribing Physical Activity (3 hours)
- **Phy Ed 5931(331)**, Adult Exercise Leadership (3 hours)
- **Phy Ed 5380(380)**, Nutrition for Human Performance (3 hours)

Total 27-29 hours

Second concentration: Electives to total 12 hours to be chosen from Bio, Chem, Phys, Psy, Geron, or an area chosen in consultation with the adviser.

Emphasis in Professional Education Studies

27 hours in one of the following, numbered 3000(200) or above: Ele Ed, Spc Ed, Sec Ed.

Second Concentration: Electives to total 12 hours to be chosen from an area not selected above or Ech Ed, Phy Ed, Tch Ed, Cns Ed, Ed Psy, Ed Rem or Ed Tec.

Candidates for the Bachelor of Educational Studies degree must achieve a cumulative grade point average of at least 2.750, complete 24 of the last 30 hours in residence at UM-St. Louis, and be recommended by the faculty of the College of Education.

Early Childhood Education (Ech Ed) Undergraduate Studies

Bachelor of Science in Education: Early Childhood

This program is designed for students wishing to teach and direct programs for children from birth through grade three.

General Education Requirements:

Students entering college first time, Fall 2002 should refer to the Introductory section of this Bulletin for their General Education Requirements.

English and Communication (9 hours)

English 1100(10), Composition
English 3100(210) or 3120(212), Advanced Expository Writing

Communication: 3 hours

Mathematics (3 hours)

Math 1150(50), Structure of Mathematical Systems I

Biological Science: includes lab (5 hours)

General Biology 1012/1013(001/Lab 003)

Physical Science: includes lab (4 hours)

Humanities (8 hours)

Three courses from two of the following fields: art, music, philosophy, and literature.

Social Science (15 hours)

Psych 1003(3), General Psychology

PolSci 1100(11), Introduction to American Politics, or equivalent

and one of the following history courses

His 1001(3), American Civilization

His 1002(4), American Civilization

and the following courses:

Pol Sci 1850(85), Global Ecology

Soc 1010(10), Introduction to Sociology, or any anthropology course.

Degree Requirements

Students are required to take the general education requirements as indicated for early childhood education above.

Level I: Exploring Education as a Profession

Tch Ed 2210(210), Introduction to Teaching

Tch Ed 2211(211), Introduction to American Schools

Tch Ed 2212(212), Introduction to Learners and Learning

Level II: Analyzing the Nature and Process of Education

Tch Ed 3310(310), Introduction to Instructional Methods

Tch Ed 3312(312), Psychology of Teaching and Learning

Tch Ed 3313(313), Introduction to Learners with Disability and Inclusive Education

Tch Ed 3315(315), Literacy Learning and Instruction

Phy Ed 3430(130), Elements of Health Education

Phy Ed 3282(282), Physical Growth and Motor Development

Level III: Synthesizing Theory and Practice in Education

Ele Ed 3330(330), Children's Literature and Reading

Ele Ed 3336(336), Teaching Language Arts and Reading, N-9

plus these Early Childhood Education (Ech Ed) courses:

Note Ech Ed 3290(290) and Ech Ed 3291(291) must be taken during the same semester.

3312(312), Introduction to Early Childhood Education

4317(317), Assessing Individual Needs for Early Childhood

4331(331), Language Acquisition and Development in Early Childhood

3332(332), Early Literacy

4346(346), The Acquisition of Mathematical Concepts

3313(313), Curriculum and Practice: Infant/Toddler

3314(314), Curriculum and Practice: Preschool

3315(315), Curriculum and Practice: Primary

- 3303(303)**, Curriculum and Practice Laboratory:
Infant/Toddler
3304(304), Curriculum and Practice Laboratory: Preschool
3305(305), Curriculum and Practice Laboratory: Primary
3290(290), Student Teaching in Early Childhood
Education I (6 hrs)
3291(291), Student Teaching in Early Childhood
Education II (6 hrs)

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).

Total: A minimum of 120 hours

Graduate Studies

Master of Education: Elementary Education, Concentration in Early Childhood Education

This program is designed to develop a master teacher through a common core of essential knowledge and experiences drawn from current research and practice in early childhood education.

Core Competencies (12 hours):

- Ele Ed 6410(410)**, Current Research in Early Childhood and Elementary Programs.
Ele Ed 6411(411), Curricular Issues in the Elementary School
Students may select two of the following courses:
Ech Ed 410, Foundations of Preschool Education (strongly suggested)
Ed Psy 6310(412), Psychology of Learning Processes
Ed Psy 6215(416), Psychology of Early Childhood Development
Ech Ed 6490(490), Internship
Ech Ed 6497(497), Problems

Content Competencies (minimum of 12 hours of course work from the following areas):

- Early Childhood Certification Courses
Early Childhood Electives
Other courses approved by adviser

Curricular Application Competencies (9 hours):

A measurement course is required before admission to the exit course Ele Ed 6423(423) and one of the following is suggested:

- Ed Rem 6707(420)**, Classroom Measurement and Evaluation
Ed Rem 6709(421), Educational and Psychological or Measurement
Ed Rem 6710(431), Educational Research Methods (an option if a prerequisite measurement course was completed at the undergraduate level)

- Ele Ed 6422(422)**, Curriculum Construction in Elementary School
Ele Ed 6423(423), Curriculum Implementation in Elementary School

Career Outlook

The field of early childhood education has experienced a marked increase in the demand for highly qualified and professional prepared educators. As research continues to focus on the crucial early years of development, the need for trained professionals in early care and education will continue to rise. Early childhood graduates at all degree levels are attractive candidates for employment in a variety of educational positions. The downward extension of ages of schooling opens employment opportunities in the public and private sector. 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. Additional career opportunities exist for early childhood educators in specialized childcare, private family care, instruction and training, corporations, self-owned businesses, and family-focused public and private agencies. Qualified early childhood educators can and do make a powerful difference in the lives of families and children.

Elementary Education (Ele Ed)

Undergraduate Studies

Bachelor of Science in Education: Elementary Education

The elementary education program prepares students to teach in grades one through six.

General Education Requirements:

English and Communication (9 hours)

- English 1100(10), Freshman Composition
English 3100(210), Advanced Expository Writing
*Communication 1040(40), Introduction to Public Speaking

Mathematics (6 hours)

- Math 1150(50), Structure of Mathematical Systems I
Mathematics 2510(151), Structure of Mathematical Systems II

Biological Science: includes lab (5 hours)

- *General Biology 1012/1013(001/Lab 003)

Physical Science: includes lab (4 hours)

Humanities (8 hours)

Three courses from two of the following fields: art, music, philosophy, and literature.

Social Science (18 hours)

- Psych 1003(3), General Psychology
Pol Sci 1100(11), Introduction to American Politics, or equivalent

And one of the following history courses:

- His 1001(3), American Civilization
His 1002(4), American Civilization

Pol Sci 1850(85), Global Ecology
Soc 1010(10), Introduction to Sociology, or
Any anthropology course.
Econ 3052(306), Microeconomics for the School
Curriculum

Program Requirements

Level I: Exploring Education as a Profession

Tch Ed 2210(210), Introduction to Teaching
Tch Ed 2211(211), Introduction to American Schools
Tch Ed 2212(212), Introduction to Learners and Learning

Level II:

Tch Ed 3310(310), Introduction to Instructional Methods
Tch Ed 3312(312), Psychology of Teaching and Learning
Tch Ed 3313(313), Introduction to Learners with
Disabilities and Inclusive Education
Tch Ed 3315(315), Literacy Learning and Instruction

**Level III: Synthesizing Theory and Practice in
Education**

3330(330), Children's Literature and Reading
3336(336), Teaching Language Arts and Reading N-9
Must take the following three courses during the same
semester as Professional Internship (Ele Ed 3289/289).
4246(246), Teaching Mathematics in the Elementary
School
4253(253), Teaching Social Studies in the Elementary
School
4341(341), Teaching of Science in the Elementary School
3289(289), Elementary Education Professional Internship
*3291(291), Elementary School Student Teaching

Attention education majors: Professional education courses
must be completed with a grade point average of 2.5 and
no grade lower than a C-.

Total: minimum of 120 hours.

Middle School/Junior High (5-9)

General education requirements are the same as for
elementary education, except that Psychology 211,
Adolescent Psychology, is taken in lieu of Psychology
2270(270), Child Psychology.

Related Area Requirements

Phy Ed 3430(130), Elements of Health Education
Phy Ed 3465(165), Physical Education Activities for the
Elementary School
Ele Ed 2177(177), Elementary School Music
Ele Ed 2179(179), (Art 139), Art Activities for
Elementary School

Program Requirements

Tch Ed 2211(211), Introduction American Schools
Ed Psy 3312((312), Psychology of Teaching and Learning
Tch Ed 2213(313), Instruction to Learners with
Disabilities and Inclusive Education and these
Elementary Education (Ele Ed) courses:

4246(246), Teaching Mathematics in the Elementary
School
4253(253), Teaching of Social Studies in the Elementary
School

*3290(290), Elementary School Student Teaching I
*3291(291), Elementary School Student Teaching II
3330(330), Children's Literature and Reading
3336(336), Teaching Language Arts and Reading, N-9
4341(341), Teaching of Science in the Elementary School
385, Teaching Reading in the Elementary School
3389(389), The Analysis and Correction of Reading
Problems in the Classroom

*Note Ele Ed 3290(290) and Ele Ed 3291(291) must be
taken during the same semester.

Attention education majors: Professional education
courses must be completed with a grade point average of
2.5 and no grade lower than a C (2.0). A C- grade is not
acceptable.

Postdegree certification students may take Ed Fnd
4330(330), History of American Education, or Ed Fnd
6421(421), Philosophy of Education, in lieu of Tch Ed
2211(211).

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 Certification)**

This area of specialization in elementary education
prepares students to teach in grades 5-9.

General Education Requirements

General education requirements are the same as for
elementary education.

Related Area Requirement

Phy Ed 3430(130), Teaching Health in the Elementary
School

Program Requirements

Level I: Exploring Education as a Profession

Tch Ed 2210(210), Introduction to Teaching
Tch Ed 2211(211), Introduction to American Schools
Tch Ed 2212(212), Introduction to Learners and Learning

**Level II: Analyzing the Nature and Process of
Education**

Sec Ed 4315(315), The Middle Level School
Ele Ed 4316(316), Middle Level Curriculum and
Instruction
Tch Ed 3310(310), Introduction to Instructional Methods
Tch Ed 3312(312), The Psychology of Teaching and
Learning

Tch Ed 3313(313), Introduction to Learners with Disabilities and Inclusive Education
Tch Ed 4391(386), Teaching Reading in the Secondary School Content Area

Level III: Synthesizing Theory and Practice in Education

Ele Ed 3389(389), The Analysis and Correction of Reading Problems in the Classroom
Sec Ed 4880(305), Writing for Teachers
Ele Ed 4317(317), The Middle level Child
Spc Ed 4320(320), Behavior Management

Special Methods

Along with education courses in Level III, students must take the appropriate special methods course congruent with the certification area(s) listed below:

Ele Ed 3336(336), Teaching Language Arts and Reading, N-9
Ele Ed 4253(253), Teaching of Social Studies in the Elementary School
Ele Ed 4246(246), Teaching Mathematics in the Middle School
Ele Ed 4341(341), Teaching of Science in the Elementary School
Ele Ed 3291(291), Student Teaching

Area of Concentration for State Certification

Middle School certification 5-9 requires a minimum of 21 hours for certification in the specific content of language arts, social studies, math, or science. Contact the office of undergraduate teacher education, 155 Marillac Hall, for specific content area courses.

Attention education majors: Professional education courses must be completed with a grade point average of 2.5 and no grade lower than a C- is acceptable.

Minimum of 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 a general program or the emphasis in reading. 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 6410(410), Current Research in the Elementary School Curriculum; Ele Ed 6411(411), Curricular Issues in the Elementary School; and 6 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 9 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 6 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 6422(422), Curriculum Construction in Elementary Schools, and Ele Ed 6423(423), Curriculum Implementation in the Elementary School.

Upon completion of Ele Ed 6410(410) and Ele Ed 6411(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 6410(410) and Ele Ed 6411(411), should be taken at the beginning of the program; Ele Ed 6422(422) and Ele Ed 6423(423) constitute the final two program courses. Students should note that Ele Ed 6411(411) is typically offered only during the winter and summer semesters, Ele Ed 6422(422) is offered only during the fall semester and Ele Ed 6423(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.

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:

- ***6486(486)**, Clinical Diagnosis and Treatment of Reading Disabilities
- ***6493(493)**, Clinical Methods in Child Study I
- ***6494(494)**, Clinical Methods in Child Study II
- Note Ele Ed 6493(493) is offered in Fall and Summer Semesters; Ele Ed 6494(494) is offered in the Winter and Summer. and also:
Ele Ed 6482(482), Problems and Research in Teaching). Elementary School Reading (offered only in the winter semester
- ***Ed Rem 6707(420)**, Classroom Measurement and Evaluation
- ***Spc Ed 4315(315)**, Speech and Language Problems, or
- ***Ech Ed 4331(331)**, Language Acquisition and Development
- ***Spc Ed 4320(320)**, Behavior Management
- ***Cns Ed 3000(310)**, Introduction to the Counseling Profession
- ***Ed Psy 6220(417)**, Psychology of the Elementary School Child
- ***Ed Psy 6225(418)**, Psychology of Adolescence

Note **Spc Ed 6412(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.

- Ed Fnd 6421(421)**, Philosophy of Education
- Adu Ed 4311(311)**, Teaching Basic Reading Skills to Adults
- Ele Ed 6484(484)**, Developmental Reading (K-13)
- Ele Ed 6488(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 (PK-3), and middle school/junior high (4-9). Students should consult certification advisers. Graduate credit will not be given for courses below the 5000 level.

Career Outlook

Undergraduate and graduate degrees in 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, 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 currently employed teachers will retire within the next 5-10 years; consequently, a shortage of teachers is anticipated.

Physical Education (Phy Ed)

Undergraduate Studies

Bachelor of Science in Education: Physical Education

This program prepares students to teach physical education. Individuals can be certified for grades PK to 9 only or for grades PK to 12.

Communication Skills (9 hours)

- English 1100(10)**, Freshman Composition
- English 3100(210)**, Advanced Expository Writing or equivalent
- Communication 1030(30) or 1040(40)**

General Education Requirements (42 hours required): Students entering college first time, Fall 2002 should refer to the Introductory section of this Bulletin for their General Education Requirements.

Humanities (8 hours)

Three courses from two curricular designations in the humanities (Symbol H).

Social Science (9 hours)

- One course in American history
- One course in American government
- Psych 1003(3)**, General Psychology

Natural Science (8 hours)

- 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 (3 hours)

One college-level mathematics course

Note: All of the courses above must be a minimum of two semester hours.

- Electives 11-14 hours**
- PK-9 Emphasis**

Level I: Exploring Education as a Profession

The following physical education (Phy Ed) courses and professional education courses are required (16 hrs) and must be completed before advancement to Level II:

- Phy Ed 3280(280), Human Anatomy and Physiology (5 hrs)
- Phy Ed 3277(277), Historical/Philosophical Foundations of Physical Education and Sport (2 hrs)
- Tch Ed 2210(210), Introduction to Teaching (3 hrs)
- Tch Ed 2211(211), Introduction to Schools (3 hrs)
- Tch Ed 2212(212), Introduction to Learners (3 hrs)

Level II: Analyzing the Nature and Process of Education

The following physical education (Phy Ed) courses and professional education courses are required (27 hrs) before enrollment in any Level III courses:

- Phy Ed 3267(267), Performance Analysis in Physical Education (3 hrs)
- Phy Ed 3275(275), Psychological Aspects of Physical Education (3 hrs)
- Phy Ed 3282(282), Physical Growth and Motor Development (3 hrs)
- Phy Ed 3283(283), Kinesiology (3 hrs)
- Phy Ed 3284(284), Physiology of Human Exercise (3 hrs)
- Phy Ed 3285(285), Sports Medicine (3 hrs)
- Tch Ed 3312(312), Psychology of Teaching and Learning (3 hrs)
- Tch Ed 3313(313), Introduction to Learners with Disabilities and Inclusive Education (3 hrs)
- Tch Ed 3386(386), Teaching Reading in Secondary School Content Areas (3 hrs)

The following physical education courses are required (9 hrs) and can be taken concurrently with Level III courses:

- Phy Ed 3434(234), Teaching of Wellness and Health Related Fitness (4 hrs)
- Phy Ed 3261(261), Physical Activity for the Exceptional Learner (2 hrs)
- Phy Ed 3468(268), The Curriculum and Methods of Teaching Physical Education (3 hrs)

Level III: Synthesizing Theory and Practice in Education

The following physical education (Phy Ed) courses are required (26 hrs):

- Phy Ed 3422(222), Teaching of Skills: Grade PK-4 (4 hrs)
- Phy Ed 3423(223), Teaching of Skills: Grades 5-9 (4 hrs)
- Phy Ed 3425(225), Teaching of Skills: Movement, Dance and Rhythms (3 hrs)
- Phy Ed 3289(289), Physical Education Professional Internship (3 hrs)

Phy Ed 3990(290), Student Teaching in Physical Education PK-5 (6 hrs)

Phy Ed 3991(291), Student Teaching in Physical Education 5-9 (6 hrs)

Total: 126 hours

Attention education majors: Professional education courses must be completed with a grade point average of 2.5 and no grade lower than a C-.

Grades PK through 12 Emphasis

Level I: Exploring Education as a Profession

The following physical education (Phy Ed) courses and professional education courses are required (16 hrs) and must be completed before advancement to Level II:

- Phy Ed 280, Human Anatomy and Physiology (5 hrs)
- Phy Ed 3277(277), Historical/Philosophical Foundations of Physical Education and Sport (2 hrs)
- Tch Ed 2210(210), Introduction to Teaching (3 hrs)
- Tch Ed 2211(211), Introduction to Schools (3 hrs)
- Tch Ed 2212(212), Introduction to Learners (3 hrs)

Level II: Analyzing the Nature and Process of Education

The following physical education (Phy Ed) courses and Professional education courses are required (29 hrs) Before enrollment in any Level III courses:

- Phy Ed 3267(267), Performance Analysis in Physical Education (3 hrs)
- Phy Ed 3275(275), Psychological Aspects of Physical Education (3 hrs)
- Phy Ed 3276(276), Sociological Foundations of Physical Education and Sport (2 hrs)
- Phy Ed 3282(282), Physical Growth and Motor Development (3 hrs)
- Phy Ed 3283(283), Kinesiology (3 hrs)
- Phy Ed 3284(284), Physiology of Human Exercise (3 hrs)
- Phy Ed 3285 (285), Sports Medicine (3 hrs)
- Tch Ed 3312(312), Psychology of Teaching and Learning (3 hrs)
- Tch Ed 3313(313), Introduction to Learners with Disabilities and Inclusive Education (3 hrs)
- Tch Ed 3386(386), Teaching Reading in Secondary School Content Areas (3 hrs)

The following physical education courses are required (9 hrs) and can be taken concurrently with Level III courses

- Phy Ed 3434(234), Teaching of Wellness and Health Related Fitness (4 hrs)
- Phy Ed 3261(261), Physical Activity for the Exceptional

Learner (2 hrs)

Phy Ed 3468(268), The Curriculum and Methods of Teaching Physical Education (3 hrs)

Level III: Synthesizing Theory and Practice in Education

The following physical education (Phy Ed) courses are Required (30 hrs):

Phy Ed 3422(222), Teaching of Skills: Grades PK-4 (4 hrs)

Phy Ed 3423(223), Teaching of Skills: Grades 5-9 (4 hrs)

Phy Ed 3424(224), Teaching of Skills Grades 9-12 (4 hrs)

Phy Ed 3425(225), Teaching of Skills: Movement, Dance And Rhythms (3 hrs)

Phy Ed 3289(289), Physical Education Professional Internship (3 hrs)

Two of the following three:

Phy Ed 3990(290), Student Teaching in Physical Education PK-5 (6 hrs)

Phy Ed 3991(291), Student Teaching in Physical Education 5-9 (6 hrs)

Phy Ed 3992(292), Student Teaching in Physical Education 9-12 (6 hrs)

Minimum: 132 hours

Attention education majors: Professional education courses must be completed with a grade point average of 2.5 and no grade lower than a C- .

Athletic Coaching Minor

An athletic coaching minor is available (minimum of 20 hours). The following courses are required:

Phy Ed 3283(283), Kinesiology

Phy Ed 3424(224), Teaching of Skills: Grades 9-12

Phy Ed 5312(312), Management of Sports Programs

Phy Ed 5330(330), Prescribing Physical Activity

All courses apply to, but do not complete, teaching certification in Missouri.

Health Certification

For those with a valid teaching certificate in physical, courses are available to obtain an additional endorsement in health education.

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 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 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 age categories.

Secondary Education (Sec Ed)

Undergraduate Studies

Bachelor of Science in Education: Secondary Education

Two secondary education programs prepare students to teach in grades 9 through 12: Bachelor of Science in Secondary Education through the College of Education (B.S.Ed.) OR Bachelor of Arts in a department of the College of Arts and Sciences (B.A.) with certification in Secondary Education

General Education Requirements

Students entering college first time, Fall 2002 should refer to the Introductory section of this bulletin for their General Education Requirements.

B.S.Ed. degree candidates must complete the following general education courses required by the College of Education and the Missouri Department of Elementary and Secondary Education.

Humanities

Three courses required from two of the following fields: music (excluding applied music), art, foreign language, Western and non-Western cultures, philosophy, literature, classical studies, and theater and drama.

Communication Skills

At least two courses in English composition and one in oral communications.

Social Studies

One course in each--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 2 semester hours.

Program Requirements

B.S.Ed. and B.A. certification candidates must complete the following courses:

Level I: Exploring Education as a Profession

Tch Ed 2210(210), Introduction to Teaching

Tch Ed 2211(211), Introduction to Schools

Tch Ed 2212(212), Introduction to Learners

Level II: Analyzing the Nature and Process of Education

Tch Ed 3310(310), Introduction to Instructional Methods

Tch Ed 3312(312), Psychology of Teaching and Learning

Tch Ed 3313(313), Introduction to Learners with Disabilities and Inclusive Education

Tch Ed 4391(386), Teaching Reading in Secondary School Content Areas

Level III: Synthesizing Theory and Practice in Education

Sec Ed 32xx, Curriculum and Methods of Teaching (specific subject area)

Sec Ed 3289(289), Secondary Education Professional Internship

Sec Ed 3290(290), Student Teaching

Note: Sec Ed 3289(289) Secondary Education Professional Internship and Sec Ed 3xxx, Curriculum and Methods of Teaching (specific subject area) must be taken in the same semester and in the semester immediately preceding Sec Ed 3290(290), Student Teaching

Attention education majors: Professional education courses must be completed with a grade point average of 2.5 and

no grade lower than a C- or better are required in all courses in the teaching field.

Emphasis Areas: B.S.Ed. candidates must complete 30 to 50 hours of specific subject requirements in one of the following fields: English, foreign language (French, German, or Spanish), mathematics, music, unified science (biology, chemistry, or physics endorsement), or social studies. For specific subject requirements see the appropriate department listing in the Arts and Science section of this bulletin: Social Studies requirements are listed below:

Note: Music education students take the following courses instead of Sec Ed 290: Sec Ed 3293(293), Student Teaching in Music Education K-6, and Sec Ed 3294(294), Student Teaching in Music Education 7-12. These two courses must be taken during the same semester.

Social Studies certification students must complete a major or an equivalent in hours in one of the following disciplines: anthropology, economics, geography, history, political science, psychology, or sociology. They must meet these minimum social science requirements: American history, 12 hours including History/Sec Ed 3257(257); European or world history, 9 hours including History/Sec Ed 3258(258); United States and/or state government, 6 hours including Political Science/Sec Ed 3209(209); economics, 3 hours; geography, 3 hours; and 2 hours of elective social studies credit. For emphasis area advising see the History Department.

Bachelor of Science in Education: Secondary Education with Emphasis in Business Education

General Education Requirements

B.S.Ed degree in Business Education candidates must complete the university general education requirements required by the College of Education and the Missouri Department of elementary and Secondary Education, the requirements for the program and the academic major

Program Requirements

Level I: Exploring Education as a Profession

Tch Ed 2210(2*10), Introduction to Teaching

Tch Ed 2211(211), Introduction to American Schools

Tch Ed 2212(212), Introduction to Learners and Learning

Level II: Analyzing the Nature and Process of Education

Tch Ed 3310(310), Introduction to Instructional Methods

Tch Ed 3312(312), Psychology of Teaching and Learning

Tch Ed 3313(313), Introduction to Learners with Disabilities and Inclusive Education

Tch Ed 4391(386), Teaching Reading in the Secondary School Content Area

Level III: Synthesizing Theory and Practice in Education

Sec Ed 3xxx Curriculum and Methods of Teaching (specific subject area)

Sec Ed 3289(289), Secondary Education Professional Internship

Sec Ed 3290(290), Student Teaching

Academic major (36 hours required)

These **secondary education (Sec Ed)** courses:

2162(162), Computer Keyboarding and Formatting

3261(261), Methods of Teaching Keyboarding and Formatting

3263(263), Methods of Teaching Accounting

3264(264), Methods of Teaching Basic Business Subjects

***3265(265)**, Secretarial Practice

3267(267), The Secondary Business Curriculum

4361(361), Information Processing: Applications and Techniques of Teaching

4367(367), Methods of Teaching Desktop Publishing Concepts and Procedures **plus these Business**

Administration courses:

Bus Adm 1800(103), Computers and Information Systems

Bus Adm 2400(140), Fundamentals of Financial Accounting

Bus Adm 2410(145), Managerial

Bus Adm 2900(156), Legal Environment of Business

Bus Adm 3900(256), Business Law I

Bus Adm 3700(206), Basic Marketing and

Econ 1001(51), Principles of Microeconomics

* Majors working toward shorthand certification must take this additional course, and are not required to take **BA 3700(206)**

Attention education majors: Professional education courses must be completed with a grade point average of 2.5 and no grade lower than a C-. Grades of C- or better are required in all courses in the academic major.

Minimum of 120 hours

Electives

Electives are to be selected only after consulting with a faculty adviser.

Total: 120 hours

B.S. degree in Secondary Education with an Emphasis in Science-Physics

All candidates must enroll in a program that includes levels I, II, and III course work in the College of Education. In addition, students must complete the following Science Core Courses and the courses listed under Physics Endorsement:

Science core courses:

Philosophy 3380(280), Philosophy of Science

Biology

1811(11), Introductory Biology I

1821(12), Introductory Biology II

1111((11), Introductory Chemistry I

1112(12), Introductory Chemistry II

Geology 1001(1), General Geology

Atmospheric Science 1001(1), Elementary Meteorology

Biology 1202(120), Environmental Biology or another environmental science

Physics

1011(111), Physics: Mechanics and Heat

1012(112), Physics: Electricity, Magnetism, and Optics

Physics Endorsement

Physics

3200(200), Survey of Theoretical Physics

3221(221), Mechanics

3223(223), Electricity and Magnetism

3231(231), Introduction to Modern Physics

4310(304), Modern Electronics

4311(311), Advanced Physics Laboratory I

3232(280), or Education **3240(240)**, Methods of Teaching Science in Secondary Schools

Physics 4833(283), Teaching Intern Seminar

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 M. Ed. Students

The minimum 32-hour program for all secondary education majors includes the following requirements:

Core Requirements (9 hours)

Ed Fnd 3421(421), Philosophy of Education

Sec Ed 3415(415), The Secondary School Curriculum

Sec Ed 6420(420), The Improvement of Secondary School Teaching

Exit Requirement (3 hours)

One of the following courses must be taken as part of the last 9 hours in the M.Ed. program in secondary education:

Ed Fnd 3422(422), Analysis of Educational Issues

Sec Ed 6416(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 6990(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 4315(315), The Middle Level School
Sec Ed 4391(386), Teaching Reading in Secondary School
Content Areas

Sec Ed 6414(414), Teaching the Gifted and Talented in Secondary School

Sec Ed 6416(416), Curriculum Schools Construction for Secondary

Sec Ed 6422(422), Individualizing Instruction in Secondary Schools

Phy Ed 6462(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 College 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 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 4391(386), Teaching Reading in Secondary School
Content Areas

Ele Ed 6486(486), Clinical Diagnosis and Treatment of Reading Disabilities

Ed Rem 6716(422), Individual Assessment of Cognitive Abilities

Ele Ed 6493(493), Clinical Methods in Child Study I

Ele Ed 6494(494), Clinical Methods in Child Study II

Ele Ed 6482(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 4315(315), Speech and Language Problems of Exceptional Children, or

Ech Ed 4331(331), Language Acquisition and Development in Early Childhood

Spc Ed 4320(320), Behavior Management

Cns Ed 6000(327), Personal and Professional Development in Counseling

Ed Psy 6220(417), Psychology of the Elementary School Child

Ed Psy 6225(418), 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**

All candidates must enroll in a program that includes levels I, II, and III course work in the College of Education.

2) **Certification and M.Ed. requirements**

Ed Psy 3312(312), The Psychology of Teaching and Learning

Sec Ed 4391(386), Teaching Reading in Secondary School Content Areas

Ed Psy 6225(418), The Psychology of Adolescence

Ed Fnd 6421(421), Philosophy of Education

Sec Ed 6415(415), The Secondary School Curriculum

Sp Ed 6416(416), Current Research in Psychology of Learners with Disabilities

Electives

Selected graduate courses, including at least eight hours in the teaching specialty or in curriculum/instruction.

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 retraining 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.

Graduate Certificate in the Teaching of Writing, Gateway Writing Project

Jointly housed in the Division of Teaching and Learning and the Department of English, this Graduate Certificate prepares teachers at all levels (K-12, college, adult) to improve their students' performance in writing. The program also emphasizes using writing as a means to promote learning in all content areas. All courses provide opportunities for teachers to write, revise, share feedback, and reflect on their own writing development. Based on the National Writing Project's core belief that teachers of writing must themselves be writers, the Graduate Certificate in the Teaching of Writing brings together sound pedagogy, composition theory, and writing practice.

The Certificate is an 18-hour program through the Gateway Writing Project (GWP); it may also be coordinated with other graduate programs. Certificate courses may be applicable to the M.A. in English with emphasis in composition or to various M.Ed. programs. The GWP Certificate is especially appropriate for post-

master's candidates who wish to pursue a specialization in teaching writing. The Graduate Certificate in the Teaching of Writing requires a 12 semester-hour core of courses developed by the Gateway Writing Project: The GWP invitational institute (6 hrs), a designated "topics" course (3 hrs.), and an exit course (3 hrs.). The Certificate requires a minimum of 12 semester hours at the 400 level or above. Electives (6 hrs.) may be chosen from approved offerings in English or Education.

Admission:

Applicants must be admitted to Graduate School and be selected by the faculty admissions committee for the Gateway Writing Project's Certificate in the Teaching of Writing. The committee will review candidates on the basis of an interview, an application essay, and supporting documentation. Criteria include experience teaching writing at any level and academic record, especially in writing and the teaching of writing.

Prerequisites:

- **Eng/SecEd 4880(305)**, "Writing for Teachers" or an equivalent course in teaching writing
- Coursework or competency in basic computer application.

Required Core Courses (12 semester hours)

- **Eng 4850(317)/TchEd 5850(317)**, Topics in the Teaching of Writing (designated topics, 3 sem. hrs.)
- **Eng 5880(490)/SecEd 6880(436)**, future **TchEd(6880)**, Gateway Writing Project (Invitational Institute, 6 sem. hrs.)
- **TchEd. 6890(446)**, Seminar in Professional Writing for Teachers (exit course, 3 sem. hrs.)

Electives (6 semester hours)

Electives may be chosen from other Gateway Writing Project offerings **OR** from courses offered by the appropriate academic department with advisor's approval. These electives must include at least one more 5000(400) level course.

Suggested electives applicable to an MA in English with writing emphasis:

- Eng. 5840(485), Theories of Writing
- Eng. 5860(487), Writing/Reading Theory
- Eng. 5860(488), Composition Research
- Eng. 5890(489), Teaching College Writing
- Eng. 5800(410), Modern Linguistics

Suggested electives applicable to an M.Ed. in Elementary or Secondary Education

- El. Ed. 4387(387), Lang. & Literacy Needs of Diverse Children
- El. Ed. 6430(430), Problems in Teaching Language Arts
- Sec. Ed. 6430(430), Problems in Teaching English in Sec. School

- El. Ed. 6432(432), Research in Language Arts
- El. Ed. 6482(482), Problems & Research in Elementary Reading
- Ed. REM 6714(441), Action Research

Courses in adult and higher education may also be appropriate. For complete information, see *The Gateway Writing Project's Graduate Certificate in Teaching Writing*, available from the English Department, from the Division of Teaching and Learning, and from the GWP Director via Continuing Education & Outreach.

Special Education (Spc Ed)

Undergraduate Studies

Bachelor of Science in Education: Special Education

General education requirements (46 hours required): Students entering college first time, Fall 2002 should refer to the Introductory section of this bulletin for their General Education Requirements.

English and Communication (9 hours)

- **English 1100(10)** Composition
- **Communication 1030(30)** or **Communication 1040(40)**
- **English 3100(210)**

Mathematics (3 hours) **1150(50)**, Structure of Mathematical Systems I

Science (8-9 hours)

- **Biology** (Laboratory)
- **Physical Science** (Laboratory)

Humanities (8 hours)

Music 3770(177), Introduction to Music for the Elementary School Teacher (Recommended) plus two courses from art, music, philosophy, or literature

Social Science (18 hours)

- Psych 1003(3), General Psychology
- History 1001(3), American Civilization, or History 1002(4), American Civilization
- PolSci 1100(11), Introduction to American Politics
- Econ 3052(306), Microeconomics for the School Curriculum
- Sociology 1010(10), Introduction to Sociology, or any Anthropology course
- Geography 1001(101) or 1002(102)

Related Area Requirements (6 hours)

- **Phy Ed 3430(130)**, Elements of Health Education
- **Phy Ed 3261(261)**, Physical Activity of the Exceptional Learner

Program Requirements (24 hours)

Level I: Exploring Education as a Profession

Tch Ed 2210(210), Introduction to Teaching
Tch Ed 2211(211), Introduction to Schools
Tch Ed 2212(212), Introduction to Learners

Level II: Analyzing the Nature and Process of Education

Tch Ed 3310(310), Introduction to Instructional Methods
Tch Ed 3312(312), Psychology of Teaching and Learning
Tch Ed 3313(313), Introduction to Learners with Disabilities and Inclusive Education
Tch Ed 3315(315), Literacy Learning and Instruction
Cns Ed 3220(331), Counseling Individuals with Special Needs
Spc Ed 4315(315), Speech and Language Problems Exceptional Children
Spc Ed 4342(342), Transitions Issues and Planning
Spc Ed 3345(345), Education Programs for Students with Disabilities

Level III: Synthesizing Theory and Practice in Education

Ele Ed 3330(330), Children's Literature and Reading
Ele Ed 3336(336), Teaching Language Arts and Reading, N-9
Ele Ed 4342(342), Teaching Remedial Mathematics

Must take the following three courses during the same Semester as Elementary Professional Internship (El Ed 289/3289).

Ele Ed 4246(246), Teaching Mathematics in the Elementary School
Ele Ed 4341(341), Teaching Science in the Elementary School
Ele Ed 4253(253), Teaching Social Studies in the Elementary School

El Ed 3289(289) Elementary Education Professional Internship

Must take the following 6 credit hour course during the same semester as Special Education Professional Internship (Spc Ed 3289/289)

Spc Ed 3349(349) Learning and Social Supports for Students with Disabilities

Spc Ed 3289(289) Special Education Professional Internship

Note: Ele Ed 3289(289) must be taken prior to Spc Ed 3289(289)

Student Teaching

Ele Ed 3290(290), Student Teaching in Elementary Education

Ele Ed 3291(291), Student Teaching in Special Education

Note: Ele Ed 3290(290) and Spc Ed 3291(291) must be taken during the same semester.

Attention education majors: Professional education courses must be completed with a grade point average of 2.5 and no grade lower than a C-.

Total: Minimum of 120 hours

Graduate Studies

Master of Education: 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 advisors.

Following is the recommended curriculum for students enrolled in the mild/moderate disabilities (cross-categorical), learning disabilities, behavioral disorders, mental retardation (developmental disabilities) or early childhood-special education options.

I. Areas of specialization: Students are required to complete the course requirements in at least one of the following five specialization areas:

1. Learning Disabilities (6 hours)

Spc Ed 6443(443), Introduction to Learning Disabilities

Spc Ed 6444(444), Education of Learners with Learning Disabilities

2. Early Childhood Special Education (6 hours)

Spc Ed 6462(462), Introduction to Early Childhood-Special Education

Spc Ed 6463(463), Curriculum, Methods, and Materials for Early Childhood Special Education

3. Emotional/Behavioral Disorders (6 hours)

Spc Ed 6450(450), Introduction to Emotional, Behavioral, and Social Problems of Childhood and Schooling.

Spc Ed 6452(452), Social, Emotional, and Environmental Supports for Learners with Disabilities (6 hours)

4. Developmental Disabilities/Mental Retardation (6 hours)

Spc Ed 6430(430), Introduction to Developmental Disabilities

Spc Ed 6431(431), Education of Learners with Developmental Disabilities

5. Cross-Categorical(mild/moderate disabilities) Special Education (9 hours)

Spc Ed 6430(440), Disability, Schooling and Culture
Spc Ed 6431(441), Curriculum & Teaching for

Spc Ed 6452(452). Social, Emotional, and Environmental Supports for Learners with Disabilities

II. Educational Research and Evaluation Methods (3-6 hours)

Ed Rem 6707(420), Classroom Measurement and Evaluation

Ed Rem 6714(421), Educational and Psychological Measurement

Ed Rem 6716(422), Psychoeducational Assessment: I

III. Psychological foundations and human development (3-6 hours)

Ed Psy 6111(411), Psychological of Education

Ed Psy 6215(416), Psychological of Early Childhood Development

Ed Psy 6620(417), Psychology of the Elementary School Child

Ed Psy 6225(418), The Psychology of Adolescence

IV. Exit Requirement: Program exit requirement is met by taking Spc 6416(416), Current Research in the Psychology of Learners with Disabilities. It is recommended that students take this during the final nine hours of the program.

V. Electives

Spc Ed 6410(410), Families and Schools in Inclusive Communities

Spc Ed 6411(411), Law, Policy and Bureaucracy in Education and Disability Studies

Other electives may be chosen from the courses listed here and from other courses with approval of the advisor and department chairperson

Total hours: minimum 32 credit hours

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, and 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.

Course Descriptions

Courses in this section are grouped as follows: Early Childhood Education (Ech Ed), Educational Foundations (Ed Fnd), Educational Technology (Ed Tec), Elementary Education (Ele Ed), Physical Education (Phy Ed), Secondary Education (Sec Ed), and Special Education (Spc Ed), and Teacher Education (Tch Ed).

Prerequisites may be waived by consent of the department.

Early Childhood Education (Ech Ed)

3290(290) Student Teaching in Early Childhood Education I (6)

Prerequisites: Ed Fnd 1111(111), Psychology 2270(270), Ech Ed 3312(312), Ech Ed 333, Ele Ed 385, Ele Ed 3336(336), Communication 1040(40), English 3100(210), Ed Psy 3312(312), Ele Ed 3330(330), Ele Ed 3389(389), Ech Ed 3314(314); and admission to student teaching. Must be taken with Ech Ed 3291(291), and must immediately precede Ech Ed 3291(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.

3291(291) Student Teaching in Early Childhood Education II (6)

Prerequisite: Ech Ed 3290(290). Must be taken concurrently with Ech Ed 205 and must follow Ech Ed 3291(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 3290(290) assignments. Required of all majors in early childhood education.

3303(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 3313(313), Curriculum and Practice: Infant/Toddler.

3304(304) Curriculum and Practice Laboratory: Preschool (1)

Classroom experience in preschool classrooms under direction of university personnel. Must be taken concurrently with Ech Ed 3314(314), Curriculum and Practice: Preschool.

3305(305) Curriculum and Practice Laboratory: Primary (1)

Classroom experience in primary classrooms under direction of university personnel. Must be taken concurrently with Ech Ed 4315(315), Curriculum and Practice: Primary.

3312(312) Introduction to Early Childhood Education (3)

Prerequisites: Ed Fnd 1111(111) and Ed Psy 3312(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.

3313(313) Curriculum and Practice: Infant/Toddler (2)

Prerequisite: Ech Ed 3312(312). Focuses on planning integrated curriculum for child from birth to 30 months. Includes working with parents and community resources. Lab required.

3314(314) Curriculum and Practice: Preschool Education (2)

Prerequisite: Ech Ed 3312(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.

3332(332) Early Literacy (3)

Prerequisites: Ech Ed 3312(312) and Ech Ed 4331(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.

4315(315) Curriculum and Practice: Primary Education (2)

Prerequisite: Ech Ed 3312(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.

4317(317) Assessing Individual Needs for Early Childhood Instruction (3)

Prerequisites: Ech Ed 3312(312). Techniques of observing children and using assessment instruments to plan an individualized program for early childhood. Practicum experience required.

4321(321) Parent and Community Resources in Early Childhood Education (3)

Prerequisite: Admission to the College 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.

4331(331) Language Acquisition and Development in Early Childhood (3)

Prerequisite: Ed Psy 3312(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.

4346(346) The Acquisition of Mathematical Concepts (3)

Prerequisites: Formal admission to the Teacher Education Program, Ed Psy 3312(312), and Math 1050(50). Applications of the major theorists to mathematics reasoning. Content is appropriate for pre-k to third grad learners. Research and its implications for practice in the areas of logical thinking, pre-number ideas, geometry, topology, problem solving and arithmetical operations are considered.

5335(335) Inclusion Practices In The Early Childhood Classroom (3)

Prerequisites: Tch Ed 2210(210), 2211(211), and 2212(212), or consent of instructor. This course provides theory and practice in the inclusion of young children with disabilities in a classroom setting. The focus of the course will be developing a team approach to supporting families as they make decisions for their children. Students will study development, observations, and assessment to be able to make appropriate referrals to support children with disabilities in the early childhood classroom. Other areas of understanding will include legal rights and responsibilities, development of individual plans for success, understanding of best practices for inclusion, and accessing community resources for families of children with disabilities.

6412(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.

6413(413) The Educational Role of Play (3)

Prerequisite: Ech Ed 3312(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.

6415(415) Organization and Development of Early Childhood Programs (3)

Prerequisites: Ech Ed 3312(312) or equivalent. Strategies for the effective organization and development of programs for children from diverse cultures, ages birth through eight years, will be studied. Research and theory in funding and budgeting, staffing and professional development, selection, development, and assessment of program curriculum will be emphasized. Long-range planning for program stability and involvement in advocacy issues will be covered.

6490(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.

6497(497) Problems (1-10)

Prerequisite: Graduate standing. Individual study on topics pertaining to early childhood education.

Educational Foundations (Ed Fnd)

4330(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.

6421(421) Philosophy of Education (3)

Prerequisites: Graduate standing or consent of instructor. (Same as Philosophy 6421(473). Critical examination of selected issues in education from the perspective of Western philosophy. Topics may include the distinctive features of education as an activity and achievement, concepts of teaching and learning, relations between education and values, and the role of public educational institutions.

6422(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.

6435(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.

Educational Technology (Ed Tec)

2245(245) Audiovisual Equipment Operation for Classroom Teachers (1)

An entry-level course for all teacher education students. May be taken concurrently with Ed Tec 2246(246). A self-paced, modularized, and criterion referenced course. Students will demonstrate competence in operating standard audiovisual equipment normally found in the schools.

2246(246) Preparation of Inexpensive Materials for the Classroom (1)

An entry-level course for teacher education students. May be taken concurrently with Ed Tec 2245(245). A lecture-demonstration laboratory course in material preparation for classroom use.

2247(247) Integration of Media and Materials in Instructional Planning (1)

Prerequisites: Ed Tec 2246(246), and for secondary Education students, Sec Ed 3213(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 prepares appropriate material for that unit. Ed Tec 2246(246) must be taken prior to, or concurrently with, this course.

2248(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.

5301(301) Introduction to Computers and the Internet in Education (3)

The course focuses on how computers and the Internet have changed teaching and learning; how teachers can facilitate learning in inquire-based, technology-rich classrooms; and on the design and implementation of technology-rich activities and projects. Introduces students to the networked computer as an instructional tool. Course participants will be introduced to how teachers and their students can use computer tools in appropriate ways for different content areas and educational levels. Practices to be explored include making presentations; searching for information and educational resources; organizing, writing, and displaying information and data.

5340(340) Selection and Utilization of Educational Multimedia (3)

Prerequisites: Ed Tec 5301(301) or consent of instructor. Prepares students for selecting and utilizing multimedia technologies for learning. Students will conduct projects involving educational multimedia programs available on computers or over telecommunications networks. The projects will incorporate graphics, sound, and video. The goal of working on these projects is to prepare students to facilitate others' use of multimedia in classrooms and other educational contexts.

5345(345) Preparation of Graphic Materials for Audiovisual Education (3)

Prerequisite: Ed Tec 5340(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.

5346(346) Instructional Television (3)

Prerequisite: Ed Tec 5340(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.

6404(404) Seminar (1-10)

Prerequisites: Ed Tec 5340(340) or consent of instructor. Seminar in educational technology addressing special issues and topics not normally included in the regular educational technology courses.

6410(410) Computer-Based Graphics and Text Design and Production (3)

Prerequisite: Education 4301(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.

6412(412) Applications of Computers in Education (3)

Prerequisite: Educ 4301(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.

6415(415) Teaching and Learning with Technology: Authoring Tools (3)

Prerequisite: Ed Tec 5340(340) or consent of instructor. A practical course in the design and development of computer-based educational materials and activities, utilizing "authoring" software tools. Authoring tools allow the development of interactive multimedia educational modules without the need for command-line programming. Emphasis will be placed on principled, theoretically sound, learner-centered design that meets curriculum needs.

6416(416) Teaching and Learning with Technology: Data Representational Tools (3)

Prerequisites: Ed Tec 5340(340) or consent of instructor. Examines the use of representations of different forms of data with technology for teaching and learning. Students will learn about techniques for graphing and visualizing data in science, math, the social sciences, and humanities, and will become familiar with research and practice pertaining to their use in a variety of learning activities and projects.

6417(417) Teaching and Learning with Technology: Geographic Information Systems (GIS) (3)

Prerequisite: Ed Tec 5340(340) Provides a foundational understanding of the Geographical Information System (GIS) and how it is integrated into middle and high school classrooms. Students will learn how to represent data used in schools and carry out projects that can be used in middle and high school classrooms.

6433(433) Educational Technology Systems Management (3)

Prerequisite: Ed Tec 5340(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.

6435(435) Instructional Technology and Education Reform (3)

Prerequisite: Ed Tec 5340(340) or consent of instructor. Students will learn how to foster changes in uses of technology for learning in schools, based on a historical understanding of previous technology reforms, and a critical assessment of recent reforms. Questions addressed include: What did stakeholders predict and hope for with earlier educational technologies, early uses of the computer and networking, and present technological innovations? What actually happened? Why? How can teachers and other educators help foster and spread effective use of technology for learning?

6436(436) Computer-Mediated Communication in Education (3)

Prerequisite: Ed Tec 5340(340) or consent of instructor. Explores the theory, research, and practice of using computer-mediated communication and computer-supported collaborative learning in education. Learning environments including elementary, secondary, higher, and adult education will be considered.

6437(437) Distance Learning via Networks and Telecommunications (3)

Prerequisite: Graduate standing. This course is an investigation in the ways the learning and teaching across the barriers of time and distance are similar to and different from face to face learning and teaching. Students will study the influence of interactive media: Videoconferencing, asynchronous discussions and other commonly used methods.

6444(444) Cognition and Technology (3)

Prerequisites: Ed Psy 6111(411) or consent of instructor. Examines cognitive theories and computer-based tools for learning. Students will gain a critical understanding of the relationship between the design of technological tools, the use of those tools in educational settings, and their implications for learning.

6446(446) Advanced Instructional Television Production (3)

Prerequisite: Ed Tec 5340(340) and Ed Tec 5346(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.

6448(448) Technology-Supported Inquiry Learning (3)

Prerequisites: Ed Tec 5340(340) and Ed Psych 6310(412), or consent of instructor. Educational technology such as networked computers and software can play a supportive role in inquiry-based learning. Students will explore the theoretical background, design issues, and pragmatic realities of technology-supported inquiry learning environments. Such learning environments are best understood as systems involving social, cultural, material and psychological aspects. Consideration will be given to the important properties of settings, activities and technologies, as well as to the role of instructors.

6452(452) Educational Multimedia Design (3)

Prerequisite: Ed Tec 5340(340) or consent of instructor. Examines principles and techniques for design of visually and functionally effective multimedia educational resources. Emphasis on techniques for computer-based production of materials incorporating text, graphics, and video. Rapid prototyping and evaluation techniques incorporated.

6454 Instructional Video Production (3)

Prerequisites: Ed Tec 5340(340) or consent of instructor. Elements of digital video production will be studied and used to produce video for a variety of formats. Students will develop the skill to produce and stream programs for school news programs, video annuals, documentaries and staff development programs.

6460 Technology Coordination in Schools (3)

Prerequisite: Ed Tec 5340(340) & 444 & 6448(448) or consent of instructor. This course provides theoretical and practical knowledge for implementing technology in schools. A major focus will be placed on analyzing the total cost of implementations and methods for measuring educational success.

6462(462) Technical System Implementation for Educational Technology (6)

Prerequisites: Ed Tec 5340(340) Provides a foundational understanding of technical systems used in educational institutions, with a special emphasis on networked personal computers. Students learn theory and practice enabling them to set up, troubleshoot and configure networked computers for educational purposes.

6490(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.

6497(497) Problems (1-10)

Prerequisite: Ed Tec 5340(340) or consent of instructor. Individual study on topics pertaining to educational technology.

Elementary Education (Ele Ed)

1082(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.

2177(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.

2179(179) Art Activities for Elementary Schools (3)

Same as Art 1179(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. Lab fee required. Basic studio equipment will be provided though students will need to supply some personal equipment and supplies

2192(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.

3277(277) Curriculum and Methods of Teaching Elementary School Music (3)

Same as Music Education 3570(257). Prerequisites: Music 2311(131) and Ed Fnd 1111(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. This course must be completed in residence.

3289(289) Elementary Education Professional Internship (3)

Prerequisites: Level 1 & Level 2 requirements. This course is an intensive professional development experience (9 hours per week for 14 weeks) working in an elementary school setting with students. Activities on site include

assisting the classroom teacher in all areas of instruction, assessment, and classroom management. Particular emphasis will be given to literacy development. This course is to be taken during the semester immediately preceding student teaching. This course is to be taken in conjunction with Ele Ed 4253(253), Ele Ed 4246(246) and Ele Ed 4341(341). Assignments from these allied courses are carried out in the Internship, and Internship experiences inform the activities and discussions in these courses.

3290(290) Elementary School Student Teaching I (6)

Prerequisites: Tch Ed 2210(210), 2211(211), 2212(212), 3310(310), 3312(312), 3313(313), and 3315(315) Ele Ed 230, 4246(246), 4253(253), 3336(336), 4341(341), 385, 3389(389), Psy 1003(3), Comm1040(40), Eng 3100(210) and admission to student teaching. Must be taken with Ele Ed 3291(291) and must immediately precede Ele Ed 3291(291) in the same semester. Clinical teaching experience in elementary school classrooms under university and school supervision. Required for all majors in elementary education.

3291(291) Elementary School Student Teaching II (6)

Prerequisite: Ele Ed 3290(290). Must be taken "in block" with Ele Ed 205 and Ele Ed 3290(290), and must immediately follow Ele Ed 290(3290) in the semester. Clinical teaching experiences in elementary school classrooms under university and school supervision. Required for all majors in elementary education.

3330(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.

3336(336) Teaching Language Arts and Reading N-9 (3)

Prerequisites: Six hours of English/Communication; Ed Psy 3312(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.

3389(389) The Analysis and Correction of Reading Problems in the Classroom (3)

Prerequisites: Ele Ed 385 or Sec Ed 4391(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.

3390(390) Elementary School Student Teaching III (6)
Prerequisites: Ele Ed 3291(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.

4246(246) Teaching Mathematics in the Elementary School (3)
Prerequisites: Ed Fnd 1111(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.

4253(253) Teaching of Social Studies in the Elementary School (3)
Prerequisites: Ed Fnd 1111(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.

4310(310) Elementary School Curriculum (3)
Prerequisites: Ed Fnd 1111(111) and junior standing. Study of modern education with regard to objectives, content, and methods in elementary school curriculum.

4341(341) Teaching Science in the Elementary School (3)
Prerequisites: Completion of science requirements in general education, Ed Fnd 1111(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.

4342(342) Teaching Remedial Mathematics (3)
Prerequisite: Ele Ed 4246(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.

4346(346) Advanced Methods in Elementary School Mathematics (3)
Prerequisites: Ele Ed 4246(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.

4387(387) Language and Literacy Needs of Culturally and Linguistically Diverse Children (3)
Prerequisites: Ed Psy 3312(312) and Reading Methods or equivalent. Analysis of the community and cultural influences on children's language and literacy development, particularly children from culturally diverse settings. Attention to the sociolinguistic and constructivist practices in the teaching of language and literacy. Study of strategies to focus on the efforts of school administrators, faculty, parents, students, and the community on developing language and literacy competence as a primary tool for supporting academic achievement.

4405(405) Seminar (1-10)

6410(410) Current Research in Early Childhood and Elementary Program (3)
Prerequisite: Graduate admission. A systematic examination of research related to early childhood and elementary school programs. 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. This course should be taken as the first course in the M.Ed. in Elementary Education degree program.

6411(411) Curricular Issues in Early Childhood and Elementary Programs (3)
Prerequisite: Ele Ed 6410(410). Selected contemporary problems that affect classroom decisions. Technology, literacy, meeting individual needs, diversity, and dealing with discipline are studied through investigative discussions, reading, and a research paper.

6412(412) Microcomputers in Elementary Education (3) Focuses on principles and procedures for using microcomputers for instructional and classroom management activities in the elementary classroom.

6422(422) Curriculum Construction in Early Childhood and Elementary Programs (3)
Prerequisite: Ele Ed 6410(410) and 6411(411). A study of current and classic curricular models early childhood and elementary education. Using developmental learning theory, students will select appropriate curriculum and develop activities for the early childhood or elementary classroom. Students begin a research project by gathering data and evaluating curricular designs from the models studied.

6423(423) Curricular Implementation in the Early Childhood and Elementary Programs (3)
Prerequisite: Ele Ed 6422(422). Implementation of a culminating project designed in Ele Ed 6422(422). Students will study implementation and evaluation strategies for the project. The project will be implemented during the semester and students will conduct an evaluation of the project by the end of the semester.

6425(425) Elementary School Supervision (3)

Organized to study such problems in field of supervision as will meet needs of superintendents, principals, and special supervisors.

6426 Elementary School Curriculum Reform in the Earth/Space Sciences (4)

Prerequisite: Graduate standing. Field-based experiences in improving the district-level elementary school science program, with special attention to the earth/space sciences. Emphasis is given to planning and implementing standards-based inquiry science activities that include connections to other curricular areas.

6427(427) Supervision of Clinical Experiences in Teacher Education (3)

Prerequisite: 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 formulation, and recent developments in the field.

6428(428) Elementary School Curriculum Reform in the Life Sciences (4)

Prerequisite: Graduate standing. Field-based experiences in improving the district-level elementary school science program, with special attention to the life sciences. Emphasis is given to planning and implementing standards-based inquiry science activities that include connections to other curricular areas.

6429(429) Elementary School Curriculum Reform in the Physical Sciences (4)

Prerequisites: Graduate standing. Field-based experiences in improving the district-level elementary school science program, with special attention to the physical sciences. Emphasis is given to planning and implementing standards-based inquiry science activities that include connections to other curricular areas.

6430(430) Problems of Teaching the Language Arts (3)

Procedures used in teaching integrated language arts in elementary schools.

6432(432) Problems and Research in Elementary School Language Arts (3)

Prerequisites: Ele Ed 6430(430), Ed Rem 6710(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.

6436(436) Children's Literature I: Survey and Analysis (3)

Prerequisite: Ele Ed 3330(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.

6437(437) Children's Literature II: Selection and Functions (3)

Prerequisite: Ele Ed 3330(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.

6441(441) Problems and Research in Teaching Elementary School Science (3)

Prerequisites: Eight hours of science, Ele Ed 4341(341), and Ed Psy 6111(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.

6442(442) Elementary School Curriculum Reform in the Health Sciences (4)

Prerequisites: Graduate Standing. Field-base experiences in improving the district-level elementary school science program, with special attention to the health sciences. Emphasis is given to planning and implementing standards-based inquiry science activities that include connections to other curriculum areas.

6443(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.

6444(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.

6445(6455) 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.

6446(646) Curriculum and Methods of Teaching Measurement in Mathematics: Metric and Standard Systems (3)

Prerequisite: Ech Ed 4346(346) or Ele Ed 4246(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.

6447(447) Problems and Research in Teaching Elementary School Mathematics (3)

Prerequisite: Ele Ed 6445(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.

6448(448) Diagnosis and Remediation of Disabilities in Learning Mathematics (3)

Prerequisite: Ele Ed 6445(445). Causes of mathematical disabilities. Materials and techniques for diagnoses and corrective programs for children and youth.

6450(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.

6452(452) Problems and Research in Teaching Elementary School Social Studies (3)

Prerequisite: Ele Ed 6450(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.

6482(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.

6484(484) Developmental Reading (K-13) (3)

Prerequisite: Ele Ed 385 or Sec Ed 4391(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.

6486(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.

6488(488) Supervision of School Reading Programs (3)

Prerequisite: Ele Ed 385 or Sec Ed 4391(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.

6490(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.

6493(493) Clinical Methods in Child Study I (3)

Prerequisites: Ele Ed 6486(486) and Ed Rem 6716(422). Clinical experience in diagnosing learning problems, especially reading disability, in school children.

6494(494) Clinical Methods in Child Study II (3)

Prerequisite: Ele Ed 6493(493). Clinical experience in applying remedial procedures to schoolchildren with learning problems, especially reading disability.

6495(495) Supervision of Practicum in Clinical Reading (3)

Prerequisites: Ele Ed 385 or Sec Ed 385; Ele Ed 6486(486), Ele Ed 6493(493), Ele Ed 6494(494); and Ed Rem 6716(422). Supervising graduate students in diagnosis and remedial process within the reading clinic.

6497(497) Problems (1-10)

Selected problems to meet the needs of individual students.

Middle Education (Mid Ed)

3289(289) Middle Level Education Professional Internship (3)

Prerequisites: Level 1 & Level 2 requirements, Mid Ed 4315(315), Mid Ed 4316(316). This course is an intensive professional development experience (9 hours per week for 14 weeks) working with students in a middle school setting. Activities on-site include assisting the classroom teacher in all areas of instruction, developing instructional materials, assessment, and classroom management. This course is to be taken prior to student teaching, ideally during the semester immediately preceding student teaching. This course should be taken concurrently with Mid Ed 4317(317).

4246(246) Teaching Mathematics in the Middle School (3)

Prerequisites: Level 1 & Level 2 and completion of mathematics area of concentration. A study of the middle school math curriculum with state standards and appropriate instructional strategies, materials and assessments.

4315(315) The Middle Level School (3)

Prerequisites: Level 1 and admission to teacher education program. An in-depth study of the philosophical and historical basis of middle level schools, including a review of the research as the basis for organization, current trends and practices.

4316(316) Middle Level Curriculum and Instruction (3)

Prerequisites: Completion of Level 1. 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.

4317(317) The Middle-Level Child (3)

Prerequisites: Completion of Level 2. Developmental characteristics and needs of early adolescents are studied through field experience in middle school classrooms. The relationship between needs and behavior is explored and skills for effective student teacher relationship are highlighted.

Physical Education (Phy Ed)

Prerequisites may be waived by consent of the department or the instructor.

1124(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.

1190(190) Clinical Experience in Physical Gerontology (3)

Same as Gerontology 1190(190). Early supervised experience in gerontological physical activity programming. Seminar precedes and accompanies clinical experience.

1193(193) Clinical Experience in Youth Support Programs (3)

Supervised clinical experience in youth sport programs. Seminar precedes and accompanies clinical experience.

2132(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.

2134(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.

3204(204) Special Topics in Physical Education (1-3)

Prerequisite: Consent of instructor. Independent study through readings, reports, field study, or research.

3261(261) Physical Activity for the Exceptional Learner (2)

Prerequisites: Spc Ed 3311(311) and Spc Ed 3313(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.

3267(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.

3275(275) Psychological Aspects of Physical Education (3)

Prerequisites: Psychology100 3(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.

3276(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.

3277(277) Historical and Philosophical Foundations of Physical Education and Sport (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.

3280(280) Human Anatomy and Physiology (5)

Prerequisite: Bio 1012(1) and Bio 1003(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.

3282(282) Physical Growth and Motor Development (3)

Prerequisite: Psychology 2270(270). 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.

3283(283) Kinesiology (3)

Prerequisite: Phy Ed 3280(280). Study of the biomechanics of human motion with particular application to performance in sport activities.

3284(284) Physiology of Human Exercise (3)

Prerequisite: Phy Ed 3280(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.

3285(285) Sports Medicine (3)

Prerequisite: Phy Ed 3280(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.

287 Seminar in Exercise Science (3)

Prerequisites: Phy Ed 3283(283), 3284(284), or 3285(285). A review of current topics in the area of exercise science. Focus is on research and practice in various subdisciplines in the field. An emphasis will be placed on application of research to professional situations. Some field experience may be required.

3289(289) Physical Education Professional Internship (3)

Prerequisites: Level II designated course requirements. This course is an intensive professional development experience (9 hours per week for 14 weeks) working in a school setting with students. Activities on site include assisting the classroom teacher in all areas of instruction, assessment, and classroom management. This course is to be taken prior to student teaching, ideally during the semester preceding student teaching. Assignments from allied courses (Phy Ed 3422(222), 3423(223), 3424(224) or 3425(225) are carried out in the Internship, and

Internship experiences inform the activities and discussions in these courses.

3422(222) Teaching of Skills: Grades PK-4 (4)

Prerequisite: Completion of 27 designated credit hours of Level II courses. 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.

3423(223) Teaching of Skills: Grades 5-9 (4)

Prerequisite: Completion of 27 designated credit hours of Level II courses. 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.

3424(224) Teaching of Skills: Grades 9-12 (4)

Prerequisite: Completion of 27 designated credit hour of Level II courses. 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.

3425(225) Teaching of Skills: Movement, Dance and Rhythms (3)

Prerequisites: Completion of 27 credit hours of Level II courses. Study of movement analysis and techniques of teaching fundamental movement skills, rhythmic activities, creative movement, and dance, including folk, square, ballroom, modern, and jazz, in school settings. Emphasis will be given to biomechanical analysis of movement, developmental sequences of fundamental movement, application of motor learning concepts, and design and preparation of appropriate instructional experience and materials.

3430(130) Teaching Health in the Elementary School (3)

Prerequisites: Ed Fnd 1111(111) and admission to the College 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.

3434(234) Teaching Wellness and Health-Related Fitness (4)

Prerequisite: Phy Ed 3280(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.

3465(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.

3468(268) Curriculum and Methods of Teaching Physical Education (3)

Prerequisite: Phy Ed 101 or Sec Ed 3213(213). Study of the scope and sequence of the school program in physical education with emphasis on planning processes, content selection, management procedures, instructional strategies, and program assessment.

3990(290) Student Teaching in Physical Education: PK-5 (6)

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.

3991(291) Student Teaching in Physical Education 5-9 (6)

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.

3992(292) Student Teaching in Physical Education: 9-12 (6)

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.

5240(340) Community Health Education (3)

Prerequisites: Tch Ed 2211(211) or equivalent, junior or graduate standing, or permission of instructor. Study of community health issues and programs, within the school and the community, including spread and control of communicable diseases. Treatment and prevention programs, community resources, and educational issues for both communicable and chronic diseases will be examined.

5248(348) Teaching Health in the Secondary School: Grades 9-12 (3)

Prerequisites: Tch Ed 2211(211) or equivalent, junior or graduate standing, or permission of instructor. Study of methods of health education in the secondary school. Class will examine instructional program, ways to provide healthful environment in the school, and health services for high school student.

5312(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.

5330(330) Prescribing Physical Activity (3)

(Same as Gerontology 5330(330)). Prerequisite: Phy Ed 3280(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.

5380(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.

5931(331) Adult Exercise Leadership (3)

Prerequisites: Phy Ed 3284(284) or equivalent. A study of the roles, functions, and skills necessary to become certified as an American College of Sports Medicine Health/Fitness Instructor for adult exercise programs.

5990(390) Student Teaching in Physical Education III (5)

Prerequisites: Phy Ed 3991(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.

5992(392) Internship in Physical Gerontology (1-10)

Prerequisites: Phy Ed 1190(190) or consent of instructor. Same as Gerontology 5992(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, participant and program evaluation, research, and related activities.

6462(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.

6464(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.

6474(474) Psychological Dynamics of Sport Performance (3)

Prerequisite: Phy Ed 3275(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.

6475(475) Motor Learning and Control (3)

Prerequisite: Phy Ed 3275(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.

6476(476) Social Inquiry of Sport (3)

Prerequisite: Phy Ed 3276(276) or consent of instructor. A study of basic social processes in sport, such as socialization, social facilitation, and assimilation.

6478(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.

6482(482) Life Span Perceptual and Motor Development (3)

Prerequisite: Phy Ed 3282(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.

6483(483) Biomechanics of Sport Techniques (3)

Prerequisite: Phy Ed 3283(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.

6484(484) Physiological Bases of Physical Performance (3)

Prerequisites: Phy Ed 3280(280) and Phy Ed 3284(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.

6485(485) Theory of Exercise and Cardiovascular Disease Risk Factor Management (3)

Prerequisite: Completion of Phy Ed 6484(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.

6497(497) Problems (1-10)

Prerequisite: Consent of instructor. Selected problems to meet the needs of individual students.

6990(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.

7492(492) Directed Readings in Curriculum and Instruction (1-6)

Prerequisites: Graduate standing, one graduate course in curriculum and instruction, and consent of instructor. Independent study into the current research, literature, and issues in the areas of physical education and curriculum and instruction.

7494(494) Directed Readings in Motor Behavior (1-6)

Prerequisites: Graduate standing, one graduate course in motor behavior, and consent of instructor. Independent study into the current research, literature, and issues in the area of motor behavior.

Secondary Education (Sec Ed)

2162(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.

3204(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.

3208(208) Mathematics Teaching Intern Seminar (1)

Prerequisite: Concurrent enrollment in Sec Ed 3290(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(3209).

3209(209) American Government for the Secondary Classroom (3)

Prerequisites: Tch Ed 3310(310) and Pol Sci 1100(11), graduate standing or consent of instructor. Same as Pol Sci 3090(209). Adapts the themes and subject matter of American government to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting themes of American government, on expanding bibliography, and on choosing methods of inquiry for use in an interactive classroom. Either History/Sec Ed 3257(257) or 3258(258) or Political Science/Sec. Ed. 3209(209) must be taken the same semester as History/Sec Ed 3255(255) except with special consent of the Social Studies Coordinator. Can be counted towards the Political Science major requirement, but not the American Politics subgroup. Counts towards Social Studies Certification.

3240(240) Curriculum and Methods of Teaching Physical Sciences (3)

Same as Chemistry 4802(280) and Physics 4802(280). Prerequisite: Tch Ed 3310(310) 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. This course must be completed in residence.

3246(246) The Curriculum and Methods of Teaching Mathematics (3)

Prerequisites: Tch Ed 3310(310) 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. This course must be completed in residence.

3255(255) The Curriculum and Methods of Teaching History and Social Studies (3)

Same as History 3255(255). Prerequisite: Junior standing and Tch Ed 3310(310). A study of the scope and sequence of 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. This course must be completed in residence.

3256(256) Social Studies Teaching Intern Seminar (1)

Same as History 3256(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.

3257(257) United States History for the Secondary Classroom (3)

Same as History 3257(257). Prerequisites: Tch Ed 3310 or consent of the instructor. This course is required for Social Studies Certification. Adapts the themes and subject matter of American history to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting themes of American history, on expanding bibliography, and on choosing methods of inquiry for use in an interactive classroom. Cannot be counted towards the 38-hour history major requirement, but can be counted towards the 45-hour maximum and for Social Studies Certification.

3258(258) World History for the Secondary Classroom (3)

Prerequisite: Tch Ed 3310 or consent of instructor. Same as History 3258(258). This course is required for Social Studies Certification. Adapts the themes and subject matter of World history to the secondary classroom and trains teachers in techniques particularly designed to maximize the use of primary sources, foster critical inquiry, and encourage knowledge of subject matter. Particular emphasis will be placed on defining the broad and connecting themes of World history, on expanding bibliography, and on choosing methods of inquiry for use in an interactive classroom. Cannot be counted towards the minimum 38-hour history major requirement, but can be counted towards the 45-hour maximum and for Social Studies Certification.

3261(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.

3263(263) Methods of Teaching Accounting (3)

Prerequisites: BA 2410(140), BA 2415(145), or equivalent. Methods and techniques of teaching data processing and accounting in the secondary schools.

3264(264) Methods of Teaching Basic Business Subjects (3)

Prerequisites: Econ 1001(51) or equivalent, BA 3700(206) and/or BA 3900(256). Methods and techniques of teaching basic business, business law, economics, consumer economics, and business principles and management in the secondary school curriculum.

3267(267) The Secondary Business Curriculum (3)

Prerequisite: Tch Ed 2211(211) 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.

3700(270) English Student Teaching Seminar (2)

(Same as English 3700(270). Prerequisite: Sec Ed 3289(289). 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 Student Teaching, Sec Ed 3290(290).

3273(273) The Curriculum and Methods of Teaching Art (3)

Prerequisites: Sec Ed 3328(328) and completion of, or concurrent enrollment in Tch Ed 3310(310), 3312(312), 3313(313) 3386(386). A study of the scope and sequence of art education in the school curriculum, with emphasis on the preparation, selection, organization and application of materials and methods of instruction and assessment. Attention is also given to understanding the research methods of literature in the field of art education.

3274(274) Curriculum and Methods of Teaching Foreign Language (3)

Same as FLL 3264(264). Prerequisites: Tch Ed 3310(310) 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. This course must be completed in residence.

3275(275) Philosophic and Practical Foundations of the Secondary Music Education Curriculum (1)

Same as Music 3670(267). Prerequisites: Music 2311/2312(131), Music 3570(257)/Ele Ed 3277(277), and Ed Fnd 1111(111); concurrent registration in Music 261, Music 3680(268)/Sec Ed 3276(276) or Music 3690(269)/Sec Ed 3277(277) and Music 3700(270)/Sec Ed 3278(278) or Music 3710(271)/Sec Ed 3279(279). For the music education major. A study of the secondary school music program: curricular objectives, philosophy, and general administrative procedures common to all secondary music classes. This course must be completed in residence.

3276(276) Curriculum and Methods of Teaching Instrumental Music I (2)

Same as Music 3680(268). Prerequisites: Music 2311/2312(131), 145, 2510(151), 2610(161), Ed Fnd 1111(111), two of the following: Music 1250(25), 1260(26), 1270(27), and 1280(28). Concurrent registration in Music 3570(257)/Ele Ed 3277(277). A study of the teaching techniques, materials, curriculum, and organization of the beginning instrumental music Education program. Topics include student recruitment, the elementary band/orchestra, small group instruction, jazz ensemble, and marching band. This course must be completed in residence.

3277(277) Curriculum and Methods of Teaching Middle School/Junior High School General Music (2)

Prerequisites: Music 23211/2312(131), Music 3570(257)/Ele Ed 3277(277), and Ed Fnd 1111(111). (Same as Music 3690(269).) Concurrent registration in Music 3670(267)/Sec Ed 3275(275) and Music 3710(271)/Sec Ed 3279(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. This course must be completed in residence.

3278(278) The Curriculum and Methods of Teaching Instrumental Music II (2)

Prerequisites: Music 2311/2312(131), 3521(152a), 3620(162), Music 3570(257)/Ele Ed 3277c 3680(268)/Sec Ed 3276(276) and 1111(111), three of the following: Music 1250(25), 1260(26), 1270(27), 1280(28). Same as Music 3700(270). Concurrent registration in Music 3670(267)/Sec Ed 3275(275). Continuation of Music 3680(268)/Sec Ed 3276(276). Topics include large group rehearsal techniques, program development, administrative procedures, and evaluation. This course must be completed in residence.

3279(279) Curriculum and Methods of Teaching Secondary Choral Music (2)

Same as Music 3710(271). Prerequisites: Music 2311/2312(131), Music 3570(257)/Ele Ed 3277(277), and Ed Fnd 1111(111); concurrent registration in Music 261,

Music 3670(267)/Sec Ed 3275(275), Music 3690(269)/Sec Ed 3277(277). For the music Education major. A study of the secondary school choral music program: curriculum, methods, teaching techniques, organization, and administrative procedures for choral performance classes. This course must be completed residence.

3289(289) Secondary Education Professional Internship (3)

Prerequisites: Level 1 & Level 2 requirements. This course is an intensive professional development experience (9 hours per week for 14 weeks) working in a secondary school setting. Activities on site include assisting the classroom teaching in all areas of instruction, assessment, and classroom management. This course is to be taken during the semester immediately preceding student teaching. This course must be taken in conjunction with methods of instruction course in specific content area. Assignments from these allied courses are carried out in the Internship, and Internship experiences inform the activities and discussions in these courses.

3290(290) Secondary School Student Teaching (12)

Prerequisites: Tch Ed 3310(310) 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.

3293(293) Student Teaching in Music Education, K-6 (5)

Prerequisites: Ele Ed 3210(210), Sec Ed 3213(213), Music 3570(257)/(Ele Ed 3277(277), Music 3670(267)/Sec Ed 3275(275), Music 2180(118)), Music 3680(268)/Sec Ed 3276(276), Music 3700(270)/Sec Ed 3278(278) (instrumental emphasis majors); Music 3290(120), Music 3690(269)/Sec Ed 3277(277), Music 3710(271)/Sec Ed 3279(279) (Choral/vocal emphasis majors); and admission to student teaching. Must be taken "in block" with Sec Ed 3294(294) and must immediately precede it in the semester. Clinical teaching experience in music education settings in the schools under university and school supervision with seminar included. Required of all majors in music education.

3294(294) Student Teaching in Music Education, 7-12 (5)

Prerequisite: Sec Ed 3293(293). Must be taken "in block" with Sec Ed 3293(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 3293(293). Required of all majors in music education.

3296(296) Student Teaching in Elementary Art (6)

Prerequisites: Sec Ed 3273(273), 45 hours Studio Art, 15 hours Art History, and admission to student teaching.

Intensive clinical teaching experience under university and school supervision, with seminar included. Must be taken in block with Sec Ed 3297(297).

3297(297) Student Teaching in Secondary Art (6)

Prerequisites: Sec Ed 3273(273), 45 hours Studio Art, 14 hours Art History, and admission to student teaching. Clinical teaching experience under university and school supervision in middle/junior high and/or high school, with seminar included. Must be taken with in block with Sec Ed 3296(296).

3328(328) Art Education: Theory to Practice (3)

Prerequisites: Tch Ed 2210(210), 2211(211), 2212(212) and completion of Foundation Art Program. Development and application of concepts related to comprehensive art education and standards-based curriculum in art education, with an examination of current theories, trends, publication, and on-line resources in the field.

3600(232) The Curriculum and Methods of Teaching English (3)

Prerequisites: Completion of Level II courses and a near major in the subject area. (Same as Eng 3600(262)). A study of the scope sequence of the English course 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 reading to field experiences and theory to practice. To be taken prior to student teaching and concurrently with Professional Internship, Sec Ed 3289(289). This course must be completed in residence

4360(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.

4361(361) Information Processing: Applications and Techniques of Teaching (3)

Prerequisite: Sec Ed 2162(162) Sec Ed 3261(261), or equivalent, or consent of instructor. The course will focus on the needs of pre-service 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.

4362(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.

4367(367) Methods of Teaching Desktop Publishing Concepts and Procedures (3)

Prerequisite: Sec Ed 2162(162); Sec Ed 3261(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.

4374(374) Foreign Language Teaching Seminar (2)

Same as FLL 4364(364). Prerequisite: Concurrent enrollment in Sec Ed 3290(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 3274(274), Curriculum and Methods, with an emphasis on specific practical skills. To be taken concurrently with Sec Ed 3290(290), Student Teaching.

4393(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 8 credit hours may be applied toward an advanced degree contingent upon adviser approval.

4399(393) Student Teaching in Music Education, K-12 (5)

Prerequisite: Sec Ed 3294(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.

4880(305) Writing for Teachers (3)

Same as English 4880(305). Prerequisite: English 3100(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.

4985(285) Curriculum and Methods of Teaching Life Sciences (4)

Same as Biology 4985(285). Prerequisites: Tch Ed 3310(310) 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. This course must be completed in residence.

4986(286) Laboratory in Teaching Life Sciences (2)

Same as Biology 4986(286). Prerequisite: Tch Ed 3310(310). Discussion, development, utilization, and evaluation of equipment, materials, and techniques applicable to instruction in the life sciences. Must be taken concurrently with Biology 4985(285)/Sec Ed 4985(285).

4999(399) Science Teaching Intern Seminar (3)

Same as Biology 4999(399). Prerequisites: Sec Ed 4985(285) and Sec Ed 4986(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 3290(290).

6404(404) Seminar (1-10)

6413(413) Secondary Teaching with Microcomputers (3)

Prerequisite: Educ 4301(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.

6414(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 identify the gifted/talented with emphasis on teaching the gifted/talented in both heterogeneous and homogenous secondary classrooms. Models of gifted/talented programs in a school setting.

6415(415) The Secondary School Curriculum (3)

For secondary school principals, teachers, and superintendents. Present methods in curricular change and methods of curricular investigation.

6416(416) Curriculum Construction for Secondary Schools (3)

Prerequisite: Sec Ed 6415(415) or consent of instructor. Designed for those engaged in curriculum revision work and construction of new secondary school courses.

6420(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.

6422(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 are designed for teaching and administrative personnel.

426 Secondary School Curriculum Reform in the Earth/Space Sciences (4)

Prerequisites: Graduate standing. Field-based experiences in improving the district-level K-12 school science program, with special attention to the earth/space sciences. Emphasis is given to planning and implementing standards-based secondary school earth/space science activities that are built on the district K-6 science program.

6427(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.

6428(428) Secondary School Curriculum Reform in the Life Sciences (4)

Prerequisites: Graduate standing. Field-based experiences in improving the district-level K-12 school science program, with special attention to the life sciences. Emphasis is given to planning and implementing standards-based secondary school life science activities that build on the district K-6 science program.

6429(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.

6430(430) Systems 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.

6452(452) Systems 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.

6484(484) Secondary School Curriculum Reform in the Health Sciences (4)

Prerequisites: Graduate standing. Field-based experiences in improving the district-level K-12 school science program, with special attention to the health sciences. Emphasis is given to planning and implementing standards-based secondary school health science activities that build on the district K-6 science program.

6485(485) Secondary School Curriculum Reform in the Physical Sciences (4)

Prerequisites: Graduate standing. Field-based experiences in improving the district-level K-12 science program, with special attention to the physical sciences. Emphasis is given to planning and implementing standards-based secondary school physical science activities that build on the district K-6 science program.

6490(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.

6497(497) Problems (1-10)

6986(486) Techniques in Teaching Biology for Graduate Students (2)

Same as Biology 5986(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.

Special Education (Sp Ed)

3192(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.

3242(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.

3289(289) Special Education Professional Internship (3)

Prerequisites: Level 1 & Level 2 requirements and Ele Ed 3289(289). This course is an intensive professional development experience (9 hours per week for 14 weeks) working in a school setting with students with disabilities. Activities on site include assisting the classroom teacher in all areas of instruction, assessment, and classroom management. This course is to be taken in conjunction with Spc Ed 3349(349). Assignments from this course are carried out in the Internship, and Internship experiences inform the activities and discussions in this course.

3290(290) Student Teaching in Special Education I (6)

Prerequisites: Tch Ed 2210(210), 2211(211), 2212(212), 3310(310), 3312(312), 3313(313), 3315(315), Spc Ed 4320(320), 3332(332) and admission to student teaching. Must be taken with Spc Ed 3291(291) and must immediately precede Spc Ed 3291(291) in the same semester. Clinical teaching experience in special education classrooms in schools under university and school supervision. Required of all majors in special education.

3291(291) Student Teaching in Special Education II (6)

Prerequisite: Spc Ed 3290(290). Must be taken with Spc Ed 3290(290), and must immediately follow Spc Ed 3290(290) in the semester. Clinical teaching experiences in elementary school classrooms under university and school supervision. Assignments will be in different grade levels from those of the Spc Ed 3290(290) assignments. Required for all majors in special education.

3311(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.

3313(313) Introduction to Learners with Disabilities and Inclusive Education (3)

Prerequisite: Psychology 2270(270) 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.

3330(330) Introductions to Mental Retardation and Severe Handicaps (3)

Prerequisite: Spc Ed 3313(313). An introductory course describing characteristics, classification, and causes of mental retardation and severe handicapped.

3332(332) Educating Learners with Developmental Disabilities, Physical or other Health Impairments (3)

Prerequisites: Tch Ed 2211(211), Spc Ed 3313(313), and Spc Ed 3345(345). Methods and techniques for educating learners with developmental disabilities, physical or other health impairments. Required of all who are preparing for certification in special education with endorsement in Developmental Disabilities or Cross Categorical

3345(345) Educational Programs for Students with Disabilities (3)

Prerequisites: Tch Ed 3313(313) or equivalent or consent of instructor. This course examines current research, theory, and practices of educational programs provided for students with disabilities. Particular emphasis is given to the effective inclusive education of students with mild/moderate learning disabilities, emotional/behavioral disorders, and developmental disabilities. Topics addressed include assessment for and of learning, assessment for eligibility for special education services, legal requirements for special education programs, various definitions and theories of mild/moderate disability types, collaboration with families and other professionals, and issues of race, ethnicity, class, and gender.

3347(347) Teaching Learners with Learning Disabilities (3)

Prerequisites: Spc Ed 3313(313) and Spc Ed 3345(345). Application of instructional techniques for learners with learning disabilities, including assessment for instruction, interdisciplinary teamwork, parental involvement, individualized education plans, and classroom techniques. Required for certification in special education of learners with learning disabilities.

3349(349) Learning and Social Supports for Students with Disabilities (6)

Prerequisites: All Level 2 courses and Spc Ed 3345(345). This course focuses on the development of professional practices for the provision of instructional, social, emotional, medical and behavioral supports for students with disabilities in general education classroom and buildings. Course content includes assessment, planning, action, and collaboration. Students seeking special education teacher certification must take this during the same semester as Spc Ed 3289(289), Special Education Professional Internship.

3350(350) Teaching Learners with Emotional/Behavioral Disorders (3)

Prerequisites: Spc Ed 3313(313) and Spc Ed 3345(345). A course designed to instruct students in the management and instructional strategies necessary to the education of learners with emotional/behavioral disorders.

4301(301) Special Education Orientation (2)

Prerequisites: Admission to Special Education Transition Program or consent of instructor. This course examines characteristics of students in cross-categorical placements.

Examination of special education philosophy, historical and legal issues, special education process, and personal traits.

4302(302) Special Education Process and Performance Assessment (2)

Prerequisite: Spc Ed 4301(301) or consent of instructor. This course examines the special education process from pre-referral to placement, and the roles of educators, parents and auxiliary personnel. Examines informal and formal assessment procedures and instruments for screening, diagnosis, placement and performance of school-aged individuals.

4303(303) Instructional Practices (3)

Prerequisite: Spc Ed 4301(301) or consent of instructor. This course provides an in-depth examination of methods and techniques for use in the education of students in cross-categorical placements.

4304(304) Structure of Teaching and Communication

Prerequisite: Spc Ed 4303(303) or consent of instructor. This course provides a study of the problems associated with speech and language development and the techniques employed by classroom teachers. Examination of transition requirements and strategies for students in cross-categorical placements in order to utilize communication skills for effective collaboration with students, parents, colleagues, and community agency representatives.

4315(315) Speech and Language Problems of Exceptional Children (3)

Prerequisites: Ed Fnd 1111(111), Spc Ed 3313(313), and admission to the College 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.

4320(320) Behavior Management (3)

Prerequisites: Spc Ed 3313(313) and an appropriate introductory course in the special education area of concentration. An in-depth exploration of various behavior control techniques that is particularly applicable to exceptional children. Students will be required to conduct at least one behavior modification project with exceptional children.

4322(322) Inclusive Education: Theory and Practice (3)

Prerequisite: Spc Ed/Tch Ed 3313(313) or Spc Ed 6416(416), or equivalent. This course for general and special educators focuses on current theory, research, and practice of inclusion of students with disabilities in general education classrooms. Topics include instructional strategies, adaptations of curriculum, facilitation of friendship development and social support, consultation and collaboration with other professionals, and working with parents.

4342(342) Transitions Issues and Planning

Prerequisite: Tch Ed 3313(313), or equivalent, or consent of instructor. This course provides information to teachers and human service professionals who work closely with adolescents and young adults with disabilities. Emphasis is placed on understanding and planning for the transition from school to adult life for students with disabilities. Transition outcomes include employment, residential options, and other developmental concerns. Topics include self-determination, career education and planning, interagency collaboration, vocational and residential issues and resources, and family support and involvement.

4370(370) Sensory-Motor Development of the Severely Handicapped (3)

Prerequisite: Spc Ed 3330(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.

4371(371) Methods and Curricula for Severely Handicapped (3)

Prerequisite: Spc Ed 4370(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.

4372(372) Screening and Diagnosis of the Developmentally Delayed (3)

Prerequisites: Ed Rem 310 or equivalent and Spc Ed 3313(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.

4382(382) An Introduction to Gifted Children (3)

Prerequisite: Spc Ed 3313(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.

4384(384) The Education of Gifted Children (3)

Prerequisite: Spc Ed 3313(313). This course deals with methods, techniques, and curricular modifications necessary for the effective education of gifted children.

4390(390) Student Teaching in Special Education III (6)

Prerequisites: Spc Ed 3291(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.

5305(305) Planning and Managing the Teaching and Learning Environment (3)

Prerequisite: Spc Ed 4303(303) or consent of instructor. This course provides an in-depth exploration of various behavior management techniques that are particularly applicable for students in cross-categorical placements. Projects on functional behavioral assessment and behavior support plans will be conducted.

5306(306) Research Into Practice (4)

Prerequisite: Spc Ed 5305(305) or consent of instructor. This course provides an examination of current trends, issues and research in the education of students in cross-categorical placements with particular emphasis on instructional and management issues, effective inclusive education practices, and behaviorist and constructivist strategies for delivering instructional content and reflective practices.

5307(307) The Reflective Practitioner (4)

Prerequisite: Spc Ed 5306(306) or consent of instructor. This course provides reflection on all competency areas associated with the education of students in cross-categorical placements. Self-assessment on abilities and self-reflection on professional development. Selected problems on student-learner exceptionalities. A selective portfolio for K-12 Mild/Moderate Cross-Categorical endorsement is required.

6405(405) Introduction to Braille (4)

Braille reading and writing of Standard English Grade 2 braille and braille mathematics will be introduced. Information on transcribing printed matter into braille and the use of writing devices and technical aids will be presented. The objectives of this class will be met over two semesters due to the large amount of information and high level of proficiency required. A literary braille test and transcription test must be passed at the end of the course.

6410(410) Families and Schools in Inclusive Communities (3)

Prerequisite: Graduate standing. This course focuses on how parents and other family members, teachers, administrators (and other education professionals) can collaboratively increase the capacity of families and schools to support inclusive education and community participation for all students, especially those with significant disabilities. This course draws upon the

multiple perspectives of families, schools and the general culture to explore a shared context of family and disability history, educational issues, and personal perspectives.

6411(411) Law, Policy and Bureaucracy in Education and Disability Studies (3)

Prerequisite: Graduate Standing. This course focuses on the evolution and current status of law and educational policy affecting individuals with disabilities and their families. The course will provide a basic review of governmental structure and educational policy analysis in the United States, and explore statutes, policies, and judicial decisions in areas of special education, adult services, family supports, and civil rights.

6412(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.

6413(413) Organizational Foundations for Special Education (3)

Prerequisite: Spc Ed 3313(313) or equivalent. A study of organizational issues in special education and implications for practices and procedures. Specific attention will be given to special education delivery systems, compliance standards, funding sources, and regulatory standards.

6416(416) Current Research in Psychology of Learners with Disabilities (3)

Prerequisite: Consent of instructor/adviser. Study of current trends, issues, and research in special education. Areas of investigation focus on major developments in disabilities, situations related to programming for projected needs, and considerations and utilization techniques with learners with disabilities. Students should have experience or an undergraduate background in the education of learners with disabilities prior to enrolling in this course.

6421(421) Prescriptive Teaching of Learners with Disabilities (3)

Prerequisite: Spc Ed 3313(313) or equivalent. Course will instruct students on how to develop and implement prescriptive educational programs for learners with disabilities. Students will become familiar with prescriptive systems, which will enable them to use various sources of information in response to learner remedial and developmental needs.

6430(430) Introduction to Developmental Disabilities (3)

Prerequisite: Spc Ed 3313(313) or equivalent. An advanced study of the theoretical and methodological problems related to developmental disabilities. Particular emphasis on the application of current research findings to the problems confronting learners with developmental disabilities.

6431(431) Education of Learners with Developmental Disabilities (3)

Prerequisite: Spc Ed 6430(430). A systematic study of current educational practices and procedures for the education of learners with developmental disabilities. Methods and materials are stressed.

6440(440) Disability, Schooling and Culture (3)

Prerequisites: Tch Ed 3313(313) or equivalent. An advanced course that will examine foundational issues in social and educational policy for students with disabilities. The course explores the historical, philosophical, sociological and economic dimensions of the recent emphasis on inclusive and community-based support systems for individuals with disabilities and their families. The course will review recent research and experience in the U.S. (primarily) concerning the evolving roles and relationships of families, teachers, administrators, and students with and without disabilities in increasingly diverse schools and communities.

6441(441) Curriculum & Teaching for Diverse Learners and Students with Disabilities (3)

Prerequisites: Spc Ed 6440(440) Curriculum and methods for working within a general education environment with students with disabilities and other students who require extra support and assistance. The course examines approaches to assessment and curriculum design that can accommodate all students, including activity-and interest-based assessments, various strategies for developing integrated curriculum units, and developments of various learning outcomes that can be individually tailored or "personalized" for any student.

6443(443) Introduction to Learning Disabilities (3)

Prerequisite: Spc Ed 3313(313) or equivalent. Advanced study of the theoretical and methodological problems related to learning disabilities. Particular emphasis on the application of current research findings to the problems confronting learners with disabilities.

6444(444) Education of Learners with Learning Disabilities (3)

Prerequisite: Spc Ed 6443(443). Systematic study of current educational practices and procedures for the education of learners with learning disabilities. Methods and materials are stressed.

6450(450) Introduction to Emotional/Behavioral Disorders (3)

Prerequisite: Spc Ed 3313(313) or equivalent. Advanced study of the problems and characteristics of learners with emotional/behavioral disorders. Particular emphasis on the application of current research findings to problems confronting learners with emotional/behavioral disorders.

6452(452) Social, Emotional, and Environmental Supports for Learners with Disabilities (3)

Prerequisite: Spc Ed 6450(450) or consent of instructor.

This course provides advanced students with the research, theory, and practices of providing support to students with disabilities and other students experiencing emotional and behavioral problems. This course focuses on the development of professional skills necessary to assist and teach students with difficult behaviors. Additionally, this course helps classroom teachers learn how to work collaboratively with parents and other professionals in order to construct classroom environments that are supportive and productive for all students.

6462(462) Introduction to Early Childhood Special Education (3)

Prerequisite: Spc Ed 3313(313) or equivalent. A study of issues and concepts central to special Education of young children with disabilities, and at-risk for disabilities, and their families. Focus on program models, screening and assessment procedures, and curriculum concepts. An ecological perspective is emphasized.

6463(463) Curriculum, Methods, and Materials for Early Childhood Special Education (3)

Prerequisites: Spc Ed 6462(462). In-depth study of integrated assessment-based curriculum development for learners in early childhood special education. Emphasis on individualized educational planning and implementation for learners and their families.

6481(481) Introduction to Orientation and Mobility (3)

This course is an introduction to the principles of orientation and mobility and is designed to acquaint the student with the effects of visual impairment on spatial orientation and movement within the environment. Topics will include instructional strategies for developing prerequisite concepts, basic travel techniques, structuring the classroom environment, low vision orientation and mobility, and orientation and mobility devices for individuals who are visually impaired.

6483(483) Instructional Strategies and Technology for Students with Visual Impairment (4)

This course focuses on meeting the instructional needs of visually impaired and blind elementary and secondary students through the use of curricula adaptations and technology. Topics include designing and implementing instructional plans to teach keyboarding skill, math, science, and social studies; listening and recording devices; transition; and the use of computers with students who are visually impaired. The objectives of this class will be met through in class, lab, and out of class activities. Students will be expected to have an ongoing interaction with students who are visually impaired through directed experiences.

6490(490) Internship (1-10)

Prerequisite: Consent of instructor/adviser. 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 includes planning, research, evaluation, and related professional activities.

6492(492) Practicum in Special Education (3-6)

Prerequisite: Two courses in area of concentration (developmental disabilities, early childhood special education, emotional/behavioral disorders, or learning disabilities). Supervised experience in the education of learners with disabilities in a school or other appropriate setting.

6493(493) Practicum with Students with Visual Impairment (6)

Prerequisites: Spc Ed 366, 6405(405), 6481(481), 482, 6483(483) and all required course work for certification for Teachers of Blind and Partially Sighted Students. This practicum focuses on the techniques and materials necessary to education students who are visually impaired and on procedures for evaluating their effectiveness. This supervised practicum involves both field placement and classroom instruction. It is limited to advanced students in the area of Blind and Partially Sighted.

6497(497) Problems (1-10)

Prerequisite: Spc Ed 3313(313) or equivalent and consent of instructor. Investigation of a selected problem related to the education of learners with disabilities. To be conducted under the direction of a graduate faculty member.

Teacher Education (Tch Ed)

2210(210) Introduction to Teaching (3)

Explores the multiple roles and functions of professional teaching including: communication, leadership, management skills, use of technology, and identification of needs of diverse populations. Portfolio preparation will be introduced. Fourteen clock hours of classroom observation are required.

2211(211) Introduction to American Schools (3)

One of three introductory, prerequisite courses to the Teacher Education Program. An examination of selected concepts and principles underlying American public education. Required field experience of eight clock hours complements class assignments.

2212(212) Introduction to Learners and Learning (3)

Prerequisites: Psych 1003(3). Same as Ed Psy 2212(212). Foundational study of the development of infants, children and adolescents focusing on the role of appropriate educational environments in fostering positive physical, cognitive, social and moral outcomes. Reading relevant research will be combined with experiences in the field and technology-based assignments to investigate both biological and sociocultural forces that shape the development process.

3310(310) Introduction to Instructional Methods (3)

Prerequisites: Tch Ed 2210(210), 2211(211), 2212(212), or equivalent and admission to Teacher Education Program. Beginning methods course for K-12 teachers. Skill development in planning instruction, selecting content, use of various teaching methods, designing assessment, developing classroom climate and management strategies. Participation in professional development through observing students in a school setting, microteaching, using educational technology, and portfolio development. Ten hours per semester of field experiences required.

3312(312) The Psychology of Teaching and Learning (3)

Prerequisites: Tch Ed 2210(210), Tch Ed 2211(211), Tch Ed 2212(212) or equivalents and admission to Teacher Education program. Same as Ed Psy 3312(312). 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.

3313(313) Introduction to Learners with Disabilities and Inclusive Education (3)

Prerequisites: Tch Ed 2210(210), 2211(211) or equivalent, and admission to Teacher Education program. Same as Spc Ed 3313(313). Provides an overview of inclusive education and special education with an emphasis on relevant educational legislation, important historical development, and necessary adaptations of instructional methods to meet the needs of students with disabilities. Issues related to inclusive education, such as professional collaboration, family involvement, multicultural issues, transition services, and professional support for teachers are also covered.

3315(315) Literacy Learning and Instruction (3)

Prerequisites: Admission to the Teacher Education program. May take concurrently with Tch Ed 3312(312) and Tch Ed 3313(313) or equivalents; may not be taken before Tch Ed 3312(312) and Tch Ed 3313(313) or equivalents. Methods, materials, frameworks, and technology for the effective teaching of literacy to young children, children with special needs, and children in elementary education settings. Emphasis on role of language experience, phonics, semantics, syntactics, pragmatics, schema theory, and metacognition in literacy development. Observation, assessing children's literacy interests and development, and teaching lessons in a school classroom setting are required.

4320(320) Educational Issues in the cultural Construction of Diversity (3)

Prerequisites: none In this course students will explore issues of human diversity and how these issues impact a wide range of educational settings. Students will be involved in a continued process of self-assessment regarding how each of us deals with others not like

ourselves. Human similarity and diversity will initially be examined using anthropological and biological research. Socio-cultural constructions of this diversity will then be investigated. Diversity will be explored on the individual, local, national and global levels. Students will become familiar with the science of diversity and will investigate how this diversity plays out in a variety of socio-cultural contexts. This class will provide students with a knowledge base about human diversity and will promote multicultural competencies for educators.

**4391(386) Teaching Reading in Secondary School
Content Areas (3)**

Prerequisite: Tch Ed 3310(310) and 3312(312), or consent of instructor or equivalent. Methods and materials for improving reading and study strategies in content area classes in upper grades.

5311(311) Foundations of Education (4)

Prerequisites: Acceptance into the post-baccalaureate teacher education certification program. Investigation into the history, philosophies, and purposes of public schools and the multiple roles played by professional educators. Emphasis will be on the history of public education, the role of the teacher as change agent, the influence of technology, and the impact of diversity on American classrooms.

5454(454) Cultural Diversity in Teaching (3)

Prerequisite: Graduate standing. An advanced study, application, and discussion of pedagogical issues associated with cultural diversity and human origin. The course will emphasize application of research in order to help teachers develop effective strategies for preparing teachers to integrate.

5850(317) Topics in the Teaching of Writing (1-3)

Same as English 4850(317). Prerequisite: English 210 or equivalent. Special topics in the practice of and pedagogy of writing designed for in-service teachers. Topics may include writing at specific grade levels, writing/reading workshops, writing in urban settings, writing across the curriculum, action research, new technology, classroom and district-level assessment. May be repeated once for credit if topics differ. Counts toward Certificate in writing.

6446 Seminar in Professional Writing for Teachers (3)

Prerequisite: Tch. Ed. 6880(436), Eng. 5880(490), and near-completion of Graduate Certificate in the Teaching of Writing. Capstone seminar for the Graduate Certificate in the Teaching of Writing. Participants will pursue the dual role of writer/writing teacher by designing individual projects with one of these emphases: (1) research writing based on a classroom inquiry into the teaching of writing. (2) expository and creative writing based on an inquiry into the teacher's own evolution as a writer. Seminar meetings will include both face-to-face and on-line communication.

6880(436) Gateway Writing Project (1-6)

Same as English 5880(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.

Evening College

The Evening College provides undergraduate degree programs for students who, for various reasons, choose to attend evening classes. Thirty 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 full-time and 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 p.m. and limited offerings on Saturday mornings. Classes and degree programs are conducted according to the same standards as the day program.

Course Areas The Evening College offers courses in the following areas: anthropology, art, astronomy, biology, business administration, chemistry, communication, computer science, criminology and criminal justice, economics, education, English, French, geography, geology, German, history, mathematics, 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 develop programs appropriate to their needs. Students can see an academic adviser by calling or stopping by the University Advising Center, 225 Millennium Student Center, (314) 516-5161. All students may come to the University Advising Center for advising, see a faculty adviser in their department, or see a professional adviser in their college, school or professional school.

Facilities The facilities of the University of Missouri-St. Louis, including the computer center, library, laboratories, cafeteria, cashiers, bookstore, financial aid, health 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 24 semester hours in the Evening College, have a cumulative grade point average of 3.2, and be enrolled in the Evening College.

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 or College of Fine Arts and Communications portion of this *Bulletin*.

Bachelor of Science

The B.S. degree is available in biology, chemistry, computer science, criminology and criminal justice, economics, mathematics, 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 accounting (B.S.A.), bachelor of science in business administration (B.S.B.A.), the bachelor of science in management information systems (B.S.M.I.S.), the bachelor of science in education (B.S.Ed.), and the bachelor of science in public policy and 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. Students should consult the appropriate departmental section of the College of Arts and Sciences, the College of Business Administration, or the College of Education of this *Bulletin*.

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 and increase their opportunities for job advancement. For further information, consult the Social Work section of this *Bulletin*.

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

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.

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:

- Students must have reasonable programs of study, and be in good academic standing.
- Students must have demonstrated the equivalent of academic proficiency required for any other undergraduate degree at UM-St. Louis.
- 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.

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 36 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 program must be approved by the faculty adviser, dean, and General Studies Committee. Students and advisers periodically review the program 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 campus grade point average overall and in the personal emphasis area. No more than 30 hours may be taken in any one department. 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 18 hours must be in the personal emphasis area and completed after admission to the B.G.S. program. 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 Nontraditional 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 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 3 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 faculty adviser and approvals of the dean and the General Studies Committee.

Community Service Projects/Cultural Activities Credit not exceeding 6 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 elective 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 College of Business Administration offer a minor in employee training and development. The requirements are:

BA 3623(318), or Psych 3318(318), Industrial and Organizational Psychology
BA 3624(319), Employee Training and Development
Ed Psy 3312(312), Psychology of Teaching and Learning
Ed Tec 5340(340), Selection and Utilization of Educational Media
Psych 2219(219), Research Methods

One additional course selected from these approved electives:

BA 3621(309), Human Resources Management
Comm 1141(141), Business and Professional Speaking
Sociology 4354(354), Sociology of Business 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 human resources managers in small companies and training managers or human resources 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 in business administration include accounting, finance, general business, international business, logistics and operation management, management and organizational behavior, marketing, and management information systems.

Other Minors

Minors are also available in biology, black studies, chemistry, communication, computer science, criminology and criminal justice, economics, English, history, legal studies, mathematics, political science, philosophy, physics, psychology, public affairs journalism, social work, sociology, and urban studies. For currently offered minors, consult an adviser.

Certificates

Certificate programs are available in various areas of study. 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 midlife, 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. Call the Evening College office, (314) 516-5161 for more information.

College of Fine Arts and Communication

General Information

The College of Fine Arts and Communication at the University of Missouri-St. Louis includes the Departments of Art and Art History, Communication, Music, and Theatre and Dance. The Faculty and alumni of this College have distinguished themselves as scholars, visual artists, teachers and performers. Students of the College pursue their activities in a variety of campus locations, including the Fine Arts Building, Lucas Hall, the Music Building and the General Services Building. The University's new, \$55 million Performing Arts Center will open the fall of 2003, affording two world class venues for performances by individual university students and faculty, campus ensembles, and visiting artists. In addition Gallery 210, Gallery FAB, and Gallery VISIO in the Millennium Student Center, offer space for the display of student and faculty artwork, as well as visiting exhibitions.

The College of Fine Arts and Communication is distinguished by its collaboration with the community. Five endowed professorships link the University to the Saint Louis Symphony, the Saint Louis Art Museum, Opera Theatre of Saint Louis, the Laumeier Sculpture Park, and other local cultural institutions. The Des Lee Arts Education Collaborative connects the University and a variety of partner cultural institutions to eleven local school districts.

The College of Fine Arts and Communication consists of some 50 full-time faculty members in the following departments, each offering work in specific undergraduate degree programs: art and art history, communication and music. In addition, the Theatre and Dance Department began to offer classes in theatre during the 2002-2003 academic year.

Graduate degree programs administered through the Graduate School are also offered in the communication and music departments.

Requirements for Undergraduate Study
In addition to the university general education requirements, all majors in the College of Fine Arts and Communication must meet the following requirements:

To graduate, all majors in the college also must complete the following:

Requirements of their chosen baccalaureate degree (i.e., B.A., B.F.A., B.M., etc) in accordance with the policies of the College of Fine Arts and Communication.
Requirements of the department for their selected major or interdisciplinary program.

Cultural Diversity Requirement

To expand cultural awareness, all students are required to complete a course that emphasizes Asian, African, Middle Eastern, Latin American, Pacific aboriginal, Native American, or a comparable culture. Courses that satisfy this requirement involve substantial material independent of the cultures' interactions with European cultures. If a course focuses on one facet of a culture, it must treat the topic within the context of the culture as a whole. A list of courses which fulfill the Cultural Diversity requirement may be found elsewhere in this bulletin..

Academic Policies

Grade Requirements

To graduate all majors in the college must satisfy one of the following grade point options:

Earn 120 hours with a C grade or better, which constitutes a complete degree program. Neither a grade of C- nor a satisfactory grade may be counted.

Have a minimum UM-St Louis Campus grade point average of 2.0 and have met all the other Grade Point restrictions that are required for the degree program and the major.

Residency Requirements

Unless otherwise specified, a transfer student must complete 12 hours of graded work at UM-St. Louis at the 2000(100) level or above within the minimum number of hours required for each major.

Unless otherwise specified, a transfer student must complete at least six hours of graded work at UM-St Louis at the 100 level or above within the minimum number of hours required for each minor. Students should consult the minor department for specific residency and grade requirements.

Specific Baccalaureate Degree Requirements

Course Requirements

After fulfilling the general education and specific major degree requirements, students are to take the remaining hours required to complete the bachelor'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), astronomy, biology, chemistry, communication, criminology and criminal justice, economics, English, foreign languages/literatures, geology, history, mathematic/computer science, music (appreciation, history, performance), philosophy, physics, political science, psychology, social work, sociology, business, education, engineering, or interdisciplinary. Other areas or courses not listed require approval by the chair of the student's department.

Bachelor of Arts (B.A.)

All B.A. degree candidates must successfully complete a curriculum which includes a departmental major or an approved interdisciplinary field. A major must include at least 30 credit hours but no more than 45 hours. The college offers the B.A. degree in art history, communication and music.

Foreign Language Requirement

Candidates for the B.A. degree are required to complete 13 credit hours or the equivalent in proficiency in one foreign language. Foreign language guidelines are as follows:

Students entering with no high school language units must enroll in Language or may enroll in the 115 series.

Students with the degree of proficiency equivalent to 13 hours of college-level work may obtain exemption by passing the department's placement exam. The specific dates for the exam are announced in the Schedule of Courses or may be obtained from the admissions office or the Department of Foreign Languages and Literatures. Native speakers of language other than English may meet the foreign language requirement by presenting a transcript from a university or secondary school of their native country. The department will certify native speakers of those languages which are taught at the university. Those who are proficient in other languages must submit certification of competence to the college.

Language 2115 a, b, and c (Intensive) (115) will satisfy the foreign language requirement. 115a, 2115(115b) and 115c are co-requisites and must

be completed with a grade of C or better, to satisfy the foreign language requirement.

Students may not repeat for credit an elementary course if they have already completed a higher-level course for which the elementary course, or its equivalent is a prerequisite.

Applied Music and Studio Art

All students in the college may count any number of hours of applied music (private lessons) or studio art courses toward any degree in the college. This also includes transferred credit. However, students not majoring in music may count no more than eight hours in music performing organizations (Music 1400(40), 1410(41), 1500(50), 1520(52), etc) toward graduation, including credit transferred.

Bachelor of Music (B.M.)

The requirements are the same as for the B.A. degree with the addition of music education and education courses for music majors seeking state teacher certification. Although foreign language proficiency is not required, foreign language study is required for applied voice students.

Certificate Program

A certificate program is offered in photographic studies.

Department Honors

Majors in the music department may pursue department honors.

Minors

A number of minors are available at UM-St. Louis. Some are offered by individual departments, while others, such as Classical Studies and Black Studies, are interdisciplinary in nature and involve a number of departments. The requirements for the various minors are listed in either the departmental or interdisciplinary sections of this *Bulletin*.

Department of Art and Art History

Faculty

Dan Younger, Associate Professor, Chairperson*
M.F.A., University of Iowa

Susan E. Cahán, Associate Professor, Des Lee Endowed
Professorship in Contemporary Art
Ph.D., Graduate Center, City University of New York

Glen P. Gentele, Aronson Endowed Professor of Modern
and Contemporary Art History, Director of Laumeier
Sculpture Park

M.F.A., Maryland Institute, College of Art

E. Louis Lankford, Professor, Des Lee Foundation
Endowed Professorship in Art Education*
Ph.D., Florida State University

Jay Rounds, Professor, Des Lee Foundation Endowed
Professorship in Museum Studies and Community
History*

Ph.D., University of California, Los Angeles

Kenneth Anderson, Professor*

M.F.A., Southern Illinois University, Edwardsville

Jeanne Morgan Zarucchi, Professor*, Art History
Coordinator

Ph.D., Harvard University

Marian Amies, Associate Professor*

M.F.A., Southern Illinois University, Edwardsville

Ruth L. Bohan, Associate Professor*

Ph.D., University of Maryland

Yael Even, Associate Professor*

Ph.D., Columbia University

Jeffrey L. Sippel, Associate Professor*, BFA
Coordinator

M.F.A., Arizona State University

Terry L. Suhre, Assistant Professor, Gallery Director*

M.F.A., Southern Illinois University, Carbondale

Jennifer McKnight, Assistant Professor

M.F.A., California Institute of the Arts

Phillip E. Robinson, Assistant Professor*

M.F.A. University of Illinois, Chicago

Gretchen Schisla, Assistant Professor

M.F.A., Boston University

Susan Waller, Assistant Professor

Ph.D. Northwestern University

Luci Mauricio-McMichael, Lecturer

M.F.A., Fontbonne University

*members of Graduate Faculty

The Department of Art and Art History represents a diverse faculty actively engaged in the production of art and in its historical and critical evaluation. The department prides itself on its commitments to high standards of teaching and sound research achievements. Individual faculty has been cited for their teaching excellence. Art history faculty members have written books, articles, and critical reviews and regularly participate in national and international conferences. For their research art history faculty have received research grants from such major

institutions as the J. Paul Getty Foundation, the National Endowment for the Humanities, the Andrew W. Mellon Foundation, and the American Philosophical Society. Studio art faculty exhibit nationally and internationally in group- and solo-juried and invited exhibitions. Their work has been accorded various show awards and received financial support from the National Endowment for the Arts, the Ford Foundation, and University Research grants.

General Information

Degrees and Areas of Concentration

The department offers course work leading toward the B.A. in art history and the B.F.A. in studio art.

Courses included in the B.A. in art history cover the arts of Asia, Africa, Europe, and North America, including Native American arts, from ancient times to the present. Courses examine the entire range of human visual expression from painting, sculpture, architecture, and photography to performance and festival arts in the tribal world. In each case the arts are examined within their historical, aesthetic, and cultural contexts.

The B.F.A. in studio art consists of a foundation art program and an emphasis area in one of the following: drawing, graphic design, painting, photography, printmaking, and general fine arts. UM-St. Louis has a transfer agreement with the St. Louis Community College District, which offers a direct credit transfer to upper division BFA courses for students who graduate with an AFA degree from the SLCC.

To support its teaching and research objectives, the department maintains a slide collection of over 80,000 slides. The collection, which includes examples of painting, sculpture, architecture, photography and decorative arts, is under the supervision of a professional slide curator, who is available for special assistance to staff and students.

Gallery 210

Gallery 210 located in Lucas Hall offers visual arts programming of regional, national, and international importance. The gallery's exhibitions and related arts programming have enjoyed a long and distinguished history of service to the university and to the St. Louis community. Gallery activities are supervised by a professional gallery director.

Gallery FAB

Located in the Fine Arts Building, Gallery FAB exhibits a range of work by artists of regional and national significance. The exhibitions are coordinated by members of the Studio Art Faculty and complement the teaching emphases of the Fine Arts program.

Gallery Visio

Gallery Visio is a student-run gallery located in the Millennium Student Center. Its exhibitions are devoted primarily to the display of student and faculty work.

Scholarships/Internships

Three scholarships are available on a competitive basis within the department: the Art Department/Barbara St. Cyr Scholarship, the William T. Isbell Jr. Scholarship, and the Aronson Scholarship. The department also sponsors a variety of internships with local arts institutions, including the St. Louis Art Museum, the Missouri Historical Society, Contemporary Art Museum St. Louis, Laumeier Sculpture Park, and various private art galleries.

Undergraduate Studies

General Education Requirements

Majors in art history must meet the college and university general education requirements. A foreign language is required. French or German is recommended. Art history courses required for the degree may not be taken on a satisfactory/unsatisfactory (S/U) basis.

Art history courses can be applied toward minors in Anthropology, American Studies, Classical Studies, Philosophy, and Urban Studies, or certificates in Studies in Religions, Women's and Gender Studies, Photographic Studies and African Studies.

Majors in studio art must meet the college and university general education requirements. A foreign language is not required. Studio art courses required for the degree may not be taken on a satisfactory/unsatisfactory (S/U) basis. A total of 123 hours is required for graduation. Studio art courses do not fulfill the humanities general education requirement.

Degree Requirements

Bachelor of Arts in Art History

Art history majors must complete a minimum of 36, but no more than 45, hours in art history. The following courses are required:

- 1100(5), Introduction to Art
- 3395(195), Sophomore/Junior Seminar: The Methods of Art History
- 3303(203), Media and Technique in Art History
- 4495(395), Senior Art History Seminar

Students must take **three** lower-division courses from three of the following four categories:

Ancient and Medieval

- 2211(111), Art and Archaeology of the Ancient World
- 2212(112), Greek Art and Archaeology
- 2213(113), Roman Art and Archaeology

- 2214(114), Early Christian and Byzantine Art
- 2225(125), Medieval Art

Early Modern

- 2235(135), Italian and Northern European Renaissance Art
- 2237(137), Northern European Renaissance Art
- 2238(138), Italian Renaissance Art
- 2240(140), French Art and Architecture 1400-1715
- 2245(145), Baroque Art and Architecture

Modern and American

- 2255(155), Modern Art
- 2265(165), History of Photography
- 2267(263), Photography Since 1945
- 2278(158), American Art
- 2279(159), American Architecture
- 2281(191), Art Since 1945

Non-European

- 1102(15), Art of Africa, Oceania, and the Americas
- 1103(119), Pre-Columbian Art
- 1104(116), North American Indian Art
- 1105(117), African Art
- 1108(8), Survey of Asian Art
- 1109(107), Chinese Art
- 1110(108), Japanese Art

Students must take **four** upper-division courses. **Two** of these courses should be chosen from the following list:

- 3365(295), The Artist and the City
- 3374(274), Philosophy of Art
- 3375(275), The Art of the Print
- 3376(276), Women and the Visual Arts
- 3385(285), Studies in Architectural History
- 3391(205), Advanced Issues and Ideas in Art History
- 3394(294), Art Criticism
- 3396(296), The Nude in Art
- 3397(297), Landscape Perspectives in Art
- 3398(298), The Portrait

The remaining **two** upper-division courses must be chosen from **two** of the following four categories:

Ancient and Medieval

- 4411(212), Topics in Ancient Art
- 4425(225), Topics in Medieval Art

Early Modern

- 4435(235), Topics in Renaissance Art
- 4445(245), Topics in Baroque Art

Modern and American

- 4455(255), Topics in Modern European Art
- 4465(265), Topics in Photographic Studies
- 4475(258), Topics in American Art
- 4481(291), Topics in Contemporary Art

Non-European

- 4402(215), Topics in Tribal Art
- 4405(217) Topics in African Art
- 4408(208), Topics in Asian Art

Students must also take **one** course in studio art. Up to nine hours in studio art may be applied toward the B.A. in art history. Art 1134(134), Art Activities for Elementary Schools, does not fulfill this requirement.

To complete the 36-45 hours for the degree, art history majors may take additional courses from those previously noted or any of the following:

- 1165(65), Photography and Society
- 2291(105), Issues and Ideas in Art History
- 2295(179), Special Topics in Art History
- 3387(287), Professional Internship
- 3388(288), UM-St. Louis-Saint Louis Art Museum Internship
- 3389(289), Visual Resource Management
- 3390/4490(290/390), Special Study
- 3392(292), Museum Studies
- 3393(293), Art Gallery Management

Note: Art history majors who began in the program before 1991 have their choice of completing the major under the old requirements or the new. Consult with your advisor for details.

Bachelor of Fine Arts in Studio Art

Candidates for the B.F.A. degree must complete a Foundation Art Program (which is largely satisfied by the A.F.A. degree) and an emphasis area in one of the following: drawing, graphic design, painting, photography, printmaking or general fine arts. An art education emphasis may be taken in combination with one of the studio art emphasis areas. Studio art majors are required to take 75 hours in studio art (this includes 30 hours in the foundation art program) and 15 hours in Art History. Art 1134(134), Art Activities for Elementary Schools, cannot be applied toward this degree, the exception being for art education students. The final 24 hours must be completed in residence at UM-St. Louis. Graduating students must also pass a faculty portfolio review.

Advanced Placement in Studio Art Classes: Studio Art Majors who have professional Graphic Design or Photographic experience may wish to submit a portfolio review to a committee of studio art faculty. Depending on the nature and the quality of the student's portfolio, they

may be able to obtain exemptions from selected lower level division studio art courses. Students applying for these exemptions must submit their portfolios prior to the first day of class of their first semester at the University. A handout detailing the submission procedures and requirements can be obtained from the Studio Arts office. Students will be notified in writing if an exemption is granted. Students informed of these waivers will be advised of their requirements in the studio art major. All decisions of the portfolio reviews are final.

Foundation Art Program

The following courses are required for the Foundation Art Program:

- 1140(40), Drawing I
 - 1141(140), Drawing II
 - 1142(42), Figure Drawing I
 - 1143(142), Figure Drawing II*
 - 1150(50), Design I
 - 1151(150), Design II
 - 2240(240), Drawing III or
 - 2250(250), Composition
 - 9 hours of Studio Art Electives
- *Those planning an emphasis in drawing or painting must take Art 1142(142).

Students must complete 45 hours in **one** of the following emphasis areas:

Drawing

- 2240(240), Drawing III
- 2241(340), Drawing IV
- 2242(242), Figure Drawing III
- 2243(342), Figure Drawing IV
- 2251(350), Design III
- 3340(387), Advanced Problems in Drawing I
- 3341(388), Advanced Problems in Drawing II
- 4495/4496(396), Senior Studio Seminar (6 hours)
- 6 hours of Painting or Printmaking
- 12 hours of Studio Art Electives

Graphic Design

- Note: Enrollment in upper level graphic design courses beginning with Graphic Design III is limited to students who have been admitted to candidacy for the Bachelor of Fine Arts with Graphic Design emphasis
- 1210(210), Graphic Design I
 - 1220(211), Graphic Design II
 - 2220(220), Computer Art I or Studio Art Elective
 - 2221(221), Computer Art II or Studio Art Elective
 - 3310(310), Graphic Design III
 - 3311(311), Graphic Design IV
 - 3312(312), Special Techniques in Illustration and Graphic Design or Studio Art Elective
 - 3383(383), Advanced Problems in Graphic Design I
 - 3384(384), Advanced Problems in Graphic Design II

3389(389), Graphic Design Studio or Studio Art Elective
4497(397), Senior Seminar in Graphic Design I
4498(398), Senior Seminar in Graphic Design II
9 hours of Studio Art Electives

Painting

1180(180), Painting I
1181(280), Painting II
2251(350), Design III
2280(380), Painting III
2281(381), Painting IV
3380(385), Advanced Problems in Painting I
3381(386), Advanced Problems in Painting II
4495/4496(396), Senior Studio Seminar (6 hours)
6 hours from the following list:
2240(240), Drawing I
2241(340), Drawing IV
2242(242), Figure Drawing III
2243(342), Figure Drawing IV

12 hours of Studio Art Electives

Photography

2251(350), Design III
2262(261), Color Photography I
2363(260), Digital Photography II
3260(360), Photography III
3362(361), Color Photography II
3391(391), Advanced Problems in Photography I
3392(392), Advanced Problems in Photography II
4495/4496(396), Senior Studio Seminar (6 hours)
12 hours of Studio Art Electives
6 hours of Photography electives

Printmaking

1170(270), Printmaking I
2241(340), Drawing IV
2243(342), Figure Drawing IV
2251(350), Design III
2271(271), Printmaking II
2274(370), Printmaking and Relief
3370(393), Advanced Problems in Printmaking I
3371(394), Advanced Problems in Printmaking II
4495/4496(396), Senior Studio Seminar (6 hours)
6 hours from the following list:
1173(273), Printmaking: Screen printing I
2272(272), Printmaking: Lithography I
2277(277), Printmaking: Photolithography
3372(372), Advanced Lithography
9 hours of Studio Art Electives, including one course in photography

General Fine Arts

30 hours of studio art electives must be taken at the 2000(200) level or above.

The following courses are required:

2251(350), Design III
4495/4496(396), Senior Studio Seminar (6 hours)
Select 6 hours from the following:
3340(387), Advanced Problems in Drawing I and
3341(388), Advanced Problems in Drawing II or,
3370(393), Advanced Problems in Printmaking I and
3371(394), Advanced Problems in Printmaking II
3380(385), Advanced Problems in Painting I and
3381(386), Advanced Problems in Painting II or,
3391(391), Advanced Problems in Photography I and
3392(392), Advanced Problems in Photography II or,

Students must complete 15 hours of Art History, with at least 9 hours taken in residence at UM-St. Louis.

Students choosing a double major in two studio art emphasis areas must complete all the requirements for each emphasis area. If the double major includes Graphic Design, students must take four semesters of Senior Studio Seminar. This includes Art 4490, Art 4491, Art 4497(397), Art 4498(398), Art 4495(396a), and Art 4496(396b).

Minors

Minor in Art History

A minor in art history requires the completion of at least 18 hours in art history courses. Students must take Art 5 and at least one course in non-Western art. They must also take at least 2 courses at the 3000(300) level or above. A maximum of 3 hours of internship can be applied toward a minor in art history. The GPA for the courses for the minor must be 2.0 or better. Nine of the 18 hours must be taken in residence at UM-St. Louis.

Minor in Studio Art

Students who wish to minor in studio art must take a minimum of 18 hours with a grade point average of 2.0 or better. The requirements for the minor are as follows:

1140(40), Drawing I
1141(140), Drawing II
1150(50), Design I
and two consecutive courses (6 hours) in any single area to be selected from the following (students should be aware that courses are not always available in all areas):
Painting
Printmaking (any one subfield)
Photography
Graphic Design
Advanced Drawing
plus a studio art elective: one three-hour course.

Photographic Studies Certificate

UM-St. Louis students, graduates, and post-baccalaureate 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, or 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 1060(60), Photography I

Interdisciplinary 1165(65)/Art 1165(65), Photography and Society

Art 2160(160), Photography II

Art 2265(165), History of Photography

Art 3260(360), Photography III, or

Interdisciplinary 3390(390), Independent Studies in Photographic Studies

Students must also take at least one 3-hour course selected from the following departmental offerings. New courses will be reviewed periodically for inclusion:

Art 1100(5), Introduction to Art

Art 2262(261), Color Photography I

Art 2263(161), Introduction to Digital Photography

Art 2264(262), Non-Silver Photography

Art 2265(263), Photography Since 1945

Art 2268(264), Video Art I

Art 2277(277), Printmaking: Photolithography

Art 3260(360), Photography III

Art 3362(361), Color Photography II

Art 3364(364), Video Art II

Art 3374(274), Philosophy 274(3374), Philosophy of Art

Art 3390(390), Special Studies

Art 3391(391), Advanced Problems in Photography I

Art 3392(392), Advanced Problems in Photography II

Biology 4784(360), Techniques in Electron Microscopy

Comm. 1050(50), Introduction to Mass Media

Comm. 1070(70), Introduction to Cinema

Comm. 2210(210), Television Production

English 3140(214)/Comm 3214(214), News Writing

English 3150(215), Feature Writing

Interdisciplinary 3390(390), Independent Studies in Photographic Studies

Psych 2213(213), Principles of Perception

Pre-Professional Graduation: Architecture

The Department of Art 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 the 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.

Career Outlook

Study in art history broadens and enriches a general education, offering insight into the visual, architectural, and cultural artifacts left by earlier, as well as modern, civilizations. Art history graduates have found career opportunities in teaching, museums, galleries, libraries, historical societies, sales and auction houses, and historic preservation, and as travel guides, art administrators, and editors and in art restoration.

Students with degrees in studio art find careers in teaching, advertising, public relations, graphic design, illustration, film and video production, art administration, art restoration, product and industrial design, framing, and commercial photography.

Course Descriptions

Courses in this section are grouped as follows: Art History and Studio Art. Prerequisites may be waived by consent of instructor. For the nonmajor, any number of studio courses will be accepted as electives.

Students who have earned 24 or more semester hours of credit at any accredited post-secondary institutions(s)

before the start of the fall 2002 semester must meet the general education requirements stipulated in the UM-St Louis 2001-2002 Bulletin. The following courses fulfill the Humanities breadth of study requirements as described in that Bulletin:

ART HISTORY 1100(5) 1102(15) 1108(8), 1165(65), 2291(105), 1109(107), 1110(108), 2211(111), 2212(112), 2213(113), 2214(114), 1104(116), 1105(117), 1103(119), 2225(125), 2235(135), 2237(137), 2238(138), 2240(140), 2245(145), 2255(155), 2278(158), 2279(159), 2265(165), 2295(179), 2281(191), 3395(195), 3303(203), 3391(205), 4408(208), 4411(212), 4402(215), 4405(217), 4425(225), 4435(235), 4445(245), 4455(255), 4475(258), 2267(263), 4465(265), 3374(274), 3375(275), 3376(276), 3385(285), 3390(290), 4481(291), 3392(292), 3393(293), 3394(294), 3365(295), 3396(296), 3397(297), 3398(298), 4490(390), 4495(395).

The following courses meet the Cultural Diversity requirement: ART HISTORY 1108(8), 1102(15), 1109(107), 1110(108), 1104(116), 1105(117), 1103(119), 4408(208), 4402(215), and 4405(217).

Art History

1100(5) Introduction to Art (3) [H]

An introduction to major historical movements in Western art.

1102(15) Art of Africa, Oceania, and the Americas (3) [CD]

A survey of the art of tribal people of Africa, Oceania, and the Americas from prehistoric times through the present. The relationship of art to religion, myth, festival, and social life will be considered, as well as the effects of acculturation on the arts.

1103(119) Pre-Columbian Art of Mexico and Central America (3) [CD]

A survey of the arts of native peoples of Middle America before the coming of the Spaniards in 1519. The cultural context and meaning of sculpture, painting, architecture, and ritual among the Olmec, Maya, Aztec, and other tribes.

1104(116) North American Indian Art (3) [CD]

A detailed survey of the arts of North America from prehistoric times to the present. Cultures to be covered include: Mound builders, Northeast, Navajo, Pueblo peoples, Northwest Coast, and Eskimo. The relationship of art to religion, dance, philosophy, and social life will be explored.

1105(117) African Art (3) [H, CD]

A survey of the major achievements in painting, sculpture, and architecture of the continent of Africa, with an emphasis upon the religious and social contexts of the arts.

1108(8) Introduction to Asian Art (3) [H, CD]

A survey of the major achievements in architecture, sculpture, and painting of India, China, Japan and Southeast Asia. Emphasis on religious, historical, and social context of the arts.

1109(107) The Arts of China (3) [CD]

A survey of the major achievements in the history of Chinese art. Bronzes, sculpture, painting, calligraphy, ceramics, and jades will be considered within their historical, philosophical, and social context.

1110(108) The Arts of Japan (3) [CD]

A survey of the art and architecture of Japan from prehistory to the present. Topics will include sculpture, architecture, pottery, gardens, Japanese prints and paintings in their various forms, i.e. Chinese style, purely Japanese style, narrative scrolls, Zen, and Rimpa.

1165(65) Photography and Society (3)

Same as Interdisciplinary 1165(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. This course counts toward the major.

2211(111) Art and Archaeology of the Ancient World (3) [H]

Prerequisite: Art 1100(5). A survey of art in Egypt, the Ancient Near East, Greece, and Rome, beginning in the Neolithic era (8000-4000 BC) and ending with the Barbarian invasions of Italy in the fifth century A.D. The major highlights of architecture and city planning, sculpture, painting, pottery, and the minor arts will be covered.

2212(112) Greek Art and Archaeology (3)

Prerequisite: Art 1100(5). General survey of material culture in the Aegean basin, beginning with the Bronze Age (third millennium BC), and terminating in the late Hellenistic period (second century BC). For the Hellenistic period the course will trace Greek developments and influences outside of the Aegean, for example, in Italy and in Egypt.

2213(113) Roman Art and Archaeology (3)

Prerequisite: Art 1100(5). General survey of material culture in Italy and its dependencies beginning with prehistoric Italy (ninth and eighth centuries B.C.) and terminating in late antiquity (the fifth century A.D.). The course will focus on the regional variants of Roman art in such places as Gaul, Spain, Great Britain, North Africa, and the Greco-Roman East.

2114(214) Early Christian and Byzantine Art (3)

Prerequisite: Art 5(1100). Survey of the development of Christian imagery during the Late Antique period, the Constantinian epoch, the development of the early Byzantine style during the sixth century, and later innovations in style and subject matter in later Byzantine art until AD 1453.

2225(125) Medieval Art (3)

Prerequisite: Art 1100(5). A survey of the art and architecture of the Mediterranean World and northern Europe from late antiquity to the Late Gothic period (300-1300 A.D.). Focus on new styles and subject matter in painting, sculpture, and architecture.

2235(135) Italian and Northern European Renaissance Art (3) [H]

Prerequisite: Art 1100(5) or permission of instructor. An introduction to selected artworks, artists and patrons in Italy and Northern Europe throughout the fifteenth and sixteenth centuries, beginning with Ghiberti and Van Eyck and ending with Michelangelo and Brughel.

2237(137) Northern European Renaissance Art (3)

Prerequisite: Art 1100(5). A review of Flemish, so called Franco-Flemish, and German paintings, illuminations, and prints during the fifteenth and sixteenth centuries, before and after Luther.

2238(138) Italian Renaissance Art (3)

Prerequisite: Art 1100(5). The study of sculpture, paintings, and architecture in Florence, Rome, and Venice during the fourteenth, fifteenth, and sixteenth centuries as reflections of cultural, religious, philosophical, and political beliefs.

2240(140) French Art and Architecture 1400-1715 (3)

Prerequisite: Art 1100(5) or permission of the instructor. A survey of art and architecture in France from the late medieval period to the late baroque. Topics will include the development of French chateaux and gardens, the rise of the Academy, and the influence of royal patronage on the arts.

2245(145) Baroque Art and Architecture (3)

Prerequisite: Art 1100(5) or permission of the instructor. A survey of the major paintings, statues, buildings, and their artists and patrons in seventeenth-century Italy, France, Flanders, Holland, and Spain. Special attention will be given to the study of the city of Rome.

2255(155) Modern European Art (3) [H]

Prerequisite: Art 5(1100). A survey of European art of the nineteenth and twentieth centuries.

2265(165) History of Photography (3)

Prerequisite: Art 1100(5) or consent of instructor. A study of photography: its historical development, an examination

of it as an art medium, and its influence on the development of modern art.

2267(263) Photography since 1945 (3)

Prerequisites: Art 1100(5) and either Art 1165(65) or 2265(165) or permission of instructor. Seminar on creative photography from postwar period to present. Topics include relation of this medium to other arts, including sculptural and performance art, as well as current modes of photographic depiction in landscape and studio work.

2278(158) American Art (3)

Prerequisite: Art 5(1100). An overview of the major developments of painting, sculpture and the decorative arts in the United States since 1600. Emphasis on the contributions of individual artists and the changing cultural contexts in which they worked.

2279(159) American Architecture (3)

Prerequisite: Art 1100(5) or consent of the instructor. A brief history and analysis of American architecture, investigations of technological process, urban planning, and the dominating social attitudes which govern architectural development.

2281(191) Art since 1945 (3)

Prerequisite: Art 1100(5) or consent of the instructor. An overview of the major developments in European and American art since World War II. Topics include abstract expressionism, pop art, conceptual and minimal art, performance and video.

2291(105) Issues and Ideas in Art History (3)

Prerequisite: Art 1100(5) or permission of instructor. Intensive studies of a few selected works from various eras and cultures, with special attention to the particular social and cultural factors surrounding their creation. May be repeated for credit with change of topic and permission of adviser.

2295(179) Special Topics in Art History (1-3)

Prerequisite: Art 1100(5) or consent of instructor. Selected topics in art history. This course may be repeated for credit.

3303(203) Media and Technique in Art History (3)

Prerequisite: Art 1100(5), and two other courses in art history. Technical demonstration of and research into various materials and media used by artists. In addition to ancient media such as egg tempera and fresco, it will include modern media such as photography and video.

3339(289) Visual Resources Management (3)

Prerequisites: Art 1100(5) and 3 credit hours in other art history courses, or permission of instructor. This hands-on course in the art department's slide library will consist of the daily operation and management of, as well as

technological and theoretical approaches to visual resource collections. The course content relies upon the Art Department's slide library of over 80,000 slides, videotapes, and other visual materials.

3365(295) The Artist and the City (3)

Prerequisite: Art 1100(5). Examines the role of urban centers as a focus for significant artistic activity, as a recurring theme in art, and as a spatial and physical architectural reality. Aspects of urban planning, urban imagery in art, and the social, political, and personal networks artists develop as a result of living in particular urban centers at particular moments in history will be among the topics discussed.

3374(274) Philosophy of Art (3)

Same as Philosophy 3374.(274). A study of issues concerning the definition of art, meaning and truth in the arts, aesthetic experience, and criticism.

3375(275) The Art of Print (3)

Prerequisite: Art 1100(5) or consent of the instructor. Dealing with the history of print forms: woodcuts, etchings, engravings, lithographs, silk-screens, monotypes, and mixed media. Special emphasis will be given to the importance of prints to the art and artists of our time.

3376(276) Women and the Visual Arts (3)

Prerequisite: Art 1100(5) or enrollment in the Women's Studies Certificate Program recommended. Selected topics concerning women as creators, users, and subject matter of art. Great women artists in the Western world will be studied, as well as women weavers, potters, and sculptors in tribal society.

3385(285) Studies in Architectural History (3)

Prerequisite: Art 1100(5) or consent of instructor. A study of selected topics in architectural history. The content of the course will vary, and the course may be repeated for credit with permission of the instructor and departmental adviser. Possible topics include the history of the castle, factory architecture, the evolution of the Gothic cathedral, and domestic and vernacular architecture.

3387(287) Professional Internship (1-6)

Prerequisites: Junior/Senior standing in art history or studio art and consent of faculty advisor. The internship provides experience in museums, historical societies, galleries, design firms, or visual resource collections. Students will assist in the diverse duties associated with the day-to-day functions of the institution, under the joint direction of a faculty adviser and a supervisor at the institution. Course requirements may include readings, research assignments, and/or a paper. This course may be counted for art history or studio art credit with the department's consent.

3388(288) UM-St. Louis/Saint Louis Art Museum Internship (3)

Prerequisites: Art History or Anthropology major, junior/senior standing, and consent of faculty adviser. Student, selected competitively after submitting application to the UM-St. Louis/St. Louis Art Museum Internship Committee, completes 20 hours of work per week under direction of a curator or curators at the Saint Louis Art Museum. The precise schedule and particular projects are to be determined by the curator and the student together. Projects can include research on the Museum collection, research on possible Museum acquisitions, checking label information, research or compilation of bibliography for exhibitions, or other tasks at the discretion of the curator. Each internship runs for the duration of one semester.

3390(290) Special Study (1-10)

Prerequisites: Junior or senior standing and consent of department and instructor. Independent study through readings, reports, or field research.

3391(205) Advanced Issues and Ideas in Art History (3)

Prerequisites: Art 1100(5) and three additional courses in art history, or permission of the instructor. Seminar format. Intensive study of a few objects or issues in the history of art, focusing on issues which crosscut periods or geographic regions.

3393(293) Art Gallery Management (3)

Prerequisites: Art 1100(5) and 6 credit hours in other art history courses. This course will consider the practical application of professional training in art history as it applies to gallery management. Topics covered will include: grant writing in the arts, the development of art exhibits, the role of the art curator, and the operation of a gallery. All students will get hands-on experience in Gallery 210.

3394(294) Art Criticism (3)

Prerequisite: Art 2255(155) or Art 2281(191) or permission of instructor. An overview of the history and function of art criticism, focusing principally on the theory and criticism of twentieth-century art. Students will attempt their own critical writings on contemporary art.

3395(195) Sophomore/Junior Seminar: The Methods of Art History (3)

Prerequisites: Art 1100(5) and nine additional hours in art history. An introduction to the methods of art historical analysis. Emphasis on research techniques and writing. This course must be taken before a student's senior year.

3396(296) The Nude in Art (3)

Prerequisites: Art 1100(5) and one other course in art history. An exploration of the various meanings of nudity in art. The cultural, social, and psychological contexts of nudity in art will be examined in different historical periods and geographic regions, both Western and non-Western. Representations of both males and females will be analyzed in terms of gender construction, political authority, and personal identity.

3397(297) Landscape Perspectives in Art (3)

Prerequisite: Art 1100(5). This seminar considers the various conventions for representing landscape and nature, and human relationships to landscape, throughout history and across cultures. Issues to be considered may include landscape as metaphor in European painting, contemporary earthworks, landscape photography, and the relationship of artist to landscape in the non-Western world.

3398(298) The Portrait (3)

Prerequisite: Art 1100(5) or permission of instructor. An examination of portraiture in its social, economic and political contexts. Group and individual portraits will be analyzed in terms of gender construction, social status, family history and personal and public identity throughout selected periods of Western and non-Western culture

4402(215) Topics in Tribal Arts (3) [CD]

Same as Anthropology 1025(225). Prerequisite: One of the following: Art 1102(15), 1104(116), 1105(117), 1103(119), or consent of instructor. Intensive study of the arts of several tribal groups. Inquiry into relationships between art and culture by means of an examination of myth, literature, festival, and social life. Seminar format. May be repeated for credit with permission of adviser.

4405(217) Topics in African Art (3) [CD]

Prerequisite: Art 1102(15) or 1105(117) or permission of instructor. A study of selected topics in the history of African art. The content of the course will vary, focusing upon a single topic, which might include Islam and the arts of Africa, Christianity and the arts of Nubia and Ethiopia, art and festival in West Africa, or women and art in sub-Saharan Africa. May be repeated for credit with permission of instructor.

4408(208) Topics in Asian Art (3) [CD]

Prerequisite: Art 1108(8) or permission of instructor. A study of selected topics in Asian art. The content will vary, focusing on topics such as Chinese and Japanese landscape in paintings and in gardens, images of women in Asian art, or the Spirit of the Brush in Chinese and Japanese painting. May be repeated for credit with permission of instructor and adviser.

4411(212) Topics in Ancient Art and Archaeology (3)

Prerequisites: Art 1100(5) or Interdisciplinary 10 and one of the following: Art 2211(111), 2212(112), 2213(113), 2214(114), or permission of instructor. Intensive study of

some aspect of Classical or Early Christian art. Content will vary. May be repeated for credit with permission of adviser.

4425(225) Topics in Medieval Art (3)

Prerequisite: Art 2225(125) or consent of instructor. A study of selected topics in Medieval art. The content of the course will vary, focusing on single topics such as manuscript painting, the Gothic cathedral and its sculptural decoration, or the art of pilgrimage churches. May be repeated for credit with permission of instructor.

4435(235) Topics in Renaissance Art (3)

Prerequisite: Art 2235(135), 2237(137) or 2238(138) or consent of instructor. Studies of selected topics, which will vary. Subjects to be considered may include the art of Florence, the role of patronage in Renaissance Italy, and Papal art. May be repeated for credit.

4445(245) Topics in Seventeenth and Eighteenth-Century European Art (3)

Prerequisite: Art 2245(145) or consent of instructor. A study of selected topics in Baroque and Rococo art. The content of the course will vary, focusing on single areas, such as the Baroque in Rome; or on major artists, such as Bernini, Rubens, and Rembrandt. May be repeated for credit with permission of instructor and adviser.

4455(255) Topics in Modern European Art (3)

Prerequisite: Art 2255(155) or consent of instructor. Intensive study of selected topics in European art. May be repeated for credit with permission of instructor and adviser.

4465(265) Topics in Photographic Studies (3)

Same as Interdisciplinary 4465(265). Prerequisite: Permission of instructor. Advanced study of specific styles, periods, or issues within photographic history.

4475(258) Topics in American Art (3)

Prerequisite: Art 2278(158) or 2279(159) or consent of instructor. Intensive study of selected topics in American art from colonial beginnings to the present. Topics may include the image of the family in art, patronage, the relationship between art and literature, and the role of the artist in modern society. May be repeated for credit with permission of instructor and adviser.

4490(390) Special Study (1-10)

Prerequisites: Junior/senior standing and consent of department chairperson and instructor. Independent study through readings, reports, or field research.

4491(291) Topics in Contemporary Art (3)

Prerequisites: Art 1100(5) and Art 4481(191) or permission of instructor. Seminar on particular topics in European or American art since 1945. Topics may include contemporary feminist art, postmodernism, or abstract

expressionism. May be repeated for credit with permission of instructor and adviser.

4492(292) Museum Studies (3)

Prerequisites: Art 1100(5) and 6 credit hours in other art history courses. This course is intended as an introduction to the function and operation of the art museum. Sessions will include the history of art museums and collecting policies; the organization of art museums; the tasks of the curator; the registration practices; art conservation; the museum as an educational institution; the organization and planning of permanent galleries; and the planning and installation of temporary exhibitions.

4495(395) Senior Art History Seminar (3)

Prerequisite: Art 3395(195), English 3100(210) and senior standing in art history or consent of instructor. Intensive reading, discussion, and writing on topics to be announced.

5578(458) Topics in American Art (3)

Prerequisite: Graduate standing and consent of instructor. This course examines a discrete aspect of the history of American art within the changing social, cultural and historical contexts of Euro-American and/or Native American experiences and traditions.

5588(488) Museum Education and Visitor Research (3)

Prerequisite: Consent of director of Museum Studies Program. Development and operation of museum educational programs: learning theory; program design; relationships with exhibit development; programming for children and adults. Visitor research: theoretical foundations; research design; field experience; impact on programming and strategic planning.

5592(492) The History of the Visual Arts in American Museums (3)

Prerequisite: Graduate standing and consent of instructor. This course is an introduction to selected topics in the history of museology, focusing on art and anthropology museums as sites for the interpretations of art and culture, and as contested meeting grounds for various views of history and culture.

6035(435) Foundations of Museology I (3)

Prerequisite: Consent of Director of Museum Studies Program. Same as Anthropology 6035(435) and History 6035(435). Concepts for understanding museums in their social and cultural context; history of museums; museology and general social theory; information transfer vs. Meaning-making models; museums and communities; the changing role of museums; museums as complex organizations; process models of museology.

6036(436) Foundations of Museology II (3)

Prerequisite: Art 6035(435) and consent of Director of Museum Studies Program. Same as Anthropology

6036(436) and History 6036(436). Audience-centered approaches to museology; visitor research and learning theory; philosophical and practical considerations in museum planning; the physical design of museums; creativity; exhibit and program development; collections and curation; the challenge of diversity; the future of museums.

6037(437) Effective Action in Museums (3)

Prerequisite: Consent of Director of Museum Studies Program. Same as Anthropology 6037(437) and History 6037(437). The nature of the work done in museums; how museums are organized to accomplish this work; professional roles and practices; technology and resources used by museums, skills for creative and effective leadership in project management and administration in museums; planning, flow charting, budgeting, team dynamics, and related skills. The course will include several site visits to area museums and guest lectures by a variety of museum professionals.

6038(438) Museum Studies Master's Project (4)

Prerequisite: Consent of Director of Museum Studies Program. (Same as Anthropology 6038(438) and History 6038(438). Research and writing/exhibit development on a selected topic.

Studio Art

1002(2) Introduction to Studio Art (3)

An introduction to drawing, painting, and design in a beginning studio environment. This course is designed to provide basic skills and understanding of studio experience for the non-art major. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1030(30) Ceramics I (3)

An introduction to basic methods and theory of ceramics including work with hand-built construction, wheel techniques, and glazing. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1060(60) Photography I (3)

An introduction to the techniques and aesthetics of black and white photography, the camera and the darkroom. Students must provide a camera with adjustable speeds and aperture. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1074(74) Special Topics in Studio Art (1-3)

Selected topics in studio studies. This course may be repeated for credit. Lab fee required. Basic studio

equipment will be provided, though students will need to supply some personal equipment and supplies.

1080(80) Comics and Cartoon Illustration (3)

A course in creating and appreciating the world of comics and cartoons. This course will investigate the tools and techniques for creating cartoons, cartoon illustrations and the world of comics. Students will create their own cartoons with traditional media and also with computers. While designed for beginners, experienced artists will be encouraged to perfect their personal styles. The class will create and print its own comic book. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1130(130) Ceramics II (3)

Prerequisite: Art 1030(30). A continuation of Art 1030(30). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1132(132) Sculpture I (3)

An introduction to traditional and contemporary materials, aesthetics, and theories of three-dimensional art. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1133(133) Introduction to Fibers and Textiles (3)

Prerequisites: Art 1150(50). Exploration of a variety of on – and off – loom weaving and other fiber and textile media and techniques. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1134(134) Art Activities for Elementary Schools (3)

Same as Ele Ed 2179(179). A study of art principles and laboratory experiences with various media and materials. Stresses curriculum planning and development of the elementary school program in art. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1140(40) Drawing I (3)

An introduction to drawing through the study of figure, object, and environment. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1141(140) Drawing II (3)

Prerequisite: Art 1140(40). The development of drawing skills through continued observation and problems of invention. A further exploration of varied drawing materials and techniques including graphite, charcoal, conte crayon, and inks. Lab fee required. Basic studio

equipment will be provided, though students will need to supply some personal equipment and supplies.

1142(42) Figure Drawing I (3)

Basic studies of the human form and anatomy from the model in a variety of drawing media. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1143(142) Figure Drawing II (3)

Prerequisite: Art 1142(42). Continuation of Figure Drawing I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1150(50) Design I (3)

Studio problems in the creative use and integration of the elements of two-dimensional design: line, form, space, texture. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1151(150) Design II (3)

Prerequisite: Art 1150(50). A continuation of Art 1150(50), two-dimensional design, with introduction to color theory. Some application of mixed media problems. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1170(270) Printmaking I (3)

Prerequisite: Art 1150(50) and Art 1141(140) or consent of instructor. An introduction to printmaking techniques, materials, and theories. The course will include work in a variety of print materials. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1173(273) Printmaking: Screen-printing I (3)

Prerequisite: Art 1170(270). An introduction into the techniques, methods, and aesthetics of screen-printing. Studio problems involving uses and approaches will be emphasized. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1180(180) Painting I (3)

Prerequisite: Art 1140(40), Art 1150(50) or consent of instructor. An introduction to the use of oil and/or acrylic painting media. Studio problems to develop technical and expressive skills on various surfaces. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1181(280) Painting II (3)

Prerequisite: Art 1180(180) or consent of instructor. Continuation of basic studio problems in painting media. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1210(210) Graphic Design I (3)

Introductory studio problems in layout, lettering, and design with typographic elements. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

1220(211) Graphic Design II (3)

Prerequisite: Art 1220(210), Art 1150(50) and Art 1140(40). Continuation of Graphic Design I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2160(160) Photography II (3)

Prerequisite: Art 1060(60). Continuation of Photography I at the intermediate level. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2220(220) Computer Art I (3)

Prerequisite: Art 1150(50). An introduction to the use of computer graphics software for the creation of artwork applicable to the advertising and graphic design industry. No previous computer experience is necessary. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2221(221) Computer Art II (3)

Prerequisite: Art 2220(220). Designed to familiarize students with the methods and processes and computer functions used in graphic art and illustrations. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2232(232) Sculpture II (3)

Prerequisite: Art 1132(132). Continuation of Sculpture I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2240(240) Drawing III (3)

Prerequisites: Art 1140(40) and Art 1141(140). This course offers studio problems designed to further the development of drawing skills in various media. Limited color will also be introduced. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2241(340) Drawing IV (3)

Prerequisite: Art 2240(240). Studio problems with emphasis on color and multi-material approach to drawing. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2242(242) Figure Drawing III (3)

Prerequisites: Art 1142(42) and Art 1151(142). Advanced study of the human form and anatomy from the model in a variety of drawing media. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2243(342) Figure Drawing IV (3)

Prerequisite: Art 2242(242). Continuation of Figure Drawing III. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2250(250) Composition (3)

Prerequisites: Art 1150(50) and Art 1151(150). An investigation of the use of formal design elements as used in historic and contemporary art. Weekly studio problems and discussions will concentrate on skills, application, and unifying effects of compositional elements on a variety of visual art forms. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2251(350) Design III (3)

Prerequisites: Art 1150(50) and Art 1151(150). Advanced studio problems in design materials. Use of two-dimensional and three-dimensional mixed media. Experimental use of materials and media will be introduced. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2262(261) Color Photography I (3)

Prerequisite: Art 1060(60) or equivalent. An introduction to the techniques and aesthetics of color photography. Mastering the printing and finishing processes and producing a color print portfolio will be the requirements of this class. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2263(161) Introduction to Digital Photography (3)

Prerequisite: Art 1060(60) or consent of instructor. An introduction to computer usage in photography. The basic computer techniques and software applications for digitizing, retouching, enhancing and altering photographic images will comprise the core of this course. This class will involve both learning exercises and the creation of original computer-aided photographic art. Lab fee required. Basic studio equipment will be provided, though

students will need to supply some personal equipment and supplies.

2264(262) Non-Silver Photography (3)

Prerequisites: Art 1060(60) and Art 2160(160). An introduction to the aesthetics and techniques of non-traditional photographic processes. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2265(263) Commercial Applications in Photography

Prerequisites: Art 2160(160) and permission of adviser. Exploration of issues and applications in commercial photographic production. Topics will vary. Course may be repeated for credit with permission of adviser. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2268(264) Video Art I (3)

Prerequisite: Art 2160(160) or permission of instructor. An introduction to video as an art form. Knowledge of contemporary uses and video techniques will be stressed. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2271(271) Printmaking II (3)

Prerequisite: Art 1170(270) or consent of instructor. A continuation of Printmaking I. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2272(272) Printmaking: Lithography I (3)

Prerequisite: Art 1150(50) and Art 1141(140) or consent of instructor. An introduction to printmaking skills and theory in stone and plate lithography. Studio problems in the use of materials and equipment. Attention will be given to individual development. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2277(277) Printmaking: Photolithography I (3)

Prerequisite: Art 1060(60) or departmental consent. An introduction to printmaking skills and theory in stone and plate lithography with particular emphasis on the photographic applications of the process. Some attention will also be given to commercial printmaking applications while studio problems in the use of materials and equipment will be stressed. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2281(381) Painting IV (3)

Prerequisite: Art 2280(380). A continuation of Painting III. Lab fee required. Basic studio equipment will be provided,

though students will need to supply some personal equipment and supplies.

2283(283) Watercolor Painting (3)

Prerequisites: Art 1150(50) and Art 1141(140). Beginning problems in watercolor painting. Includes the study of traditional and contemporary approaches to color, color techniques, and treatment of papers. May be repeated for credit. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2290(290) Special Study (1-10)

Prerequisites: Junior/Senior standing and consent of department and instructor. Independent study through readings, reports or field research. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

2363(260) Digital Photography II (3)

Prerequisite: Art 2263(161). Intermediate exploration of the aesthetics and techniques of digital photography. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3260(360) Photography III (3)

Prerequisite: Art 2160(160). An exploration into contemporary theories and trends in photography. Advanced projects, portfolios and techniques will be expected from those enrolled. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3274(370) Printmaking and Relief (3)

Prerequisites: Art 1170(270) and Art 2271(271). Advanced problems in printmaking. Problems in relief printmaking. Work in wood and mixed materials. Development of skills and aesthetic judgments in the media. May be repeated for credit with consent of instructor. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3280(380) Painting III (3)

Prerequisite: Art 1181(280) or consent of instructor. Advanced studio problems in painting media. Attention paid to individual development of theory, expression, and technique. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3310(310) Graphic Design III (3)

Prerequisites: Art 1220(211). Advanced studio problems to further the understanding of design and its relationship to typographic elements, illustration, and communication. The course will encourage both conceptual and technical development of the designer. Lab fee required. Basic

studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3311(311) Graphic Design IV (3)

Prerequisite: Art 3310(310). Further studio problems in the graphic arts. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3312(312) Special Topics in Illustration and Graphic Design (3)

Prerequisite: Art 3311(311) or consent of instructor. Illustration and graphic design techniques as diverse as cartooning, Web page design, multi-media animation, and interactive kiosk design (among others) are explored in this class. Each semester, one or more of these specialties are offered. Emphasis is placed on the practical applications of these approaches as well as the production of a strong student portfolio that will demonstrate the mastery of these skills.

3334(334) Contemporary Art Education: Craft and Theory (3)

Prerequisite: Upper-division standing or consent of instructor. Intensive study for advanced students and art teachers, emphasizing specialized techniques and innovative concepts. Topics to be announced. May be repeated for credit. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3340(387) Advanced Problems in Drawing I (3)

Prerequisite: Art 2241(340). This course is focused on professional-level art and portfolio production. It offers studio problems designed to further the development of drawing skills. Emphasis will be given to the study of drawing as an independent art form. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3341(388) Advanced Problems in Drawing II (3)

Prerequisite: Art 3340(387). A continuation of Art 3340(387). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3362(361) Color Photography II (3)

Prerequisite: Art 2262(261). An advanced exploration into the aesthetics and techniques of color photography. Students will be expected to refine their vision utilizing color processes. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3363(363) Special Topics in Photography

Prerequisite: Art 2160(160): Photography II and permission of adviser. Selected topics in photographic practice. May be repeated for credit with permission of adviser. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3364(364) Video Art II (3)

Prerequisite: Art 2268(264). An advanced exploration of video as a visual art. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3370(393) Advanced Problems in Printmaking I (3)

Prerequisite: Art 3274(370). This course is focused upon professional-level art and portfolio production. After completion of this and the preceding course, students should be ready to meet the artistic and intellectual demands of today's visual art world. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3371(394) Advanced Problems in Printmaking II (3)

Prerequisites: Art 3370(393). A continuation of Art 3370(393). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3372(372) Advanced Lithography (3)

Prerequisites: Art 1173(273). Continuing problems in lithography with problems in black and white, photolithography, and/or color. May be repeated for credit. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3380(385) Advanced Problems in Painting I (3)

Prerequisite: Art 2281(381). Course is focused on professional-level art and portfolio production. Non-traditional materials might be explored. Attention is focused on individual development of painting theory, self-expression, and advanced techniques. The student is expected to assume a substantial responsibility with regard to direction, motivation, and content. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3381(386) Advanced Problems in Painting II (3)

Prerequisite: Art 3380(385). A continuation of portfolio production in Art 3380(385). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3383(383) Advanced Problems in Graphic Design I (3)

Prerequisite: Art 3311(311). This course is focused on professional-level art and portfolio production. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3384(384) Advanced Problems in Graphic Design II (3)
Prerequisite: Art 3383(383). A continuation of Art 3383(383). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3390(390) Special Study (1-10)
Prerequisites: Junior/senior standing and consent of department. Independent study through readings, reports, or field research. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3391(391) Advanced Problems in Photography I (3)
Prerequisite: Art 3260(360). This course is focused on professional-level art and portfolio production. Students may employ black and white, color, non-silver or other traditional or non-traditional press for projects in this course. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

3392(392) Advanced Problems in Photography II (3)
Prerequisite: Art 3391(391). A continuation of Art 3391(391). Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

4389(389) Graphic Design Studio (3)
Prerequisite: Art 3384(384) or consent of instructor. Students will work on actual client projects in a studio setting from creative concept through client presentation. Studies will include client interviews, project planning, studio operations, project budget and estimating, vendor selection, prepress preparation, working in creative groups and professional presentations.

4495(396a) Senior Studio Seminar (3)
Prerequisites: Senior standing and Art 3381(386), 3341(388), 3392(392) or 3371(394). Weekly critiques and discussions of technical and professional issues. Will instruct students in methods of portfolio display, documentation, gallery representation, grant writing, and professional preparation. Lab fee required. Basic studio equipment will be provided, though students will need to

supply some personal equipment and supplies. Offered only during fall semester.

4496(396b) Senior Studio Seminar (3)
Prerequisites: Senior standing and Art 4495(396a). Weekly critiques and discussions of technical and professional issues. Will instruct students in methods of portfolio display, documentation, gallery representation, grant writing, and professional preparation. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies. Offered only during winter semester.

4497(397) Senior Seminar in Graphic Design I (3)
Prerequisite: Senior standing and Art 3384(384). Weekly critiques and discussions of technical and professional issues. Will instruct students in the methods of professional preparation. Lab fee required. Basic studio equipment will be provided, though students will need to supply some personal equipment and supplies.

4498(398) Senior Seminar in Graphic Design II (3)
Prerequisite: Art 4497(397). Continuation of Art 4497(397) Will instruct students in the methods of professional preparation. Lab fee required. Basic studio equipment will be provided through students will need to supply some personal equipment and supplies.

Department of Communication

Faculty

Michael Beatty, Professor*; Chairperson
Ph.D., Ohio State University
Thomas McPhail, Professor*
Ph.D., Purdue University
Michael Murray, Curators' Distinguished Teaching Professor
Ph.D., University of Missouri-Columbia
Donald Shields, Professor Emeritus
Ph.D., University of Minnesota
Elizabeth Kizer, Associate Professor Emerita
Ph.D., Purdue University
C. Thomas Preston, Associate Professor*
Ph.D., University of Nebraska-Lincoln
Alice E. Hall, Assistant Professor
Ph.D., University of Pennsylvania
Alan D. Heisel, Assistant Professor
Ed.D., West Virginia University
Betty H. La France, Assistant Professor
Ph.D., Michigan State University
Leighanne Heisel, Lecturer
M.A., West Virginia University
Clark McMillion, Lecturer
M.A., State University College of New York at Brockport
Sidney Savan, Lecturer
B.S., Washington University

*members of Graduate Faculty

The faculty represents many fields within the discipline of communication including interpersonal communication, organizational communication, mass communication, and rhetoric in addition to related disciplines such as film and media history, media production, and public relations. Most faculty members contribute to the continued growth of the knowledge base, publishing the results of their research in scholarly journals and presenting papers at national and international professional conferences. Other faculty members engage in creative activities. By integrating theory, research, and practice, the faculty is able to offer a comprehensive approach to contemporary communication problems.

General Information

The Bachelor of Arts in Communication

The B.A. in communication is a flexible degree program that allows the student to emphasize a particular field of study (communication theory and rhetoric, or mass communication) or tailor a specific concentration to meet the student's individual needs and interests. An emphasis in communication theory or mass communication is recommended for students with clear career goals in one of these areas. The communication major is recommended for students interested in teacher certification, the bachelor of

general studies degree in the Evening College, or in specific interdisciplinary fields such as public relations/advertising/organizational communication, information science, electronic journalism, television, media administration, and marketing communication. The faculty encourages all students to meet early and often with their faculty adviser to select a meaningful group of courses for a coherent, career-oriented academic program.

Minors and Certificates for Communication

The department actively supports the following minor and certificate programs open to students majoring in communication: Minor in Public Affairs Journalism, Minor in Photographic Studies, Minor in Legal Studies, Certificate in Writing, and Certificate in Secondary Education. For more information, see Certificate Programs and Interdisciplinary Studies in this *Bulletin*.

Master of Arts in Communication

The master of arts program, a collaborative effort between UM-St. Louis and UM-Kansas City, provides the opportunity for an advanced degree program in communication with emphasis in organizational and mass communication. For further details, please see the Graduate Studies section of the Communication Department listings.

Undergraduate Studies

General Education Requirements

Majors must satisfy the university and college general education requirements. The college's foreign language requirement may be taken in any language. Communication courses may not be taken on a satisfactory/unsatisfactory basis.

Course Emphasis Categories

Courses offered by the communication department are categorized below. Students will need to refer to this list in choosing courses to meet the requirements of their particular emphasis area.

Communication Theory and Rhetoric Area Courses:

1030(30), Interpersonal Communication I
1040(40), Introduction to Public Speaking
1041(41), Basic Public Debate
1065(65), Introduction to Information Technology
1108(108), Advertising Copywriting
1130(130), Interpersonal Communication II
1135(135), Communication Theory
1140(140), Advanced Public Speaking
1141(141), Business and Professional Speaking
1143(143), Parliamentary Procedure
1150(150), Introduction to Public Relations
2228(228), Public Relations Writing
2230(230), Small Group Communication
2231(231), Communication in the Organization
2240(240), Persuasive Communication
2241(241), Argumentation and Debate

2243(243), Communication in American Politics
3330(330), Research Methods in Communication I
3331(331), Research Methods in Communication II
3332(332), Intercultural Communication
3333(333), Communication Audit
3334(334), Advertising Media Planning
3335(335), Seminar in Applied Communication Research
3336(336), Communication in Advertising
3337(337), Male/Female Communication
3340(340), Rhetorical Criticism
3341(341), Classical Rhetoric and Public Address
3342(342), Modern Rhetoric and Public Address
3343(343), The Rhetoric of Protest
3344(344), Advanced Argumentation Theory
3345(345), Theory and Practice of Interviewing
3346(346), Advanced Interviewing Techniques
3358(358), Communication in Public Relations
3360(360), Health Communication

Mass Communication Area Courses

1050(50), Introduction to Mass Media
1065(65), Introduction to Information Technology
1070(70), Introduction to Cinema
1108(108), Advertising Copywriting
1110(110), Introduction to Radio and Television
Broadcasting
1114(114), Radio Production I
1118(118), Radio and Television Announcing
1150(150), Introduction to Public Relations
2210(210), Television Production I
2212(212), Broadcast Writing and Reporting
2214(214), News Writing
2215(215), Radio Production II
2216(216), Radio News
2217(217), Script Writing for Business and Industry
2218(218), Public Policy in Telecommunication
2219(219), Promotion, Publicity, and Advertising in
Broadcasting
2228(228), Public Relations Writing
2271(271), History of Film to World War II
2272(272), History of Film Since World War II
2273(273), Basic Film Production
3310(310), Television Production II
3311(311), Broadcast Management
3316(316), Television News
3317(317), Radio and the Recording Industry
3330(330), Research Methods in Communication I
3331(331), Research Methods in Communication II
3334(334), Advertising Media Planning
3350(350), Mass Communication History
3352(352), Mass Media Criticism
3354(354), Comparative Telecommunication
Systems
3355(355), Media Law and Regulation
4356(356), International Communication
4357(357), Media Ethics
3358(358), Communication in Public Relations
3360(360), Health Communication
3370(370), Documentary Film

Degree Requirements

Bachelor of Arts in Communication

Majors must complete a minimum of 36, but not more than 45, hours in communication courses. At least 18 of these hours must be taken at UM-St. Louis. Each major must take at least 6 hours of communication courses numbered 200-299(2000-2999) and at least 6 hours of communication courses numbered 300-399(3000-3999). Every major must complete the requirements for an emphasis area as described below.

Emphasis Areas

Emphasis areas are available: Communication theory and Rhetoric, mass communication, theatre.

Required Courses for All Majors

1040(40), Introduction to Public Speaking
1135(135), Communication Theory
1193(193), 1194(194), 1196(196), 1197(197), 1198(198)
(at least 3 hours of Practicum courses), or
3393(393), 3394(394), 3396(396), 3397(397) (at least 3
hours of Internship courses).

Emphasis Area Requirements

In addition to the above required course work, majors must complete the requirements specified below for one of the following emphasis areas:

I Communication Theory and Rhetoric

In addition to the required courses for all majors, students must take the following:

- a. 2230(230), Small Group Communication
- b. Twelve additional hours in Communication Theory and Rhetoric
- c. One of the following Mass Communication courses:
1050(50), Introduction to Mass Media
1070(70), Introduction to Cinema
1110(110), Introduction to Radio and Television
Broadcasting
- d. Plus 9-18 hours from any area or areas in the communication department.

II Mass Communication

In addition to the required courses for all majors, students must take the following:

- a. 1050(50), Introduction to Mass Media
1070(70), Introduction to Cinema
1110(110), Introduction to Radio and Television
Broadcasting
- b. Nine additional hours in mass communication
- c. Plus 9-18 hours from any area or areas in the communication department.

Bachelor of Arts in Communication with Certification in Secondary Education

In addition to the requirements for the B.A. in communication and general requirements set by the College of Education, students must meet the state requirements for certification.

The B.A. and certification for grades 7-12 can be completed by taking a minimum of 39 hours in communication, selected according to departmental recommendations. The B.A. and certification for grades 7-9 can be obtained by taking 36 hours in communication, selected according to departmental recommendations.

Requirements of the College of Education include courses in professional education and English 3600(262), The Curriculum and Methods of Teaching English (same as Sec Ed 3600(232)).

Departmental Activities, Laboratories, and Internships

Cocurricular projects and activities relevant to student interests and vocational plans are sponsored and advised by the department (debate and forensic, television club). In addition to the traditional classroom experience, students receive practical training in the department's laboratory facility: the Lucas Hall video laboratory.

Internships at radio and television stations, community agencies, newspapers, and public relations, marketing, and advertising firms, and a variety of business organizations provide valuable opportunities for majors to apply their communication studies.

Minors in Communication

Students with majors other than communication may select from two minors to complement their academic and career goals.

The following conditions apply to all minors: Credit hours in Communication 1195(195), and/or Communication 3395(395), may be substituted for credit hours listed below with written consent of the communication department chairperson.

At least 9 of the 18 hours required for the minor must be taken at UM-St. Louis.

A minimum GPA of 2.5 is required in the minor.

I Requirements for the minor in Communication Theory and Rhetoric are as follows:

- a. 1040(40), Introduction to Public Speaking
- 1135(135) Communication Theory
- b. One of the following Communication Theory and Rhetoric courses:
 - 1030(30), Interpersonal Communication I
 - 1140(140), Advanced Public Speaking
 - 1141(141), Business and Professional Speaking

- c. Plus nine hours from courses in Communication Theory and Rhetoric at the 2000(200) level or above.

II Requirements for a minor in Mass Communication are as follows:

- a. 1050(50), Introduction to Mass Media
- 1110(110), Introduction to Radio and Television Broadcasting
- b. One of the following Mass Communication courses:
 - 1070(70), Introduction to Cinema
 - 3350(350), Mass Communication History and Criticism
- c. Plus nine hours in Mass Communication courses at the 2000(200) level or above.

Graduate Studies

The department offers the Master of Arts degree in communication.

Admission requirements:

Applicants must have a baccalaureate in communication or a related discipline by the end of the semester in which they apply. In addition, the minimum GPA for regular admission to the graduate program in communication is 2.75 on a 4-point scale. Three letters or recommendation, at least two of which address the applicant's potential to succeed in graduate studies in communication are required. International students must obtain a TOEFL score of at least 600 to be considered for admission.

Master of Arts in Communication

Degree Requirements:

Candidates for the M.A. degree will complete a minimum of 30 semester hours of approved study, at least 21 of which must be taken in courses offered by the department. Video courses from UM-Kansas City taken while in residence at UM-St. Louis may count toward this 21 hour minimum. A minimum of 18 hours must be taken at the 5000(400) level, in addition to the hours taken for the thesis or internship/paper. Of this 18 hours of 6000(400) level courses, 15 hours must be the specific core courses noted as follows:

Communication

- 6400(400), Seminar in Communication Theory
- 6405(405), Introduction to Communication Research Methods
- 6411(411), Seminar in Mass Communication
- 6431(431), Seminar in Organizational Communication
- 6435(435), Seminar in Advanced Applied Communication Research

Students complete one of the following exit projects: No less than a 6-hour thesis or a 6-hour internship. After consultation with the graduate coordinator and with input from prospective exit project committee members, the student selects the appropriate exit project. The internship

option requires submission of an essay in which the coursework and internship experiences are integrated. Internship essay and thesis must be approved by the student's committees and assigned a grade by the advisor. The candidate must pass an oral examination conducted by student's committee regardless of exit option selected.

Career Outlook

The B.A. in communication prepares students for careers in numerous fields. Past graduates are working in the following positions: radio and television news, promotion and public relations, administration, directing, announcing, production, and sports journalism; media management; public relations, advertising, marketing, Web page design, market research, corporate media, sales, training, speech writing, print editing, journalism, teaching, and research. Other students have pursued graduate education in communication programs across North America offering the M.A. and Ph.D. degrees.

Course Descriptions

Prerequisites may be waived by consent of the department.

Students who have earned 24 or more semester hours of credit at any accredited post-secondary institutions(s) before the start of the fall 2002 semester must meet the general education requirements stipulated in the UM-St Louis 2001-2002 Bulletin. The following courses fulfill the Humanities breadth of study requirements as described in that Bulletin:

1070(70), 1160(160), 2271(271), 2272(272), 3337(337), 3340(340), 3341(341), 3342(342), 3343(343), 3344(344), 3350(350), 3352(352).

The following courses fulfill the Social Sciences breadth of study requirements: 1065(65), 1135(135), 2218(218), 2230(230), 2231(231), 2243(243), 3330(330), 3331(331), 3332(332), 3333(333), 4335(335), 3350(350), 3354(354), 4356(356).

1030(30) Interpersonal Communication I (3) [C]
Development of basic one-to-one communication skills. Includes self-awareness, listening, nonverbal communication, feedback, roleplaying, and receiver awareness.

1040(40) Introduction to Public Speaking (3) [C]
Theories and techniques of organization, evidence, argumentation, persuasion, and delivery in public speaking.

1041(41) Basic Public Debate (3)
History and practice of debate in the public arena, with opportunities to prepare for a variety of public forums for argumentation. Various debate formats, including panel discussions, joint news conferences, and audience-participation debates, in a variety of settings, will be surveyed.

1050(50) Introduction to Mass Media (3) [C,SS]
Introduction to oral, print, and electronic media of communication. Emphasis on history, theory, and criticism of the mass media as cultural institutions.

1065(65) Introduction to Information Technology (3)
The production and consumption of information by individuals, the work place and society. Emphasis on the changing nature of communication processes as a result of the expansion of communication technologies.

1070(70) Introduction to Cinema (3)
An introduction to the history, rhetoric, and aesthetics of film. Film theory and criticism will be studied as well as major genres, authors, and artists.

1108(108) Advertising Copywriting (3)
Same as English 2080(108). To give students a hands-on approach for writing advertising material for print and broadcast against tight deadlines in a professional setting.

1110(110) Introduction to Radio and Television Broadcasting (3)
An introduction to broadcasting, including the areas of history, government regulations, station operation, and program development.

1113(113) Basic Television Studio Production (3)
Study of basic television studio production techniques and practices. The class will provide the student with practical experience in studio camera operating, directing, producing, switching, audio mixing and lighting. Lab arranged.

1114(114) Radio Production I (3)
Prerequisite: Comm 1110(110). Theory and practice in the creation of radio programs. Laboratory experience included.

1118(118) Radio and Television Announcing (3)
Prerequisite: Comm 1110(110); 1114(114), and 2210(210) recommended. Training in radio and television studio procedures. Production and criticism of lab programs, including news, continuity, interviews, and oral improvisation. Classroom meetings at the radio lab and the television lab, plus lab hours to be arranged.

1130(130) Interpersonal Communication II (3)
Prerequisite: Comm 1030(30). Interpersonal communication in relationships within group contexts, such as family, classroom, and business. Various theories and diagnostic approaches to interpersonal communication. Extensive laboratory sessions utilizing individual and group exercises.

1135(135) Communication Theory (3)
Survey of elements and processes critical to human communication behavior. Comparison of influential communication theories.

1140(140) Advanced Public Speaking (3)

Prerequisite: Comm 1040(40). Application of advanced public speaking skills, with emphasis on special occasion speaking situations.

1141(141) Business and Professional Speaking (3)

Prerequisite: Comm 1040(40). Application of communication skills in the business and professional environment with emphasis on presentational speaking, organizational constructs germane to professional careers, and uses of various media.

1143(143) Parliamentary Procedure (2)

Prerequisite: Comm 1040(40). Study and practice in rules of procedure by which self-governing groups transact business.

1150(150) Introduction to Public Relations (3)

Prerequisite: Comm 40(1040) or 50(1050). Publicity methods and public relations representation of profit and nonprofit institutions to the public; use of communication research and media, as applied to the public relations profession.

1160(160) Fundamentals of Oral Interpretation (3)

Prerequisite: Comm 40(1040) or consent of instructor. An introduction to the analysis of literature and to the principles of its oral presentation by the interpreter.

1193(193) Practicum in Applied Communication (1-3)

Prerequisite: Consent of instructor. Practicum work at any of the UM-St. Louis public relations offices, sports and school newspapers, Office of Research or Photography Services. Work must be done on campus, under supervision of a working professional in the field, in consultation with a faculty member.

1194(194) Practicum in Debate/Forensics (1-3)

Prerequisite: Consent of instructor. Practical work in the University debate and forensics program, supervised by a faculty member. Repeatable, but no more than 6 credit hours may be earned in departmental practicum courses.

1195(195) Seminar in Communication (3)

Prerequisite: Consent of instructor. In-depth study of topics pertaining to current research in the department or otherwise of timely interest to students or faculty.

1196(196) Practicum in Radio (1-3)

Prerequisites: Comm 1110(110) and consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work at the campus radio station, supervised by a faculty member. Repeatable, but no more than 6 credit hours may be earned in departmental practicum courses.

1197(197) Practicum in Television/Film (1-3)

Prerequisites: Comm 1110(110) and consent of instructor; open to communication majors only; not open to students

who have any Y or delayed grades outstanding. Practical work at one of the campus television studios or for the UM-St. Louis Television/Film Club, supervised by a faculty member. Repeatable, but no more than 6 credit hours may be earned in departmental practicum courses.

2210(210) Television Production I (3)

Prerequisites: Comm 1110(110) or consent of instructor. A study of the basic theories and practices of remote television production. The areas of producing and directing in the field will be studied. The class will provide the student with practical experience in remote camera operation and basic editing techniques. Lab arranged.

2212(212) Broadcast Writing and Reporting (3)

Prerequisites: Comm 1110(110) and 3214(214) or English 3140(214), or consent of instructor. Elementary principles and practice of writing for radio and television in varied program formats, emphasis on preparation of written materials for news and public affairs presentation. Lecture and lab.

2215(215) Radio Production II (3)

Prerequisite: Comm 1114(114). Study of advanced theories and techniques of audio production, building on principles and skills learned in Radio Production I. Exploration of complex program formats such as radio drama and special problems such as those encountered in recording live music.

2216(216) Radio News (3)

Prerequisite: Comm 1114(114). Theory and laboratory practice in the gathering, writing, and delivery of news through radio. Lab hours to be arranged.

2217(217) Script Writing for Business and Industry (3)

Prerequisites: Comm 2210(210) and 2212(212). Script writing for training, motivation, education, and other applications. Students will identify and discuss communication problems and solutions in live, slide/tape, video, and film script formats.

2218(218) Public Policy in Telecommunication (3)

Prerequisite: Comm 65(1065) or 110(1110) or consent of instructor. An examination of the structure and operation of domestic, international, commercial and public telecommunication. Regulatory agencies, both private and public, will be considered in terms of their effect on programming and ownership.

2219(219) Promotion, Publicity, and Advertising in Broadcasting (3)

Prerequisite: Comm 1110(110). Introduction to theory and practice in the planning, execution, and evaluation of persuasive campaigns involving radio and television. Emphasis on concept developments and production elements. Discussion of broadcast ethics.

2228(228) Public Relations Writing (3)

Same as English 3280(228). Prerequisite: English 3140(214) or equivalent. An introduction to the process of planning, producing, and evaluating written public relations messages. Writing assignments include media releases, letters, memos, position papers, background papers, brochures, and reports and proposals.

2230(230) Small Group Communication (3)

Prerequisite: Comm 1040(40). Development of communication skills needed in small group decision making. Application of these skills to contemporary problems.

2231(231) Communication in the Organization (3)

Prerequisite: Junior standing or consent of instructor. Course integrates communication theories applicable to the structure and function of organizations. The effect of communication variables on departmental interface, member satisfaction and motivation, leadership and subordinate styles, and perception of the organization by the external environment.

2232(232) Effective Communication in the Organization: Tool for Leadership (3)

Prerequisites: Junior standing or consent of instructor. Telecourse designed to equip students with communication skills applicable to the organizational context. The course will present effective strategies for the articulation of ideas, with particular emphasis on the development of leadership skills.

2240(240) Persuasive Communication (3)

Prerequisite: Comm 1040(40). A study of persuasive communication, including theories, techniques, forms, functions, applications, potential, and limitations for the individual and organizations. Insights from both classical rhetoric and contemporary communication theory.

2241(241) Argumentation and Debate (3)

Prerequisite: Comm 1040(40), or 1041(41), or consent of instructor. Principles of argumentation and debate with practice in preparing briefs and in delivering spoken arguments in formal debate. Emphasis on analysis of issues, logical reasoning, and audience analysis.

2243(243) Communication in American Politics (3)

Prerequisite: Comm 1040(40). Analysis of audience response and media preferences in political campaigns, campaign speeches, candidates' uses of television and other mass media, and measuring effectiveness of campaign communications.

2271(271) History of Film to World War II (3)

Prerequisite: Comm 1070(70) or consent of instructor. History of world cinema from the late nineteenth century to the 1940s.

2272(272) History of Film Since World War II (3)

Prerequisite: Comm 1070(70) or consent of instructor. History of world cinema from the 1940s to the present day.

3214(214) News Writing (3)

Same as English 3140(214). Prerequisite: English 1100(10) or equivalent. An introduction to news writing and reporting. Course covers basic components of news reporting principles, and news writing style and structure. Daily writing assignments include coverage of speeches, meetings and interviews, accidents, deaths, courts, sports, consumer affairs, and government. Emphasis on clarity, accuracy, and speed.

3310(310) Television Production II (3)

Prerequisite: Comm 2210(210). Study of advanced theories of television production. Refinement of studio television principles learned in Comm 2210(210). Exploration of complex program formats. Lab arranged.

3311(311) Broadcast Management (3)

Prerequisite: Comm 1110(110). Introduction to theories of management, with application to radio and television station operations. Discussion of economic, legal, and ethical problems and issues.

3313(313) Advanced Video Editing (3)

Prerequisite: Six (6) hours of television production. Study of advanced editing techniques. Exposure to nonlinear formats. Animation and advanced graphics development. Exploration of state of the art editing formats. Lab arranged.

3316(316) Television News (3)

Prerequisite: Comm 2110(210). Theory and laboratory practice in the gathering, writing, and delivery of news through television. Lab arranged.

3317(317) Radio and the Recording Industry (3)

Prerequisite: Junior standing. Historical development and current status of the recording industry, particularly as it interacts with the broadcast industry. Impact of radio and recording technology on the development of rock and other popular music.

3330(330) Research Methods in Communication I (3)

Prerequisite: Comm 1135(135). Introduction to the fundamental tools of quantitative research in communication. Focus of the course is on reading and comprehending communication research reports rather than conducting quantitative research.

3331(331) Research Methods in Communication II (3)

Prerequisite: Comm 3330(330). Extends the study of research methods covered in Com 330 to the planning and executing of research projects. Students acquire data analysis, research design, and basic measurement skills. Problems of quantitative study unique to the study of communication are explored.

3332(332) Intercultural Communication (3)

Prerequisite: Junior standing or consent of the instructor. Study of culture as a variable in both interpersonal and collective communicative situations. Emphasis upon opportunities and problems arising from similarities or differences in communication patterns, processes, and codes among various cultural groups.

3333(333) Communication Audit (3)

Prerequisite: Comm 2231(231). The application of specific empirical research designs to evaluate communication flows, effectiveness, or channels in complex organizations.

3334(334) Advertising Media Planning (3)

Prerequisite: Comm 1050(50). A hands-on study of how to determine an advertising budget, select media and develop a strategic plan.

3336(336) Communication in Advertising (3)

Prerequisites: Comm 1050(50) and junior standing, or consent of instructor. Overview of components in persuasive messages and how advertising messages and campaigns use various media to reach target audiences.

3340(337) Male/Female Communication (3)

Prerequisite: Junior standing or consent of instructor. This course explores the influence of gender upon contemporary American communication behavior. Topics include semantic and syntactic variations in male and female speech, gender-role development as process and product of communication, analysis of communication patterns and barriers within gender groups. Mass, public, interpersonal, and dyadic communication contexts are considered.

3340(340) Rhetorical Criticism (3)

Prerequisite: Comm 1040(40). The application of rhetorical theories to the analytical and critical explanation of persuasive messages.

3341(341) Classical Rhetoric and Public Address (3)

Prerequisite: Comm 1040(40) or consent of instructor. A survey of the history and theories of persuasion and public address from ancient times to the Renaissance.

3342(342) Modern Rhetoric and Public Address (3)

Prerequisite: Comm 1040(40) or consent of instructor. A survey of the history and theories of persuasion and public address from the post-Renaissance era to the present.

3343(343) The Rhetoric of Protest (3)

Prerequisite: Comm 1040(40). An examination of the persuasive messages and tactics used in social movements and their campaigns.

3344(344) Advanced Argumentation Theory (3)

Prerequisite: Comm 2241(241) or consent of instructor. This course focuses on advanced argumentation theory. It

is aimed at providing an advanced understanding of the complex issues faced by argumentation scholars.

3345(345) Theory and Practice of Interviewing (3)

Prerequisite: Comm 1040(40) and junior standing, or consent of instructor. The application of modern communication theory to interview situations. This theory and practicum course is designed to aid the student in mastering specific skills appropriate to specialized settings.

3346(346) Advanced Interviewing Techniques (3)

Prerequisite: Comm 3345(345). Examination and application of problem solving and information-gathering methods, with emphasis on specialized situations such as journalistic; health, crisis intervention, and counseling; superior-subordinate relationships and employment. In-class study approach and field interview assignments.

3350(350) Mass Communication History (3)

Prerequisite: Comm 1050(50) or 1110(110). Examination of the social, economic, and political factors contributing to the development of American mass media. Emphasis on significant personalities who helped shape its course; analysis of select critical works.

3352(352) Mass Media Criticism (3)

Prerequisite: Comm 1050(50) or 1060(60). The study of media content and its effect on society. Reading and viewing of selected works. Independent reading and critical analysis required.

3354(354) Comparative Telecommunication Systems (3)

Prerequisite: Comm 1065(65) or consent of instructor.. Historical aspects of various systems of telecommunication throughout the world. Examination of American, Canadian, European Community (EC), and other telecommunication systems.

3355(355) Media Law and Regulation (3)

Prerequisite: Comm 1050(50) or 1110(110). Discussion of laws affecting the mass media. Exploration of problems and issues in legal regulation of media content, ownership, access, and accountability. Discussion of industry self-regulation and the influence of citizens' organizations.

3358(358) Communication in Public Relations (3)

Prerequisite: Comm 1150(150). An overview of communication within the area of public relations. Emphasis on ethics, law, professional standards, and written communication. Case study approach.

3360(360) Health Communication (3)

Prerequisite: Comm 1030(030), 1040(040), or 1050(050) or consent of instructor. An analysis of the role communication plays in influencing the health care environment. The course consists of two parts. The first part examines public health care prevention campaigns, e.g., anti-smoking, as well as focusing on the

environmental problems, including communication strategies utilizing various media alternatives. The second part focuses on interpersonal and small group communication practices within health-care settings. Consideration of verbal and nonverbal communication research will be explored.

3362(362) Storytelling (1-3)

Prerequisite: Junior standing or consent of instructor. This course gives an overview of the history of storytelling, types of tales, and appropriate uses for storytelling. The primary emphasis of the course is in developing storytelling skills through preparation, performances, and evaluation.

3370(370) Documentary Film (3)

Prerequisite: Comm 1070(70). Consideration of the history, theory, and criticism of nonfiction film. Screening of representative documentary films.

3392(392) Administration of Cocurricular Activities (3)

Prerequisites: Junior standing and consent of instructor. A survey of the skills required to administer the various cocurricular activities associated with teachers in the secondary schools, such as: operation of debate tournaments, public speaking competitions, and mass media centers.

3393(393) Internship in Applied Communication (3-6)

Prerequisites: Senior standing, with a least 12 hours of course work in communication theory and rhetoric; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Advanced practical work in business communication, political campaign communication, advertising, public relations, or other forms of organizational or public communication. Work must be done off campus, under supervision of a working professional in the field, in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

3394(394) Internship in Journalism (3-6)

Prerequisites: Senior standing, with at least 12 hours of course work in journalism, mass communication, etc.; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work with an off-campus newspaper, magazine, or other news organization, supervised by a journalism professional in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

3395(395) Special Topics in Communication (3)

Prerequisite: Senior or graduate standing. In-depth study of topics pertaining to current research in the department. May be repeated up to six credit hours if topic is different.

3396(396) Internship in Radio (3-6)

Prerequisites: Senior standing, with at least 12 hours of course work in radio, broadcasting, etc.; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work at an off-campus radio station, supervised by a professional in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

3397(397) Internship in Television/Film (3-6)

Prerequisites: Senior standing, with at least 12 hours of course work in television, film, video, etc.; an overall GPA of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Practical work at an off-campus television, film, or video organization, supervised by a television, film, or video professional in consultation with a faculty member. Repeatable, but no more than six hours total credit may be earned in internship courses toward the 36-hour minimum required for the degree.

4335(335) Seminar in Applied Communication Research (3)

Prerequisites: Comm 1135(135) and consent of instructor. This course explores the use of communication concepts, theories, methods, and designs in applied field settings with an emphasis on original research.

4356(356) International Communication (3)

Prerequisite: Comm 1050(50) or 1110(110). Examination of the social, technical, economic, and political factors affecting international broadcasting and transnational media systems.

4357(357) Media Ethics (3)

Prerequisite: nine hours of philosophy or nine hours communication or consent of instructor. Same as Philosophy 4457(357). This course is concerned with some of the issues that arise from the intersection of ethics and modern media communications. Attention is given to some of the more specific concerns of media ethics, such as truth, honesty, fairness, objectivity and bias; personal privacy and the public interest; advertising; conflicts of interest; censorship and offensive or dangerous content (pornography, violence). Particular attention will be given to problems posed by the development of personal computer communications through bulletin boards, on-line services, and the Internet.

4390(390) Directed Readings (3)

Prerequisites: Consent of instructor; not open to students who have any Y or delayed grades outstanding. Supervised independent study involving readings, conferences, papers, etc., in one of the department's disciplines: communication theory and rhetoric, or mass communication.

4391(391) Supervised Research (1-5)

Prerequisites: Junior/senior standing and consent of instructor; not open to students who have any Y or delayed grades outstanding. Supervised field or laboratory research, data collection, literature searches, qualitative or quantitative data analysis, report writing and other techniques used by communication researchers. Repeatable, but no more than 5 credit hours may be earned in supervised research courses.

6400(400) Seminar in Communication Theory (3)

Prerequisites: Graduate Standing. Examination of the theoretical, methodological, and philosophy of science issues in the discipline of communication. Examines general, micro, contextual, and interdisciplinary (symbiotic) communication theories. Required of all graduate communication students. (Core Course.)

6405(405) Introduction to Communication Research Methods (3)

Prerequisites: Graduate Standing. Concerns the logic of scientific inquiry including the discovery, counting, and analysis of material, social, and symbolic facts, and reviews research methods guided by general, micro and contextual communication theories. Provides an orientation to graduate research including proposal development for thesis, internship and paper requirements and includes a theory-based research project of the student's choice. Required of all graduate communication students. (Core Course.)

6406(406) Introduction to Communication Education Research (3)

Prerequisites: Graduate Standing. The development of educational communication research as a social scientific field. Critical evaluation of techniques and problem selection. Emphasis on the function of communication education concept formation and theory.

6411(411) Seminar in Mass Communication (3)

Examines the communication research literature pertaining to media planning, content, and effects. A broad range of media forms and possible effects are considered.

6431(431) Seminar in Organizational Communication (3)

Prerequisites: Graduate Standing. Explores communication theories and topics related to organizational, institutional, and social system contexts and reviews the communication literature on behavior in organizations. Emphasizes a case study approach to the communication strategies used by agencies and corporations. (Core course.)

6435(435) Seminar in Advanced Applied Communication (3)

Prerequisites: Graduate Standing. Examines the logic and forms of communication inquiry in solving client-centered problems. Topics include audience ratings and segmentation, targeting, applied and basic research paradigms and approaches to grounding theory. Reviews the use of research by agencies, campaigns and organizations. Includes a team research project. (Core Course.)

6445(445) Seminar in Advanced Organizational Communication (3)

Prerequisite: Com 6431(431). Extends the exploration of communication in organizations covered in Com 6431(431) to more advanced quantitative models of organizational communication. Focuses heavily on the quantitative studies published in communication research literature.

6454(454) Seminar in Communication Systems and Technologies (3)

Prerequisites: Graduate Standing. Examines innovation in modern communications technologies, their impact on society, and their contribution to the information revolution.

6490(490) Directed Readings in Communication (1-10)

Prerequisites: Graduate Standing. Individual research on a problem defined by the graduate student and the faculty member in conference. May be repeated once with the consent of the departmental graduate faculty.

6495(495) Seminar in Special Topics in Communication (3-9)

Prerequisites: Graduate Standing. Selected topics in the study of communication. Review of the communication theory and methods appropriate to the topic. The course includes a research project. May be repeated if the topic is different.

6498(498) Thesis Research and Preparation (1-10)

Prerequisites: Graduate standing. Individual research for and preparation of the graduate thesis.

6499(499) Graduate Internship (3-6)

Prerequisites: Graduate standing and approval of graduate coordinator. Individual on-site internship in organizational or mass communication setting. May be repeated.

Department of Music

Faculty

James Richards, Professor* , Chair
 Ph.D., University of Rochester, Eastman School of Music

John Hylton, Dean, College of Fine Arts and Communication, Professor*,
 D.Ed., Penn State University

Gearoid O'hAllmhurain, Jefferson Smurfit Professor of Irish Studies (Social Anthropology, Ethnomusicology)
 Ph.D., The Queen's University of Belfast

Douglas Turpin, E. Desmond Lee Professor of Music Education*
 D.Ed., Washington University

Mark Madsen, Professor
 D.M.A., University of Arizona

Kenneth E. Miller, Professor Emeritus
 Ph.D., Northwestern University

Evelyn Mitchell, Professor Emerita

Arnold Perris, Professor Emeritus
 Ph.D., Northwestern University

Robert J. Ray, Professor*
 B.M., Northwestern University

Diane Toulaitos, Professor*
 Ph.D., Ohio State University

Fred Willman, Professor*
 Ph.D., University of North Dakota

Barbara Harbach, Visiting Professor
 D.M.A., Eastman School of Music

Leonard Ott, Associate Professor*,
 Ph.D., Michigan State University

William Richardson, Associate Professor*
 Ph.D., University of Kansas

Karen Parthun, Assistant Professor*
 D.M.A., Arizona State University

John K. Southall, Assistant Professor
 Ph.D., Florida State University

Kurt S. Baldwin, Arianna String Quartet, Artist-in-Residence
 M.M., New England Conservatory of Music

Robert Meyer, Artist in Residence (Viola)
 Performers' certificate, University of Michigan and the Rice University, Shepherd School of Music

John McGrosso, Artist in Residence (Violin)
 Performers' Certificate, Northern Illinois University

Rebecca Rhee, Artist in Residence (Violin)
 M.A., Northern Illinois University

James Widner, Artist in Residence (Jazz)
 M.A., Memphis State University

William Hammond, Affiliate Associate Professor (World Music/Music Appreciation, Aural Training, French Horn)
 D.Ed. Boston University

Kathryn Haggans, Adjunct Associate Professor (Voice)
 Ph.D., University of Arizona

Carol Koch, Senior Lecturer (Music Ed./Piano)
 M.M.E., University of Missouri-St. Louis

Jennifer Garrison Brown, Lecturer (Flute)
 B.M.E., University of North Texas

Matthew Henry, Lecturer (Percussion)
 B.M., Performance, University of Missouri-St. Louis

Ann Homann, Lecturer (Oboe)**
 M.M., St. Louis Conservatory of Music

Joseph Kaminsky, Lecturer (Strings)
 M.M., Southern Illinois University-Edwardsville

Paula Kasica, Lecturer (Flute)**
 B.M., St. Louis Conservatory of Music

Katharine Lawton-Brown, Lecturer, (Voice) Director, Premiere Performance Concert Series
 M.M., James Madison University

Robert Mottl, Lecturer (Bassoon)**
 M.M., Indiana University

Elke Overton, Lecturer (Saxophone)
 M.M., University of Cincinnati, Conservatory of Music

Gerry Pagano, Lecturer
 M.M., Juilliard School of Music

Alan Rosenkoetter, Lecturer (Guitar)
 B.S., Washington University

Robert Souza, Lecturer (Trumpet)
 B.M.E., University of Missouri-St. Louis

Sue Stubbs, Lecturer (Double Bass)
 M.M., University of Missouri-Columbia

Jeanine York-Garesche, Lecturer (Clarinet)
 M.M., St. Louis Conservatory of Music

Mieko Hironaka-Bergt, Specialist (Piano)
 M.M., Toho Academy of Music

Vera Parkin, Specialist (Piano)
 M.M., Southern Illinois University at Edwardsville

Sharon Tash, Specialist (Piano)
 B.A., University of Missouri-St. Louis

*members of graduate faculty

**member, St. Louis Symphony Orchestra

Music faculty members have received recognition for distinguished achievements in conducting, composition, and performance. The faculty is also recognized for research in musicology and music education. Part-time applied music lecturers are all professional musicians.

The music department is accredited by the National Association of Schools of Music.

Membership in Music Department performing ensembles (choral, orchestral, band, jazz, chamber, etc.) is open to UM-St. Louis students in all majors and minors. Admission to most ensembles is by audition (consent of the instructor). Music 1400, University Chorus, is open to all university students without audition.

General Information

Degrees and Areas of Concentration

The Department of Music offers programs of study leading to the B.M. degree in music education (and state teaching certification in grades K-12); the B.M. degree with an emphasis in performance; the B.M. degree with elective studies in business; and the B.A. degree in music.

Instruction in piano, organ, voice, and all band and orchestral instruments is given by full-time faculty and part-time professional musicians, many of who are members of the St. Louis Symphony Orchestra. Faculty recitals are regularly scheduled.

Music Minors Three minors in music are available: a minor in music; a minor in music education (choral/vocal, grades K-9); and a minor in jazz studies.

Facilities All of the department's facilities, classrooms, rehearsal rooms, studios, practice rooms, and listening labs are located in the Music Building.

Ensembles Fifteen performing ensembles are open to all by audition with credit optional:

- 1400(40), University Chorus
- 1410(41), The University Singers
- 1500(50), University Orchestra
- 1520(52), University Band
- 1530(53), University Wind Ensemble
- 1541(54A), Chamber Ensemble Brass
- 1542(54B), Jazz Combo
- 1543(54C), Chamber Ensemble Percussion
- 1544(54D), Chamber Ensemble Strings
- 1545(54E), Chamber Ensemble Voice
- 1546(54F), Chamber Ensemble Woodwind
- 1547(54G), Accompanying
- 1550(55), Jazz Ensemble
- 1560(56), Opera Workshop
- 1600(356), Advanced Opera Workshop

Each year about 40 recitals and concerts are presented.

Undergraduate Studies

General Education Requirements

General education requirements apply to all majors, except students in the B.M. with elective studies in business and B.M. in music education degree programs who are not required to take a foreign language. Courses required for degree programs may not be taken on a satisfactory/unsatisfactory basis. All music courses presented to meet degree requirements must be completed with a grade of C or better.

Students may complete any number of hours of applied music (private lesson) toward a degree. Non-music majors may complete no more than 8 hours in music-performing organizations Music 1400(40), University Chorus; 1410(41A), University Singers; 1500(50), University Orchestra; 1520(52), University Band, et. seq. toward graduation, including credit transferred. Courses in applied music (private lessons and performing organizations) do not fulfill the humanities general education requirement. Department courses, which meet the non-Euro-American study requirement, are Music 1090(9), Non-Western Music I, and Music 1100(10), Non-Western Music II.

Degree Requirements

Admission to all music degree programs is by audition and interview to demonstrate musical aptitude and potential, moderate technical proficiency, and seriousness in selecting music as a four-year course of study. In addition to the applied music audition, examinations in music theory and music history must be taken. Students in applied music must pass a junior-standing examination to confirm their level of performance skills for enrollment in Music 3440 – 3459 (244 A – T) or Music 4440 – 4459(2:54 A – T). This examination is usually taken at the same time as the applied music jury for the fourth semester of enrollment in Music 1440 - 1459 (44 A – T).

Evidence of sound musicianship, a close acquaintance with an appropriate portion of musical literature, and the ability to bring it to actual performance are required for graduation in all music degree programs. Students in the bachelor of music-performance emphasis fulfill this requirement with junior and senior recitals. Those in all other degree programs must satisfy the requirement by participating in three regularly scheduled student recitals during the last two semesters of applied music study, or by performing for a special jury of faculty members. The faculty may invite students who are not in the bachelor of music-performance emphasis program to give public senior recitals with the recommendation of the applied music instructor.

Music majors are required to participate in an approved ensemble (University Band, University Singers, University Chorus, or Orchestra) and to study one applied area progressively each semester, and to attend pedagogy and literature seminars each semester of the degree program. (Music education majors are exempt from these requirements during the student teaching semester.) The following specific ensemble enrollments, depending upon the applied music area, are required:

Wind and percussion students—University Band; string students--University Orchestra; voice students --University Singers; keyboard and guitar students--any approved ensemble, but those in the bachelor of music in music education program must enroll in an ensemble compatible with the teaching certification they are pursuing. Instrumental students may be required to participate in additional ensembles to enhance their musical development.

Majors are required to appear in performance at the department's discretion and to attend a prescribed number of departmental recitals. Non-keyboard players are required to pass an exam in piano proficiency: Music 2180(118), Intermediate Piano Proficiency, or equivalent for instrumentalists, or Music 3290(120), Intermediate Piano Proficiency, or equivalent for vocalists.

The music 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.

Core Curriculum

The following core courses are required for all music majors:

Music Theory

1301(30A), Theory of Music I
1302(30B), Aural Training I
1311(31A), Theory of Music II
1312(31B), Aural Training II
2301(130A), Theory of Music III
2302(130B), Aural Training III
2311(131A), Theory of Music IV
2312(131B), Aural Training IV
3410(141), Orchestration

Piano Proficiency

1140(14), Piano Proficiency
1150(15), Piano Proficiency
2160(116), Intermediate Piano Proficiency
2180(118), Intermediate Piano Proficiency

Music History and Literature

1010(101), History of Western Music I
1020(102), History of Western Music II
and at least one upper level history course 4000 – 4270(300).

Applied Music

1460(44Z), 3460(244Z), 4460(254Z), Seminar in Pedagogy and Literature

In addition to the core curriculum, students must fulfill the requirements for the specific degree program or emphasis area as listed below:

Bachelor of Arts in Music

In addition to the required core curriculum, candidates must complete the following:

2510(151), Conducting I
3920(192), Senior Research
1090(09), Non-Western Music I, or
1100(10), Non-Western Music II

Applied Area 8 credit hours of private lessons

Ensemble 4 hours maximum credit

Bachelor of Music in Music Education

In addition to the required music core curriculum, candidates must complete the following:

General Education Requirements

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, American government and general psychology.

Natural Science

One course in 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 in the General Education Requirement Area must be a minimum of two semester hours.)

Applied Area 7 credit hours of private lessons

Practicum

2510(151), Conducting I

Instrumental Certification

1250(25), 1260(26), 1270(27), 1280(28), Instrumental Techniques
3521(152a), Conducting II – Instrumental
2610(161a), Elementary School Instrumental Literature Laboratory
3620(162a), Junior – Senior High School Instrumental Literature Laboratory

Vocal Certification

1250(125), Singer's Diction: English, Italian and German
1260(126), Singer's Diction: Latin, French, and Spanish
3190(119), Intermediate Piano Proficiency
3290(120), Intermediate Piano Proficiency
3420(142), Choral Arranging
3430(143), Instrumentation and Score Technique (in lieu of Music 3410(141))
3522(152b), Conducting II – Choral
2611(161b), Elementary School Choral Literature Laboratory
3621(162b), Junior – Senior High School Choral Literature Laboratory

For vocal certification students whose applied area is not voice, the following course is also required:
1240/124, Intermediate Vocal Techniques

Ensemble 4 hours maximum credit

Curriculum and Methods of Teaching

*3570/257, Curriculum and Methods of Teaching
Elementary School Music

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***3670/267**, Philosophic and Practical Foundations of the Secondary Music Education Curriculum

Instrumental Certification

***3680/268**, Curriculum and Methods of Teaching Instrumental Music I

***3700/270**, Curriculum and Methods of Teaching Instrumental Music II

Vocal Certification

***3690/269**, Curriculum and Methods of Teaching Middle School/Junior High School General Music

***3710/271**, Curriculum and Methods of Teaching Secondary Choral Music

*Must be taken in residence before enrolling in Secondary Education 3293/293 and Secondary Education 3294/294.

Proficiency Exam Students working toward certification in choral/vocal or instrumental music K-12 are required to pass a proficiency examination before admission to student teaching in music, usually before or during the sixth semester of their program.

Professional Education and Student Teaching

Level I Courses:

Tch Ed 2210(210), Introduction to Teaching

Tch Ed 2211(211), Introduction to Schools

Tch Ed 2212(212), Introduction to Learners

Level II Courses:

Tch Ed 3310(310), Introduction to Instructional Methodology

Tch Ed 3312(312), Psychology of Teaching and Learning

Tch Ed 3313(313), The Psychology and Education of Exceptional Individuals

Sec Ed 4391(386), Teaching Reading in Secondary School Content Area

Level III Courses:

Sec Ed 3293(293), Student Teaching in Music, K-6

Sec Ed 3294(294), Student Teaching in Music 7-12

Bachelor of Music with an Emphasis in Performance

In addition to the required core curriculum, candidates must complete the following:

3110(311), Analysis of Twentieth-Century Techniques

3120(312), Tonal Counterpoint

2510(151), Conducting I

3521 or 3522(152A or 152B), Conducting II

3920(192), Senior Research

3190(119), Intermediate Piano Proficiency (voice majors only)

3290(120), Intermediate Piano Proficiency (voice majors only)

1090(09), Non-Western Music I, or

1100(10), Non-Western Music II

1560(156), Piano Pedagogy (Keyboard students only)

Music History and Literature

An additional upper level course is required 4000-4270(300).

Applied Area

12 credit hours of applied music, including 8 credit hours at the Music 4440-4459 (254 A – T) level (junior and senior recitals required).

Students in Applied Music must pass a junior standing exam to confirm their level of performance skills for enrollment in Music 4440-4459 (254 A – T).

Ensemble Participation required as follows:

Large Group 4 hours maximum credit

Chamber Ensemble/Accompanying 6 hours

Foreign Language Candidates pursuing this emphasis area with an applied area in voice must complete two semesters of one foreign language selected from French, German, or Italian I and Italian 2.

Bachelor of Music with Elective Studies in Business

In addition to the required core curriculum, candidates must complete the following:

Applied Area 8 credit hours of applied music

Music History and Literature: An additional upper 4000 – 4459(300) level course is required.

1090(09), Non-Western Music I, or

1100(10), Non-Western Music II

Practicum

2510(151), Conducting I

Ensemble 4 hours maximum credit

Internship

4920(292), Internship (replaces Music 3920(192) Senior Research in Core Curriculum)

English - One of the following English courses is required:

3100(210), Advanced Expository Writing

3120(212), Business Writing

3130(213), Technical Writing

Business Administration The following courses in business administration are required:

2400(140), Fundamentals of Financial Accounting

2410(145), Managerial Accounting

3700(206), Basic Marketing

3600(210), Management as a Behavioral Science I

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Two courses selected from the following list must also be taken:

1800(103), Computers and Information Systems
2900(156), Legal Environment of Business
3500(204), Financial Management
3900(256), Business Law: Contracts, Sales, Secured Transactions, Bankruptcy
3270(720), Management of Promotion
3710(301), Consumer Behavior
3621(309), Human Resource Management
3611(311), Advanced Management and Organizational Behavior
3622(312), Industrial and Labor Relations
3441(347), Income Taxes

Note: The following courses fulfill general education requirements and are prerequisites to the required business administration courses:

Psych 1003(3), General Psychology, or
Sociology 1010(10), Introduction to Sociology
Economics 1001(51), Principles of Microeconomics

Curricula for Minors

Minor in Music

Candidates must complete the following courses (26 hours):

Music Theory

1301(30A), Theory of Music I
1311(31A), Theory of Music II
1302(30B), Aural Training I
1312(31B), Aural Training II

Music History and Literature

1010(101), History of Western Music I
1020(102), History of Western Music II

Applied Area 4 credit hours of private lessons

Ensemble 2 credit hours (4 hours maximum credit)

Six additional credit hours to be chosen from courses such as the following:

2301(130A), Theory of Music III
2302(130B), Aural Training III
2311(131A), Theory of Music IV
2312(131B), Aural Training IV
3410(141), Orchestration
2160(116), Intermediate Piano Proficiency (Prerequisite: Music 1150(15))
2180(118), Intermediate Piano Proficiency
Any 4200-level music history and literature course

Music education methods courses and instrumental techniques courses may not be taken to complete this minor.

Non-keyboard players are required to pass an exam of piano proficiency Music 1150(15) or equivalent.

A GPA of 2.5 for all music hours is required to complete this minor.

Minor in Music Education

(choral/vocal, grades K-9)

The minor in music education is designed to provide a second classification area for students enrolled in other education programs that lead to initial teaching certification.

Candidates must complete the following courses (41 hours):

Music Theory

1301(30A), Theory of Music I
1311(31A), Theory of Music II
1302(30B), Aural Training I
1312(31B), Aural Training II

Music History and Literature

1010(101), History of Western Music I
1020(102), History of Western Music II

Music Education

3570(*257), Curriculum and Methods of Teaching Elementary School Music
3670(*267), Philosophic and Practical Foundations of the Secondary Music Education Curriculum
3690(*269), Curriculum and Methods of Teaching Middle School/Junior High School General Music

*Elementary education majors will omit Music 3770(177) from their regular elementary program to take these courses. Also required, as applicable, is Sec Ed 4399(393), Student Teaching.

Practicum

1140/1150(14/15), Piano Proficiency
2160/2180(116/118), Intermediate Piano Proficiency
2510(151), Conducting I
2611(161b), Elementary School Choral Literature Laboratory
3621(162b), Junior-Senior High School Choral Literature Laboratory

Ensemble

1400/1410(40/41), Chorus or University Singers

Applied Music, voice (at least 2 hours must be private rather than class voice)

The student must receive at least a C in each music course and maintain a 2.5 GPA in all music courses (Chorus/Singers is not included in the GPA).

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Minor in Jazz Studies

Candidates must complete 31 credit hours from the following:

Music Theory

1301(30A), Theory of Music I
1311(31A), Theory of Music II
1320(32), Theory of Jazz
1302(30B), Aural Training I
1312(31B), Aural Training II

Music History and Literature

1070(7), Introduction to Jazz
1020(102), History of Western Music II

Applied Area 4 credit hours of private lessons

Jazz Improvisation

1200(20), Jazz Improvisation Laboratory (2 credit hours/
Music 1200(20) repeated)

Piano Proficiency

1140/1150(14/15), Piano Proficiency
2160(116), Intermediate Piano Proficiency
2170(117), Jazz Keyboard Harmony

Ensemble 2 credit hours minimum, to be selected from:

1542(54B), Jazz Combo
1545(54E), Chamber Ensemble Voice
1550(55), Jazz Ensemble

Graduate Study

Master of Music Education

The master of music education degree is designed to enable music specialists in grades K-12 to pursue continued professional growth in an emphasis area of their choice: choral, general music, instrumental, or music technology.

Admission Requirements

Admission to the program requires a bachelor of music in music education (or equivalent) degree, admission to the Graduate School, and three letters of recommendation.

A written examination in music education (including applications of music history and music theory/ear-training) will be taken during the first semester or term of enrollment in the program for advising purposes and to identify the possible need for review in the areas of music theory and history.

The program requires completion of 32 hours of graduate credit, 22 of which must be earned in residence.

Required Courses and Options:

Each candidate will choose one of the following emphasis areas:

Choral music education
Instrumental music education
General music education
Music education and technology

The minimum 32-hour program includes the following requirements.

Major Area (9 credit hours)

5810(481), Foundations of Music Education (3)
5910(491), Music Education Research (3)
5990(499), Master's Project in Music Education (3)

Advanced Methods (3 credits from the following)

5510(451), Graduate Instrumental Methods (3)
5610(461), Graduate Choral Methods (3)
5710(471), General Music: A Model for Multi-Faceted Musical Learning (3)

Choose 9 credits from the following:

5010(401), Studies in Style and Performance (3)
5020(402), Choral Literature (3)
5030(403), Band Literature (3)
5040(404), Orchestra Literature (3)
5110(411), Scoring and Arranging (3)
5210(421), Advanced Conducting (3)
5620(462), Guitar in the Classroom (3)
5750(475), Microcomputer Applications in Music Education(3)
5760(476), Microcomputer Assisted Instruction Curriculum Development in Music (3)
5770(477), Graduate Microcomputer Applications in Music (3)
5920(492), Psychology of Music (3)

Cognate in Education

Choose one 3-credit curriculum course such as:

Sec Ed 6415(415), The Secondary School Curriculum (3)
Ele Ed 6422(422), Curriculum Construction in Elementary Schools (3)

Choose one other 3-credit education course such as:

Ed Rem 6707(420), Classroom Testing and Measurement (3)
Ed Fnd 6421(421), Philosophy of Education (3)
Sec Ed 6425(425), Secondary School Supervision (3)
Ele Ed 6425(425), Elementary School Supervision (3)
Ed Rem 5730(330), Educational Statistics (3)
Ed Rem 6710(431), Educational Research Methods (3)

Electives

Choose 5 credits from elective courses such as:

4010(301), Marching Band Techniques (3)

- 5020(402), Choral Literature (3)
5030(403), Band Literature (3)
5040(404), Orchestra Literature (3)
5060(406), Graduate Workshop in Music Education (1-3)
5070(407), Techniques and Literature for the Jazz Ensemble (3)
5110(411), Scoring and Arranging (3)
5120(412), Advanced Composition Techniques (3)
5130(413), Teaching Music Theory in the High School (3)
5210(421), Graduate Conducting (3)
5310(431), Graduate Chamber Ensemble (0)
5430(443), Special Applied Studies (1)
5440(444), Graduate Applied Studies (1)
5490(449), Graduate Ensemble (1)
5510(451), Graduate Instrumental Methods (3)
5520(452), Instrumental Music Administration (3)
5610(461), Graduate Choral Methods (3)
5620(462), Guitar in the Classroom (3)
5650(465), Music Theatre in the School (3)
5710(471), General Music: A Model for Multi-Faceted Musical Learning (3)
5720(472), Electronic Music Techniques for Teachers (3)
5730(473), Individualizing Music Instruction (3)
5740(474), Techniques of Group Keyboard Instruction (3)
5750(475), Microcomputer Applications in Music Education (3)
5760(476), Microcomputer Assisted Instruction: Curriculum Development in Music
5770(477), Graduate Microcomputer Applications in Music (3)
5800(480), Musical Acoustics (3)
5820(482), School Music Administration and Supervision (3)
5830(483), Contemporary Music Education (3)
5840(484), Problems of Urban Music Education (3)
5920(492), Psychology of Music (3)
5950(495), Special Problems in Music Education (3)
Ed Tec 5340(340), Selection and Utilization Education Media (3)
Ech Ed 410, Foundations of Pre-School Education (3)
Spc Ed 6412(412), Psychology of Exceptional Children (3)
Sec Ed 6414(414), Teaching the Gifted/Talented in the Secondary School (3)
Sec Ed 6418(418), The Junior High/Middle School (3)
Sec Ed 6427(427), Supervision of Clinical Experiences in Teacher Education (3)
Sec Ed 6429(429), The Department Head (3)
Ed Rem 6710(431), Educational Research Methods (3)

Career Outlook

Undergraduate

A music degree builds the foundation for a career in professional performance, for teaching in a school or private studio or for serving as a church music director. A music degree may also prepare one for positions in the music industry (recording, publishing, radio programming,

manufacturing, or music retail). A trained artistic mind can also be valuable in the fields of advertising, public relations, and consumer services.

A number of UM-St. Louis music graduates have been readily accepted into outstanding graduate programs, including that at UM-St. Louis. Many are pursuing successful careers in music education, business, and industry, or as professional performers.

Graduate

Many graduate students in music education will already hold full-time music teaching positions. A graduate degree in music education allows for continued professional growth. Music specialists may refine their teaching expertise, add to their understanding and knowledge about music and educational processes, become more specialized in a specific emphasis area of music education (choral, instrumental, general music or music technology), or any combination of these professional growth areas.

Graduate-level work in music education is often required to renew a teacher's certificate or to satisfy professional growth requirements specified by an employing school or school district or to advance to new positions within the field of music education.

Course Descriptions

Prerequisites may be waived by consent of the department.

Students who have earned 24 or more semester hours of credit at any accredited post-secondary institutions(s) before the start of the fall 2002 semester must meet the general education requirements stipulated in the UM-St Louis 2001-2002 Bulletin. The following courses fulfill the Humanities breadth of study requirements as described in that Bulletin:

1001(1), 1060(6), 1070(7), 1080(8), 1090(9), 1100(10), 1110(11), 1190(19), 1301(30A), 1311(31A), 1320(32), 1010(101), 1020(102), 1030(103), 1050(105), 1080(108), 2301(130A), 2311(131A), 3770(177), 3920(192), 3020(202), 4000(300), 4210(321), 4220(322), 4230(323), 4240(324), 4250(325), 4260(326), 4270(327), 5000(400), 5750(475).

The following music History courses satisfy the Cultural Diversity requirement: Music 1090(9) and 1100(10)

Applied Music

1410 – 1429(43A - T) Secondary Applied Music (1)

Prerequisites: By audition and consent of department.
Courses are offered in the following areas: 1410-bassoon; 1411-clarinet; 1412-classical guitar; 1413-euphonium; 1414--flute; 1415-French horn; 1416-harp; 1417-oboe; 1418-organ; 1419-percussion; 1420-piano; 1421-saxophone; 1422-trombone; 1423-trumpet; 1424-tuba; 1425-violin; 1426-viola; 1427-violoncello; 1428-string bass; 1429-voice. Not applicable to the applied music requirement for music majors or music minors. May be repeated for credit.

1430(43Y) Secondary Applied Music: Jazz Studies (1)

Prerequisites: By audition and consent of department.
Individual instruction in jazz performance and literature on designated instrument. Not applicable to applied music requirement for music major or music minor degrees. May be repeated for credit.

1440 – 1459(44A-T) Applied Music (1)

Prerequisites: By audition and consent of department.
Courses offered in the following areas: 1440- bassoon; 1441-clarinet; 1442-classical guitar; 1443-euphonium; 1444-flute; 1445-French horn; 1446-harp; 1447-oboe; 1448-organ; 1449-percussion; 1450-piano; 1451-saxophone; 1452-trombone; 1453-trumpet; 1454-tuba; 1455-violin; 1456-viola; 1457-violoncello; 1458-string bass; 1459-voice. May be repeated, up to 4 credit hours. Applied Music registration requires concurrent registration in a large ensemble and seminar Music 1460(44Z).

1460(44Z) Seminar in Pedagogy and Literature (0)

Prerequisites: Concurrent registration with parallel Applied Music course. Seminars are offered in pedagogy and literature for all areas of Applied Music. May be taken on a satisfactory/unsatisfactory grading basis.

3440 – 3459(244A-T) Applied Music (1)

Prerequisite: The completion of Junior Standing Exam in major applied area. Courses offered in the following areas: 3440-bassoon; 3441-clarinet; 3442-classical guitar; 3443-euphonium; 3444- flute; 3445-French horn; 3446-harp; 3447-oboe; 3448-organ; 3449-percussion; 3450- piano; 3451-saxophone; 3452-trombone; 3453-trumpet; 3454-tuba; 3455-violin; 3456-viola; 3457-violoncello; 3458-string bass; 3459-voice. May be repeated, up to 6 credit hours. Applied Music registration requires concurrent registration in a large ensemble and seminar Music 3460(244Z).

3460(244Z) Seminar in Pedagogy and Literature (0)

Prerequisite: Concurrent registration with parallel Applied Music course. Seminars in pedagogy and literature are offered for all areas of Applied Music. May be taken on satisfactory/unsatisfactory grading basis.

4440 – 4459(254A-T) Applied Music (2)

Prerequisites: Completion of Junior Standing Exam in major applied area and admission to Performance Degree Program. Courses offered in the following areas: 4440-bassoon; 4441-clarinet; 4442-classical guitar; 4443-euphonium; 4444-flute; 4445-French horn; 4446-harp; 4447-oboe; 4448-organ; 4449- percussion; 4450- piano; 4451-saxophone; 4452-trombone; 4453-trumpet; 4454-tuba; 4455-violin; 4456-viola; 4457-violoncello; 4458-string bass; 4459-voice. May be repeated, up to 12 credit hours. Applied Music registration requires concurrent registration in a large ensemble and seminar Music 4460(254Z).

4460(254Z) Seminar in Pedagogy and Literature (0)

Prerequisite: Concurrent registration with parallel Applied Music course. Seminars in pedagogy and literature offered for all areas of Applied Music. May be taken on satisfactory/unsatisfactory basis.

5430(443) Special Applied Studies (1)

Prerequisites: Graduate standing in music and consent of department. Individual instruction in performance and literature of an instrument or instrumental family for pedagogical or review purposes in applied area other than student's primary performance study. No jury examination required. May be repeated for credit.

5440(444) Graduate Applied Music (1)

Prerequisites: Graduate standing in music and consent of department. Instruction offered in the following areas: bassoon, clarinet, classical guitar, euphonium, flute, French horn, harp, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, violin, viola, violoncello, string bass, and voice. May be repeated for credit.

Ensemble Performance

1400(40) University Chorus (1)

Prerequisite: Consent of instructor. Preparation and performance of choral literature.

1410(41) The University Singers (1)

Prerequisite: Consent of instructor. The study and performance of music for vocal chamber ensemble.

1500(50) University Orchestra (1)

Prerequisite: Consent of instructor. Study, preparation, and performance of orchestral repertory.

1520(52) University Band (1)

Prerequisite: Consent of instructor. Study, preparation, and performance of music for the wind ensemble and band.

1530(53) University Wind Ensemble (1)

Prerequisite: Consent of instructor. The study, preparation, and performance of music for wind ensemble and chamber band.

1541 –1546(54A-G) Chamber Ensemble (1)

Prerequisite: Consent of instructor. Study, preparation, and performance of music for small ensembles: 1541-brass; 1542-jazz combo; 1543-percussion; 1544-strings; 1545-voice; 1546-woodwinds.

1550(55) Jazz Ensemble (1)

Prerequisite: Consent of instructor. Study, preparation, and performance of jazz music for big band.

1560(56) Opera Workshop (1)

Prerequisite: Consent of instructor. Instruction in movement, basic stage techniques, technical theater, repertory and performance techniques and preparation. May be repeated for credit.

4560(356) Advanced Opera Workshop (1)

Prerequisite: Consent of instructor. Instruction in movement, stage technique, technical theater, repertory, and performance based on advanced vocal skills. May be repeated for credit.

5310(431) Graduate Chamber Ensemble (1)

Prerequisite: Graduate standing in music and consent of department. Study and performance of traditional and nontraditional chamber literature.

5490(449) Graduate Ensemble (1)

Prerequisite: Graduate standing in music or consent of department. Study, preparation, and performance of ensemble literature from the choral, orchestral, or band/wind ensemble repertory. May be repeated for a total of four hours of credit.

Music Education

3570(257) Curriculum and Methods of Teaching Elementary School Music (3)

Same as Ele Ed 3277(277). Prerequisites: Music 2311/2312(131) and Ed Fnd 1111(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. This course must be completed in residence.

3670(267) Philosophic and Practical Foundations of the Secondary Music Education Curriculum (1)

Same as Sec Ed 3275(275). Prerequisites: Music 131(2311/2312), Music 3570(257)/Ele Ed 3277(277) and Level 1, Education core courses. Concurrent registration in Music 3680(268)/Sec Ed 3276(276) and Music 3700(270)/Sec Ed 3278(278) or Music 3710(271)/Sec Ed

3279(279). For the music education major. A study of the secondary school music program: curricular objectives, philosophy, and general administrative procedures common to all secondary music classes. This course must be completed in residence.

3680(268) Curriculum and Methods of Teaching Instrumental Music I (2)

Same as Sec Ed 3276(276). Prerequisites: Music 2311/2312(131), 3410(141), 2510(151), 2610(161), Level 1, Education core courses, two of the following: Music 1250(25), 1260(26), 1270(27), and 1280(28). Concurrent registration in Music 3570(257)/ Ele Ed 3277(277). A study of the teaching techniques, materials, curriculum, and organization of the beginning instrumental music education program. Topics include student recruitment the elementary band/orchestra, small group instruction, jazz ensemble, and marching band. This course must be completed in residence.

3690(269) Curriculum and Methods of Teaching Middle School/Junior High School General Music (2)

Same as Sec Ed 3277(277). Prerequisites: Music 2311/2312(131), Music 3570(257)/Ele Ed 3277(277), and Level 1, Education core courses. Concurrent registration in Music 3670(267)/Sec Ed 3275(275) and Music 3710(271)/Sec Ed 3279(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. This course must be completed in residence.

3700(270) Curriculum and Methods of Teaching Instrumental Music II (2)

Same as Sec Ed 3278(278). Prerequisites: Music 2311/2312(131), Music 3521(152a), Music 3620(162), Music 3570(257)/Ele Ed 3277(277), Music 3680(268)/Sec Ed 3276(276), Level 1, Education core courses, three of the following: Music 1250(25), Music 1260(26), Music 1270(27), Music 1280(28). Concurrent registration in Music 3670(267)/Sec Ed 3275(275). A continuation of Music 3680(268)/Sec Ed 3276(276). Topics include large group rehearsal techniques, program development, administrative procedures, and evaluation. This course must be completed in residence.

3710(271) Curriculum and Methods of Teaching Secondary Choral Music (2)

Same as Sec Ed 3279(279). Prerequisites: Music 2311/2312(131), Music 3570(257)/Ele Ed 3277(277), and Level 1, Education core courses. Concurrent registration in Music 3670(267)/Sec Ed 3275(275) and Music 3690(269)/Sec Ed 3277(277). For the music education major. A study of the secondary school choral music program: curriculum, methods, teaching techniques, organization, and administrative procedures for choral performance classes. This course must be completed in residence.

3770(177) An Introduction to Music for the Elementary School Teacher (3)

Same as Ele Ed 2177(177) An introduction to the elements of music and the expressive nature of music. Includes application of fundamentals to appropriate literature and activities for use with children in a classroom setting. This course will not apply toward requirements for a music major.

4000(300) Advanced Techniques in Music Education (1-2)

Prerequisite: A 3000(200) level music education course or permission of the department. Intensive study for advanced music education students and music teachers, emphasizing specialized techniques and innovative concepts. Topics to be announced. May be repeated for credit.

4010(301) Marching Band Techniques (3)

Prerequisite: Junior Standing . Techniques for organizing and training school marching bands. Content will include planning and charting shows, rehearsal problems, corps and traditional styles, and auxiliary units.

4060(306) Advanced Workshop in Music Education (1-5)

Prerequisite: Junior standing and consent of the instructor. An intensive variable-topic workshop in music education presenting knowledge and skills to supplement specific areas in existing courses.

5000(400) Directed Research in Music: Variable Topic (1-5)

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

5060(406) Graduate Workshop in Music Education (1-5)

Prerequisite: Graduate standing and consent of instructor. Intensive workshop in music education. Variable topics. To gain skills and knowledge in specific areas not readily available in existing courses.

5070(407) Techniques and Literature for the Jazz Ensemble (3)

Prerequisite: Graduate standing in music. An examination of jazz music education. Includes methods, materials, improvisational techniques, and administration.

5130(413) Teaching Music Theory in the High School (3)

Prerequisite: Graduate standing in music. A study of the course content and pedagogical techniques for high school music theory courses.

5510(451) Graduate Instrumental Methods (3)

Prerequisite: Graduate standing in music. Development of objectives for instrumental programs and methods of achieving those objectives. Comprehensive musicianship through instrumental performance, analysis of instrumental literature, instrumental philosophies and methodologies, rehearsal organization, and recent research in instrumental music education will be discussed.

5520(452) Instrumental Music Administration (3)

Prerequisite: Graduate standing in music. Study of the organizational problems of the instrumental program; library management; budgeting; awards and incentive systems; selection, care, and handling of uniforms and equipment; instrumental balance; seating plans; and operation of festivals and contests.

5610(461) Graduate Choral Methods (3)

Prerequisite: Graduate standing in music. Development of objectives for choral programs and methods of achieving those objectives. Comprehensive musicianship through choral performance, analysis of choral literature, the changing voice, choral philosophies and methodologies, rehearsal organization, and recent research in choral music education will be discussed.

5620(462) Guitar in the Classroom (3)

Prerequisite: Graduate standing in music. A study of guitar instruction in grades 5-12 with a focus on curricular sequence that includes chords, strums and picking patterns essential for song accompaniment skill development. Current materials, suitable for upper elementary and secondary students will be explored.

5650(465) Music Theatre in the School (3)

Prerequisite: Graduate standing in music. Techniques appropriate for school musical productions. Aspects of production and planning, including makeup, staging, lighting, and costuming.

5710(471) General Music: A Model for Multifaceted Musical Learning (3)

Prerequisite: Graduate standing in music. An exploration of the general music class as a learning laboratory model designed to actively engage the learner in a series of comprehensive music learning experiences. Emphasizes techniques and materials that will motivate the nonperformance-oriented student.

5720(472) Electronic Music Techniques for Teachers (3)

Prerequisite: Graduate standing in music. Basic electronic music instruments, their operation and use as teaching tools. Materials and techniques suitable for use with students in both elementary and secondary school settings will be presented.

5730(473) Individualizing Music Instruction (3)

Prerequisite: Graduate standing in music. The development of learning strategies, materials, and evaluation techniques suitable for better accommodating the varying interests, abilities, and learning styles of individual students in music classes.

5750(475) Microcomputer Applications in Music Education (3)

Prerequisites: Graduate Standing in Music. 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.

5760(476) Microcomputer-Assisted Instruction Curriculum Development in Music (3)

Prerequisites: Graduate Standing in Music. 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.

5770(477) Graduate Microcomputer Applications in Music (3)

Prerequisite: Graduate Standing in Music. The study of complex microcomputer applications including music synthesis, MIDI, music-oriented graphics, voice and pitch recognition, administrative applications and computer-assisted instruction.

5800(480) Musical Acoustics (3)

Prerequisite: Graduate Standing in Music. The acoustical properties of the human voice, acoustic and electronic musical instruments, rehearsal rooms and performance spaces. Applications for musicians/teachers in the choice, design and acoustical treatment of rehearsal/performance space, requirements and techniques for quality musical recordings and the use of acoustic principles in the design of original classroom musical instruments.

5810(481) Foundations of Music Education (3)

Prerequisite: Graduate standing in music. A study of the historical, philosophical, and psychological foundations of music education. Includes principles necessary for development, implementation, and evaluation of the total school music program.

5820(482) School Music Administration and Supervision (3)

Prerequisite: Graduate standing in music. Theory and practice of administration and supervision of school music programs.

5830(483) Contemporary Music Education (3)

Prerequisite: Graduate standing in music. A study of recent trends and issues in music education.

5840(484) Problems of Urban Music Education (3)

Prerequisite: Graduate standing in music. An analysis of current practices, problems, trends, and research involved in developing strategies for the improvement of music programs in inner-city schools.

5910(491) Music Education Research (3)

Prerequisite: Graduate standing in music. Applications of various approaches in defining and analyzing research problems in music education. Historical, experimental, descriptive, and philosophical research will be included.

5920(492) Psychology of Music (3)

Prerequisite: Graduate standing in music. A study of the effects of music on behavior. Tuning and temperament, psychoacoustics, measurement of musical behavior, aesthetic response to music, and functional music.

5950(495) Special Problems in Music Education (1-3)

Prerequisite: Graduate standing in music. Selected problems to meet the needs of the individual student.

5990(499) Master's Project in Music Education (3)

Prerequisite: Graduate standing in music. A project utilizing historical, experimental, philosophical, descriptive, or analytical research techniques. The project will include a written report.

Music History and Literature

1001(1) Introduction to Music (3)

A historically oriented study of art music, its styles, and forms from the Baroque period to the present day. This course will not apply toward requirements for a music major.

1010(101) History of Western Music I (3)

Prerequisite: Music 30(1301/1302) or consent of department. A general survey of the history of Western music. Includes the evolution and development of styles, forms, and their social setting.

1020(102) History of Western Music II (3)

Prerequisite: Music 30(1301/1302) or consent of department. A continuation of Music 101(1010).

1060(6) Introduction to African-American Music (3)

A survey of the African-American musical heritage from its African origins through its role and development in twentieth-century American society. All genres will be discussed, including African-American composers who wrote in the European tradition. This course will not apply toward requirements for a music major or minor.

1070(7) Introduction to Jazz (3)

A survey course that examines the musical, historical, and social aspects of the subject. This course will not count toward requirements for a music major.

1080(8) Introduction to Irish Traditional Music (3)

This music appreciation course will survey the rich tapestry of Irish traditional music, song and dance. Particular attention will be given to the cultural history of the traditional music maker in Irish society, as well as among the constituent communities of the Irish Diaspora in Europe and North America. The course will introduce students to the instruments, performance settings and regional styles of Irish traditional music. Using field recordings and archive materials collected in Ireland and North America, it will also focus on celebrated folk performers of the past and present, and evaluate the impact of contemporary media on their ancient, yet evolving, musical genre. No prior experience of Irish traditional music is necessary to pursue this course.

1090(9) Non-Western Music I (3)

The music of Oceania; folk and classical music and dance of East Asia, Tibet and Southeast Asia; the influence of Buddhism, Islam, and Western acculturation on the functions of music in these societies.

1100(10) Non-Western Music II (3)

Music of the African continent, West Asia, and South Asia; a survey of the tribal, folk, and classical music and performing arts of these cultures.

1110(11) Introduction to Irish Traditional Music in North America (3)

Will examine the cultural history of Irish traditional music and music makers in North America since the end of the eighteenth century. Drawing on a diversity of ethnomusicological sources, will evaluate the contribution of Irish musicians, singers and dancers to the growth of American popular culture in the nineteenth and twentieth centuries. Will explore the role of Irish musicians in rural communities from Newfoundland and Quebec to the Mid Western States and California. In reviewing the music history of the Irish Diaspora in North America, will compare and contrast historical recordings of Irish music made in the 1920s with those produced by modern masters of Irish music. No prior knowledge of Irish traditional music is necessary to pursue this course.

4000(300) Directed Studies: Variable Topic (1-5)

Prerequisite: Consent of department. Directed independent study of selected topics in music. May be repeated, if topic is substantially different but no more than 5 hours may be applied toward a degree.

4210(321) Music of the Middle Ages (3)

Prerequisite: Music 1010(101) or consent of department. Study of music and musical thought from the beginning of

Christianity to 1450. Gregorian chant, polyphonic music, the Ars Antiqua, and the Ars Nova.

4220(322) Music of the Renaissance (3)

Prerequisite: Music 1010(101) or consent of department. A study of the theoretical and practical impact of humanism on music, musicians, and musical thought from 1450 to 1600. Sacred and secular music; the rise of an instrumental idiom.

4230(323) Music of the Baroque (3)

Prerequisite: Music 1010(101) or consent of department. A detailed study of music from 1600 to 1750. The rise of the new style, national styles in the seventeenth century, and the culmination of the Baroque period.

4240(324) Music of the Classic Period (3)

Prerequisite: Music 1020(102) or consent of department. A study of the growth of classical style; galant and expressive styles; Mozart, Haydn, and Beethoven.

4250(325) Music of the Romantic Period (3)

Prerequisite: Music 102(1020) or consent of department. Composers, forms, and styles in nineteenth-century music. The literary and social background of musical romanticism.

4260(326) Music of the Twentieth Century (3)

Prerequisite: Music 1020(102) or consent of department. A detailed study of trends in modern music and of influential composers; impressionism, serial composition, electronic music, and other recent techniques.

4270(327) A History of Byzantine Music and Hymnography (3)

Prerequisite: Music 1020(102) or consent of department. A study of the liturgical and secular music of the Byzantine Empire and post-Byzantine period during the Ottoman occupation; a historical investigation of the Oriental and Ancient Greek origins of the music along with an evolution of the types of music and poetical forms. A study of the types of notation and transcription analyses from the Medieval neumes into Western staff notation is included.

5000(400) Directed Research in Music: Variable Topic (1-5)

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

Music Theory and Composition

1190(19) Fundamentals of Music (3)

This course provides basic music vocabulary: scales, intervals, and chords, and systematic instruction in the melodic, rhythmic, and harmonic aspects of music. This course will not apply toward requirements for a music major.

1301(30A) Theory of Music I (3)

Prerequisite: Consent of the department. The basic materials of music and their use in analyzing and writing music. Concurrent registration in Music 30B(1302) is required for music majors and minors.

1302(30B) Aural Training I (1)

Prerequisite: Consent of the department. Systematic instruction in ear training and sight singing. Includes diatonic melodic and rhythmic dictation, chord quality recognition, sight singing of diatonic melodies, and the reading of units and divisions of units in simple and compound meters.

1311(31A) Theory of Music II (3)

Prerequisites: Music 1301(30A) and Music 1302(30B) or consent of department. The study of seventh chords, secondary dominants, and modulation; composition in small forms. Concurrent registration in Music 1312(31B) is required for music majors and minors.

1312(31B) Aural Training II (1)

Prerequisites: Music 1301(30A) and Music 1302(30B) or consent of department. The systematic instruction in ear training and sight singing begun in Music 1302(30B) is continued. Includes further diatonic melodic and rhythmic dictation, primary chord progressions, sight singing of diatonic melodies, and the reading of unit subdivisions in simple and compound meters.

2301(130A) Theory of Music III (3)

Prerequisites: Music 1311(31A) and Music 1312(31B) or consent of department. Study of chromaticism in eighteenth and nineteenth centuries; composition in simple part forms. Concurrent registration in Music 2302(130B) is required for music majors and minors.

2302(130B) Aural Training III (1)

Prerequisites: Music 1311(31A) and Music 1312(31B) or consent of department. Systematic instruction in ear training and sight singing of Music 1312(31B) is continued. Chromatic melodic dictation, rhythmic dictation continues, secondary and altered chords in progressions are introduced. Sight singing of chromatic, modulating, and modal melodies, and the reading of syncopated rhythmic patterns are included.

2311(131A) Theory of Music IV (3)

Prerequisites: Music 2301(130A) and 2302(130B) or consent of department. Study of late nineteenth- and early twentieth-century tonal harmony; analysis of large forms; composition in large forms. Concurrent enrollment in 2312(131B) is required for all music majors and minors.

2312(131B) Aural Training IV (1)

Prerequisites: Music 2301(130A) and 2302(130B) or consent of department. Systematic instruction in sight singing and advanced aural perceptions. Includes drill in

recognition of formal events and key relationships, sight singing of twentieth-century melodies, and rhythmic drills in borrowed divisions and changing meters.

3110(311) Analysis of 20th Century Technique (2)

Prerequisite: Music 2311/2312(131) or consent of department. Study of compositional devices in tonal and atonal music of the twentieth century.

3120(312) Tonal Counterpoint (2)

Prerequisite: Music 2311/2312(131) or consent of department. Study of tonal counterpoint with emphasis on the eighteenth-century style. Composition in two and three parts. is substantially different but no more than 5 hours may be applied toward a degree.

3300(330) Seminar in Composition (2)

Prerequisite: Music 3110(311) or consent of instructor. The study of composition in theory and practice.

3410(141) Orchestration (3)

Prerequisite: Music 2311/2312(131) or consent of department. Study of the instruments of the brass, woodwind, percussion, and string families; scoring, transcription, and arranging for various instrumental ensembles.

3420(142) Choral Arranging (2)

Prerequisite: Music 2311/2312(131) or consent of department. Study of vocal ranges, characteristics and capabilities at various ages and scoring for choral ensembles comprised of singers in these varying stages of development.

3430(143) Instrumentation and Scoring Technique (2)

Prerequisite: Music 2311/2312(131) or consent of department. Study of the modern orchestral instruments; scoring for various instrumental ensembles with emphasis on idiomatic technique and transcription from keyboard models. This course will not fulfill the music degree requirement for students with instrumental or keyboard emphases.

4000(300) Directed Studies: Variable Topic (1-5)

Prerequisite: Consent of instructor. Directed independent study of selected topics in music. May be repeated, if topic

5000(400) Directed Research in Music: Variable Topic (1-5)

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

5110(411) Scoring and Arranging (3)

Prerequisite: Graduate standing in music. Experience in scoring and arranging music for a variety of ensembles.

Pedagogy

1240(124) Intermediate Vocal Techniques (2)

Prerequisite: Consent of department. Open to non-voice majors and to non-music majors who participate in a university choral program.

1250(25) Brass Techniques (2)

Prerequisite: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all brass instruments including trumpet, horn, trombone, euphonium, and tuba in the school setting.

1260(26) Woodwind Techniques (2)

Prerequisite: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all woodwind instruments including flute, clarinet, oboe, bassoon, and saxophone in the school setting.

1270(27) String Techniques (2)

Prerequisite: Consent of the department. The objective of this course is to familiarize students with materials and techniques for teaching all string instruments including violin, viola, cello, and bass in the school setting.

1280(28) Percussion Instrumental Techniques (2)

Prerequisite: Consent of the department. The objective of the course is to familiarize students with materials and techniques for teaching all percussion instruments including snare drum, tom-tom, bass drum, cymbals, drumset, timpani, mallet instruments and miscellaneous percussion instruments in the school setting.

1560(156) Piano Pedagogy (2)

Prerequisite: Successful completion of 2 semesters of Applied Music 1450, Piano, or permission of instructor. A study of methods, repertoire, and technical problems pertaining to private studio teaching for all levels of performance ability.

2210(221) Pedagogy of Jazz Improvisation (1)

Prerequisites: Music 2311/2312(131) and permission of instructor. Study of the techniques, systems, and instructional materials used in teaching jazz improvisation.

4000(300) Directed Studies: Variable Topic (1-5)

Prerequisite: Consent of department. Directed independent study of selected topics in music. May be repeated, if topic is substantially different but no more than 5 hours may be applied toward a degree.

5000(400) Directed Research in Music: Variable Topic (1-5)

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, but no more than 5 hours may be applied toward a degree.

Practicum

1140/1150(14, 15) Piano Proficiency (2)

Prerequisite: Permission of department. Group instruction for music majors who do not meet beginning keyboard requirements.

1200(20) Jazz Improvisation Laboratory (1)

Prerequisite: Consent of instructor. The study and application of the theoretical, technical, and performance aspects of jazz improvisation. May be repeated for credit.

1250(125) Singer's Diction: English, Italian, and German (1)

Prerequisite: Music 1440-1459(44) or Music 1240(124). A study of English, Italian, and German pronunciation using the International Phonetic Alphabet.

1260(126) Singer's Diction: Latin, French, and Spanish (1)

Prerequisite: Music 1440-1459(44) or Music 1240(124). A study of Latin, French, and Spanish pronunciation using the International Phonetic Alphabet.

1530(153) Accompanying I (1)

Prerequisite: Consent of department. Accompanying and ensemble practices, including rehearsal techniques, for keyboard majors. Public performance of works studied is required.

1540(154) Accompanying II (1)

Prerequisite: Consent of department. A continuation of Music 1530(153).

1550(155) Accompanying III (1)

Prerequisite: Consent of department. A continuation of Music 1540(154).

2160(116), 2180(118), 3190(119), 3290(120) Intermediate Piano Proficiency (1)

Prerequisite: Music 1150(15) or permission of department. Continuation of piano proficiency study.

2170(117) Jazz Keyboard Harmony (1)

Prerequisite: Applied Music 2160(116) or consent of department. Group keyboard instruction in the application of chordal structures and harmonic functions commonly used in mainstream jazz performance.

2510(151) Conducting I (2)

Prerequisite: Music 2301/2302(130), Concurrent registration in Music 2610(161A) required for bachelor of music in music education program. Techniques and problems in conducting.

2610(161A) Elementary School Instrumental Literature Laboratory (1)

Prerequisite: Music 2301(130A) & 2302(130B) Active conducting experience while analyzing and evaluating selected instructional and concert materials for elementary grades.

2611(161B) Elementary School Choral Literature Laboratory (1)

Prerequisites: Music 2301(130A) & 2302(130B). Active conducting experience while analyzing and evaluating selected instructional and concert materials for elementary grades.

3521(152a) Conducting II Instrumental (2)

Prerequisite: Music 2510(151). Concurrent registration in Music 3620(162A) required for bachelor of music in music education program. Advanced study of instrumental conducting and rehearsal techniques, score reading, and interpretation.

3522(152b) Conducting II Choral (2)

Prerequisite: Music 2510(151). Concurrent registration in Music 3620(162A) required for bachelor of music in music education program. Advanced study of choral conducting and rehearsal techniques, score reading, and interpretation.

3620(162A) Junior-Senior High School Instrumental Literature Laboratory (1)

Prerequisite: Music 2311(131A) & 2312(131B) Analysis and evaluation of selected instructional and concert materials for junior and senior high school performance groups.

3621(162B) Junior-Senior High School Choral Literature Laboratory (1)

Prerequisites: Music 2311(131A) & 2312(131B) Analysis and evaluation of selected instructional and concert materials for junior and senior high school performance groups

3920(192) Senior Research (2)

Prerequisite: Consent of department. Required of all senior music majors. Directed readings and research in an area mutually acceptable to the student and instructor.

4920(292) Internship (1-3)

Prerequisites: Senior standing in bachelor of music business emphasis program and permission of the instructor. Supervised experience in the area of the student's career objective, such as music or instrument merchandising, arts management, mass communication, publishing, manufacturing or other, as available. May be repeated once for credit in different area.

4000(300) Directed Studies: Variable Topic (1-5)

Prerequisite: Consent of department. Directed independent study of selected topics in music. May be repeated, if topic is substantially different but no more than 5 hours may be applied toward a degree.

5000(400) Directed Research in Music: Variable Topic (1-5)

Prerequisite: Consent of instructor. Directed independent research in music through readings, conferences, writings, and projects. This course may be repeated, if topic is substantially different, but no more than 5 hours may be applied toward a degree.

5020(402) Choral Literature (3)

Prerequisite: Graduate standing in music. Study of choral literature appropriate for ensembles from elementary to senior high school. Criteria for evaluating choral literature will be developed, and pedagogical implications of choral music as a means of developing comprehensive musicianship will be discussed.

5030(403) Band Literature (3)

Prerequisite: Graduate standing in music. Study of band literature appropriate for soloists and ensembles from elementary to senior high school. Criteria for evaluating the literature will be developed, and related technical problems will be studied.

5040(404) Orchestra Literature (3)

Prerequisite: Graduate standing in music. Study of orchestral literature appropriate for soloists and ensembles from elementary to senior high school. Criteria for evaluating the literature will be developed, and technical problems will be studied.

5210(421) Graduate Conducting (3)

Prerequisite: Graduate standing in music. Conducting techniques, score reading, and interpretation of choral, orchestral, and band literature.

5480(448) Graduate Applied Conducting (1-2)

Prerequisite: Music 5210(421) and consent of the department. Private conducting study of the choral, orchestral, or band repertoire. Does not fulfill the applied music requirement for the master of music education degree.

Department of Theatre and Dance

Faculty

James Fay, Associate Professor; Chairperson
M.F.A., Tulane University
Rita Csapo-Sweet, Associate Professor
Ed.D., Harvard University
Eric Love, Assistant Professor
M.A., Southwest Texas State University
Roslyn Moore, Assistant Professor
M.F.A., University of California-Los Angeles
Alicia Okuchi-Guy, Assistant Professor
M.F.A., University of California-Irvine
Timothy Poertner, Assistant Professor
M.F.A., University of Texas-Austin

The Theatre and Dance program is a newly-reactivated program at the University of Missouri-St. Louis. The curriculum is a component of the Department of Communication. Work is currently underway on a new theatre curriculum

The University of Missouri-St. Louis has presented student theatrical productions in each of the past five years. Two productions are planned for 2003-2004. The University Players, a recognized student organization, is open to any University of Missouri-St. Louis student.

For further information concerning the theatre productions, curriculum, or other matters, contact the College of Fine Arts and Communication.

Undergraduate Studies

General Education Requirements

Majors must satisfy the University and College general education requirements. The College's foreign language requirement may be taken in any language.

Communication courses may not be taken on a satisfactory/unsatisfactory basis.

Required Courses for All Majors

Communication:

Communication 1040, Introduction to Public Speaking
Communication 1135, Communication Theory
Communication 2980, (at least a three hour practicum course)

Theatre:

In addition to the required courses for all majors, students must take the following:

- a] **Theatre 1210**, Fundamentals of Acting
Theatre 1230, Production Aesthetics
Theatre 1800, Introduction to the Theatre
- b] **Nine additional hours in Theatre**

- c] **One of the following Mass Communication courses:**
1050, Introduction to Mass Media
1070, Introduction to Cinema
1110, Introduction to Radio and Television Broadcasting
- d] **Plus 6-15 hours from any area or areas of the communication/theatre department.**

Communication/Theatre

Prerequisites may be waived by consent of the department.

Course Descriptions

1030 Interpersonal Communication 1 (3) [C]
Development of basic one-to-one communication skills. Includes self-awareness, listening, nonverbal communication, feedback, roleplaying, and receiver awareness.

1040 Introduction to Public Speaking (3) [C]
Theories and techniques of organization, evidence, argumentation, persuasion, and delivery in public speaking.

1050 Introduction to Mass Media (3) [C, SS]
Introduction to oral, print, and electronic media of communication. Emphasis on history, theory, and criticism of the mass media as cultural institutions.

1070 Introduction to Cinema (3)
An introduction to the history, rhetoric, and aesthetics of film. Film theory and criticism will be studied as well as major genres, authors, and artists.

1135 Communication Theory (3)
Survey of elements and processes critical to human communication behavior. Comparison of influential communication theories.

1160 Fundamental of Oral interpretation (3)
Prerequisite: Communication 1040 or consent of instructor. An introduction to the analysis of literature and the principles of its oral presentation by the interpreter.

1210(21) Fundamentals of Acting (3)
Oral and physical communication of a role through improvisations, exercises, and scene work. Emphasis on modern representational method with some attention given to other styles.

1230 Production Aesthetics (3)
An analysis of the visual components of dramatic presentation, including an introduction to theatrical styles and forms, technical design elements, and presentational techniques. A broad survey of theatre production.

1800(80) Introduction to the Theatre (3)

A study of theatre as an art form, emphasizing the audience's appreciation of the art of the playwright, actor, director, and designer. Study of major periods, genres, and plays from classical to modern times.

2225 Stagecraft (4)

A survey of the theory and practice of stage scenery methods, Practical experiences in construction, rigging, and stage lighting and painting techniques, as well as supervised work in all other phases of theatrical production will be emphasized. Two hours of lecture and four hours of laboratory

2230 Small Group Communication (3)

Prerequisite: Communication 1040. Development of communication skills needed in small group decision making. Application of these skills to contemporary problems.

2231 Communication in the Organization (3)

Prerequisite: Junior standing or consent of instructor. Course integrates communication theories applicable to the structure and function of organizations. The effect of communication variables on department interface, member satisfaction and motivation, leadership and subordinate styles, and perception of the organization by the external environment.

2240 Stage Movement (3)

Training in movement techniques for the stage, including mime, stage combat, and dramatic dance forms.

2260 Costuming for the Theatre (3)

This course covers the theory and practice of costume design and construction. It includes an overview of the history of clothing and fashion and its effect on the actor playing period drama. Lab required.

2280 Stage Lighting (3)

Prerequisite: Theatre 1230 or consent of instructor. An introduction to the theory and practice of state lighting. The course will include a variety of established theories of state lighting as well as practical training in lighting instrumentation and control systems.

2980 Practicum in Theatre (1-2)

Prerequisite: Theatre 1210, Theatre 1230, or Theatre 1800. Laboratory experience in campus theatre production from one of the following areas: acting, directing, stage management, lighting, sound design, scene construction, house management. Repeatable, but no more than four credit hours may be earned in departmental practicum courses.

3210 Ensemble Acting (3)

Prerequisite: Theatre 1210. Laboratory – discussion course emphasizing role analysis, scene study, characterization, and ensemble acting.

3214 News Writing (3)

(Same as English 3140) Prerequisite: English 1100 or equivalent. An introduction to news writing and reporting. Course covers basic components of news reporting principles, and news writing style and structure. Daily writing assignments include coverage of speeches meetings and interviews, accidents, deaths, courts, sports, consumer affairs and government. Emphasis on clarity, accuracy, and speed.

3230 Aesthetics of Theatrical Styles (3)

Prerequisite: Theatre 1230. Analysis of the development of dramatic and artistic styles as they affect the visual presentation of ideas in theatre.

3240 Movement for Musical Theatre (3)

Prerequisite: Theatre 2240 or consent of instructor. Specialized training in movement and dance techniques for musical theatre.

3250 Designing for the Theatre (3)

An introduction to the theories and practices of scenic and costume design for the theatre. The course will survey the evolution of theatrical designs through different cultures, dramatic genres, and theatre architecture.

3332 Intercultural Communication

Prerequisite: Junior standing or consent of the instructor. Study of culture as a variable in both interpersonal collective communicative situations. Emphasis upon opportunities and problems arising from similarities or differences in communication patterns, processes, and codes among various cultural groups.

3340 Male/Female Communication (3)

This course explores the influence of gender upon contemporary American communication behavior. Topics include semantic and syntactic variations in male and female speech, gender role development as process and product of communication, analysis of communication patterns and barriers within gender groups. Mass, public, interpersonal, and dyadic communication contexts are considered.

3362 Storytelling (3)

Prerequisite: Junior standing or consent of instructor. This course gives an overview of the history of storytelling, types of tales, and appropriate uses for storytelling. The primary emphasis of the course is in developing storytelling skills through preparation, performances, and evaluation.

3810 Theatre from the Ancient Greeks to the Restoration (3)
Prerequisite: Theatre 1800 or consent of instructor.
History of theatre and drama from Classical Greek to the Restoration period.

3820 Theatre from the 18th Century to the 1980s (3)
Prerequisite: Theatre 1800 or consent of instructor.
History of theatre and drama from the eighteenth century to present.

4210 Acting Styles (3)
Prerequisite: Theatre 3210. Studies in period acting styles, emphasizing cultural distinctions in manners, movement, and vocal practice.

4220 Directing for the Theatre (3)
Prerequisite: Theatre 1210 or consent of instructor. A survey of the theories and practices of theatrical directing. The course will explore the director's role in the theatre from script analysis and production planning to the performance of laboratory scenes.

4230 Theatre Management (3)
Prerequisite: Theatre 1230. Comprehensive study of theatre management techniques, including season selection, budget control, box office, facility management, and promotional techniques for theatre.

4980 Internship in Theatre (3)
Prerequisites: Senior standing, with at least 12 hours of course work in theatre; an overall GPS of at least 3.0; consent of instructor; open to communication majors only; not open to students who have any Y or delayed grades outstanding. Supervised practical work at a theatre off campus in one of the following areas: acting, directing design, stage management. Repeatable, but no more than six hours total credit may be earned in internship courses. Only three hours in internship courses may be counted toward the 36-hour minimum required for the degree.

Dance

1023 Fundamentals of Dance
This course provides an introductory exploration of movement through various styles of dance, emphasizing movement vocabulary, stretching, strengthening, body alignment, and creative expression. Prior dance experience is not required. Dance attire and shoes will be required.

2198D Practicum in Theatre (audition required)
This course provides practical experience in dance, stage movement, stage combat, or choreography in

conjunction with Theatre and Dance Department productions, or other approved independent study projects. In addition to the TBA daytime lab hours, occasional weekend and/or evening laboratory time may be required. This course is repeatable for credit. Appropriate clothing and shoes will be required. Week before classes begin August, 2003, you will receive exact information in the mail.

Graduate School Gerontology

Faculty

- Robert J. Calsyn**, Professor* of Psychology and Gerontology
Ph.D., Northwestern University
- Carl J. Bassi**, Associate Professor* of Optometry
Ph.D., Vanderbilt University
- Margo-Lea Hurwicz**, Associate Professor* of Anthropology and Gerontology
Ph.D., University of California-Los Angeles
- Ann M. Steffen**, Director, Associate Professor* of Psychology and Gerontology
Ph.D., Indiana University
- Chikako Usui**, Associate Professor* of Sociology and Gerontology
Ph.D., Stanford University
- Timothy A. Wingert**, Associate Professor* of Optometry
O.D., Illinois College of Optometry
- Nanora L. Sweet**, Assistant Professor of English
Ph.D., University of Michigan
- Kuei-Hsiang (Grace) Hsueh**, Assistant Professor of Nursing
Ph.D., R.N., University of Arizona
- Terry Ettling**, Senior Lecturer
M.A., Webster University
- John Van Emden**, Senior Lecturer
M.A., Washington University
- Kelly Everard**, Adjunct Assistant Professor
Ph.D., University of Kentucky
- Nina Tumosa**, Adjunct Associate Professor of Optometry
Ph.D., State University of New York at Albany (SUNYA)
- Rosalie Marx**, Lecturer
M.A., Social Work, G.W. Brown School of Social Work, Washington University
- Robert Sontag**, Lecturer
M.A., Social Work, St. Louis University

*members of Graduate Faculty

Faculty from 11 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, physical education, political science, psychology, sociology, social work, 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:

- Baccalaureate degree.
- 3.0 or B average (students with exceptions should contact the director of the gerontology program).
- Official transcripts of all previous undergraduate/graduate work.
- 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 30 credit hours, including 24 hours in gerontology courses, a 3-hour statistics course, and a 3-hour research methods course. The required courses are listed below.

Gerontology Distribution Requirements

A. Public Policy and Aging-3 credits from the following:
Ger (PPA, Pol Sci) 6443(443), Health Care Policy
Ger (PPA, Pol Sci) 6417(417), Income and Pension Policy for the Aged
Ger (Soc) 5449(449) Issues in Retirement

B. Health and Physical Aspects of Aging - 3 credits from the following:
Ger 300A (Soc Wk 5610(381A)) Mechanics of Aging I: The Aging Body (1 credit hour)
Ger 300A (Soc Wk 5611(381B)) Mechanics of Aging II: The Aging Brain (1 credit hour)
Ger 300C (Soc Wk 5612(381C)) Mechanics of Aging III: Diseases of Aging (1 credit hour)
Ger (Nur) 6401(401), (5000) Health and Wellness in the Aging
Ger 6441(441) Aging and Health Behavior
Ger 6458(458) (Opt 8650(558)), Geriatric Optometry

C. Psychosocial Aspects of Aging-3 credits from the following:
Ger (Psych) 4373(373) Psychology of Aging
Ger (Psych) 4376(376) Mental Health and Aging
Ger (Soc) 4361(361), Sociology of Aging
Ger (Anthro) 5440(440) Cultural Aspects of Aging
Ger (Psych) 4380(380) Psychology of Death, Dying and End of Life Concerns

D. Practica in Gerontology, 6 credits from the following:
Ger 6495(495) Practicum in Gerontology
Ger 6496(496) Advanced Practicum in Gerontology

E. Gerontology Electives - 9 credits

F. Graduate-level statistics course - 3 credits and graduate level research methods course - 3 credits. Students should consult Director of Gerontology for approved courses.

Graduate Certificate in Gerontology

The graduate certificate in gerontology is designed for students who wish to receive post-baccalaureate training in gerontology. The certificate 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 from the following:

Ger (PPA, Pol Sci) 6443(443) Health Care Policy
Ger (PPA, Pol Sci) 6417(417) Income and Pension Policy for the Aged
Ger (Soc) 6449,5449(449), Issues in Retirement

B. **Health and Physical Aspects of Aging**-3 credits selected from the following:

Ger (Nur) 6401,5000(401), Health and Wellness in the Elderly
Ger 6441(441), Aging and Health Behavior
Ger 5610(300A) Soc Wk 5610(381A), Mechanics of Aging II: The Aging Brain (1 credit hour)
Ger 5611(300B) Soc Wk 5611(381B), Mechanics of Aging II: The Aging Brain (1 credit hour)
Ger 5612(300C) Soc Wk 5612(381C), Mechanics of Aging III: Diseases of Aging (1 credit hour)
Ger 6458(458) Opt8650(558), Geriatric Optometry

C. **Psychosocial Aspects of Aging** - 3 credits selected from the following:

Ger (Psych) 4373(373), Psychology of Aging
Ger (Psych) 4376(376), Mental Health and Aging
Ger (Soc) 4361(361), Sociology of Aging
Ger (Psych) 4380(380), Psychology of Death, Dying and End of Life Concerns

D. Ger 6495(495), Practicum in Gerontology -3 credits

E. **Electives in Gerontology** - 6 credits

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, Barnes College of Nursing, the College of Business, and the College of Education. It is appropriate for students in any of the colleges of the University.

Certificate Requirements

A student may earn the certificate in gerontological studies by completing a total of 15 hours. Courses must be chosen from at least two of the following four topic areas. No more than 3 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

Ger (Eng) 1115(15), Images of Age in Film
Ger (Eng) 1116(16), Images of Age in Literature
Ger (Philos) 2256(156), Bioethics

Natural Sciences and Mathematics

Ger 5610(300A) (Soc Wk 381A), Mechanics of Aging I: The Aging Body
Ger 5611(300B) (Soc Wk 381B), Mechanics of Aging II: The Aging Brain
Ger 5612(300C) (Soc Wk 381C), Mechanics of Aging III: Diseases of Aging

Social Sciences

Ger (Psych) 2272(272), Developmental Psychology: Adulthood and Aging
Ger (Psych) 4380(380), The Psychology of Death, Dying, and End-of-Life Concerns
Ger (Psych) 4373(373), The Psychology of Aging
Ger (Soc) 4361(361), Social Gerontology
Ger (ID) 1160(60), Aging in America
Ger (ID) 1220(120), Special Topics in Gerontology
Ger (Anthro) 3215(215), Growing Old in Other Cultures

Education

Ger (PE) 1190(190), (Clinical Experience in Physical Gerontology)
Ger (PE) 5992(392), Internship in Physical Gerontology
Ger (PE) 5330(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.

Course Descriptions

1115(15) Images of the Elderly in Film (3)

Same as Eng 1150(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.

1116(16) Images of Age in Literature (3)

Same as Eng 1160(16). Reading and discussion of literature that portrays aging and old age in various settings. 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.

1160(60) Aging in America (3)

Same as ID 1160(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.

1190(190) Clinical Experience in Physical Gerontology (3)

Prerequisite: Consent of instructor. Same as Phy Ed 1190(190). Early supervised experience in gerontological physical activity programming. Seminar precedes and accompanies clinical experience.

1220(120) Special Topics in Gerontology (1-3)

Same as ID1220(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.

2256(156) Bioethics (3)

Same as Phil 2256(156). An examination of ethical issues in health care practice and clinical research and in public policies affecting health care. Topics include abortion, euthanasia, health care, experimentation, informed consent, and the right to health care.

2272(272) Developmental Psychology: Adulthood and Aging (3)

Same as Psych 2272(272) Personality, social, and physiological development from the onset of early adulthood through maturity and old age.

3215(215) Growing Old in Other Cultures (3)

Same as Anthro 3125(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.

4361(361) Social Gerontology (3)

Prerequisite: Soc 1010(10) and junior standing or consent of instructor. Same as Soc 4361(361). 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.

4373(373) Psychology of Aging (3)

Prerequisite: Nine hours of Psychology or consent of instructor. Same as Psych 4373(373). This course focuses on the developmental changes associated with aging including sensation, memory, emotions, and attitudes.

4376(376) Mental Health and Aging (3)

Prerequisites: Psych 2272(272), 4373(373), or graduate student status. Same as Psych 4376(376) and SW 5600(376) (MSW students normally take all foundation courses prior to enrolling in this course.) 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.

4380(380) Psychology of Death, Dying, and End-of-Life Concerns (3)

Same as Psych 4380(380). Prerequisites: Nine hours of psychology. This course will address the psychological aspects of a variety of end of life issues, including death attitudes, funeral practices, ethics, grief theory, family communication practices, health care system approaches, and current research regarding these.

4490(390) Directed Readings (1-3)

Prerequisite: Consent of instructor. Directed readings and research or field work. May be repeated for a maximum of three hours.

5330(330) Prescribing Physical Activity (3)

Prerequisite: Phy Ed 3280(280) or consent of instructor. Same as Phy Ed 5330(330). 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.

5440(440) Cultural Aspects of Aging (3)

Same as Anthro 5440(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.

5610(300A) Mechanisms of Aging I: The Aging Body (1)

Prerequisites: Bio 1012(001) or Bio 1102(110) or equivalent. (Same as SW 381A). (MSW students normally take all foundation courses prior to enrolling in this course). Introduces students with a social sciences/humanities background to the normal changes in the biology and chemistry of the aging human body.

5611(300B) Mechanisms of Aging II: The Aging Brain (1)

Prerequisites: Ger 5610(300A) or SW 381A or equivalent or consent of instructor. (Same as SW 5611(381B). (MSW students normally take all foundation courses prior to enrolling in this course) Provides students with a social sciences/humanities background a basic introduction to the biology and chemistry of the aging human brain and nervous system.

5612(300C) Mechanisms of Aging III: Diseases of Aging (1)

Prerequisites: Ger 5610(300A) and 5611(300B) or SW 5610(381A) and 5611(381B) or equivalents or consent of instructor. Same as SW 5612(381C). (MSW students normally take all foundation courses prior to enrolling in this course) Provides students with a social sciences/humanities background with information on how diseases associated with aging exacerbate the effects of aging on the human body and mind.

5992(392) Internship in Physical Gerontology (1-10)

Prerequisite: Phys Ed/Ger 1190(190) or consent of instructor. Same as Phys Ed 5992(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, participant and program evaluation, research, and related activities.

6401(401) Health and Wellness in the Elderly (3)

Prerequisite: Graduate standing. Same as Nurs 5000(401). 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. Introduces the "Putting Prevention into Practice" model adapted to health promotion in the elderly.

6417(417) Income and Pension Policy for the Aged (3)

Prerequisite: Graduate standing or consent of instructor. Same as PPA 6417(417), Pol Sci 6417(417), and SW 6417(417) (MSW students normally take the social policy foundation course prior to enrolling in this course). 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.

6441(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.

6442(442) Minority Aging (3)

Prerequisite: Soc 4361(361) or consent of instructor. Same as Soc 6442(422). 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.

6443(443) Health Care Policy (3)

Prerequisites: Graduate standing and consent of instructor. Same as Pol Sci 6443(443), PPA 6430(443) and SW 6443(443). (MSW students will normally take the social policy foundation course prior to enrolling in this course). 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.

6444(444) Seminar in Public Policy and Aging (3)

Prerequisite: Consent of instructor. Same as PPA 6440(444) and Pol Sci 6444(444). 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.

6445(445) Sociological Dimensions of Chronic Illness (3)

Prerequisite: Soc 5400(400) or consent of instructor. Same as Soc 6445(445). 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.

6449(449) Issues in Retirement (3)

Same as Soc 5449(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.

6458(458) Geriatric Optometry (2)

Same as Opt 8650(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.

6490(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 6 credit hours.

6494(494) Integrative Research Seminar in Gerontology (3)

Same as Psych 7494(494). Prerequisite: A graduate level research methods course (e.g., PPA 6401(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.

6495(495) Practicum in Gerontology (3)

Prerequisite: Consent of instructor. Supervised work experience in an agency that serves older adults. Students are required to complete a minimum of 150 clock hours at the practicum site.

6496(496) Advanced Practicum in Gerontology (3)

Prerequisites: Ger 6495(495) and consent of instructor. Advanced practicum experience beyond Gerontology 6495(495). Students must complete a minimum of 150 clock hours of supervised fieldwork (service or research) with older adults.

6497(497) Interdisciplinary Geriatric Care (2)

Same as Opt 6497(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.

6498(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.)

6499(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.)

Public Policy Administration

Faculty

Andrew D. Glassberg, Director, Associate Professor of Public Policy Administration and Political Science*
Ph.D., Yale University

E. Terrence Jones, Professor of Public Policy Administration and Political Science*
Ph.D., Georgetown University

Carol W. Kohfeld, Professor Emeritus of Public Policy Administration and Political Science
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George J. McCall, Professor Emeritus of Public Policy Administration and Sociology
Ph.D., Harvard University

Donald Phares, Professor Emeritus of Public Policy Administration and Economics
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D.B.A., Indiana University

John McClusky, Director of Non-Profit Management and Leadership Program*
Ph.D., University of California-Berkeley

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Ph.D., SUNY Binghamton University

Susan Kristine Walker, Adjunct Professor of Public Policy Administration and Political Science
Ph.D., University of Missouri-St. Louis

Julianne Stone, Director, Local Government Management and Leadership Program
ABD, Washington University

*Members of Graduate Faculty

General Information

The Master's Program in Public Policy Administration (MPPA) is an interdisciplinary program designed to prepare students for managerial and policy analysis positions in the public and nonprofit sectors or in organizations having substantial interaction with the public and nonprofit sectors. The program is a unit of the Graduate School and is accredited by the National Association of Schools of Public Affairs and Administration. Core faculty are on joint appointments in public policy administration and disciplines such as economics, political science, sociology, or business administration. The program includes courses in policy analysis, public administration, management, budgeting, and economics in the basic curriculum. The University of Missouri-St. Louis' MPPA program 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 Public Policy Research Center, and in the Center for International Studies. The MPPA program serves as an editorial home of the *American Review of Public Administration*.

The full facilities of Campus Computing, and the Laboratory for Quantitative Analysis are available. UM-St. Louis is 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 9 hours of prerequisites in mathematics.

Prerequisites

Students must demonstrate competency in computer-based applications, including spreadsheets, databases, and Internet use. These competencies must be demonstrated at the beginning of the degree program by completing a computer proficiency examination.

Core Curriculum

All candidates for the MPPA degree must complete 28 hours in the core curriculum sequence composed of the following public policy administration courses:

Administration

6400(440), Proseminar in Public Policy Administration
6600(460), Organizational Behavior and Administrative Processes

Budgeting

6180(418), Governmental Budgeting and Financial Control

Economics

6080(408), Microeconomics for Policy Analysis
6210(421), Public Sector Microeconomics

Policy Analysis

6000(410), Introduction to Policy Analysis
6900(419), Cases in Public Policy Administration

Statistics and Applications

6010(401), Introduction to Policy Research
6750(475), Introduction to Evaluation Research Methods

Exit Project

6990(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 1 credit hour exit project, PPA 6990(499), examining a problem in public policy administration in the final semester. PPA 6000(410) be taken at the beginning of the program. It is strongly recommended that PPA 6010(401) and PPA 6080(408) be taken early. PPA 6900(419) is a capstone course and must be taken at the end of the program.

Students may select one of five emphasis areas in which to concentrate their advanced studies: (1) managing human resources and organizations, (2) policy research and analysis, (3) local government management, (4) health policy, (5) nonprofit organization management, or they may select an individualized emphasis area in consultation with their advisors.

Prior to the completion of 15 hours in the MPPA program, students should identify an emphasis area. Specific requirements for each emphasis area are as follows:

1) Managing Human Resources and Organizations

a. Required (3 hours)

PPA 6490(449), Human Resources in the Public Sector

b. Electives (9 hours) chosen from:

MGMT 5611(462), Advanced Organizational Behavior and Administrative Processes
MGMT 5624(463), Organizational Training
Econ 6400(480), Labor Economics
PPA 6680(468), Negotiating Workplace Conflict
Pol Sci 3470(341), Collective Bargaining

PPA 6950(495), Internship – 3 hours (in assignment relevant to emphasis area)

2) Policy Research and Analysis

a. Required (3 hours)

Pol Sci 6402(402), Intermediate Techniques in Policy Research OR **Econ 4100(365)**, Introduction to Econometrics

b. Electives (9 hours) chosen from:

Pol Sci 6403(403), Advanced Techniques in Policy Research OR **Econ 4110(366)**, Applied Econometrics
Econ 3510(317), Public Finance: State and Local
Econ 4550(360), Natural Resource Economics
Econ 4160(368), Geospatial Economic Analysis
Econ 6760(472), Health Economics
Econ 6400(480), Labor Economics
Econ 6900(490), Advanced Topics in Economic Analysis
Pol Sci 6404(404), Multi-Method Research
Pol Sci 6414(414), Topics in Public Policy Analysis
Pol Sci 6422(422), Law, Courts, and Public Policy
Soc 4040(304), Survey Research Practicum OR
Soc 5432(432), Survey Research Methods
PPA 6950(495), Internship (in assignment relevant to the emphasis area)

3) Local Government Management

a. Required (6 hours)

PPA 6340(434), Seminar in City Administration AND EITHER

Pol Sci 6470(470), Proseminar in Urban Politics OR
Pol Sci 6471(471), Seminar in Urban Politics

b. Electives (6 hours) chosen from:

PPA 6490(449), Human Resources in the Public Sector
PPA 4940(394), Leadership and Management in Nonprofit Organizations
PPA 6350(435), Issues in Urban Management
PPA 6680(468), Negotiating Workplace Conflict
Econ 3510(317), Public Finance: State and Local
Econ 6700(470), Political Economy of Metropolitan Areas
Pol Sci 6432(432), Intergovernmental Relations
PPA 6950(495), Internship (in assignment relevant to emphasis area)

NOTE: Students interested in careers in local government management are strongly encouraged to take PPA 6490(449), Human Resources in the Public Sector, as one of their electives.

4) Health Policy

a. Required (6 hours)

PPA 6430(443), Health Care Policy
PPA 6460(446), Selected Topics in Health Care Policy: Comparative Health Policy

b. Electives (6 hours) chosen from:

Public Policy Administration

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PPA 6460(446), Selected Topics in Health Care Policy (with different substantive area from Comparative Health Policy)

Econ 6750(471), Political Economy of Health Care

Econ 6760(472), Health Economics

Ger 4376(376), Mental Health and Aging

Ger 6401(401), Health and Wellness in the Elderly

Ger 6441(441), Aging and Health Behavior

PPA 6950(495), Internship (in assignment relevant to the emphasis area)

5) Nonprofit Organization Management and Leadership

a. Required (9 hours)

PPA 4911, 4912, 4913 (391-A, B, C), Management Issues in Non-Profit Organizations: Staff Management Issues; Legal Issues; Financial Issues

PPA 4940(394), Leadership and Management in Non-Profit Organizations

PPA 4960(396), American Philanthropy and Non-Profit Resource Development

b) Electives - (3 hours) chosen from:

PPA 6490(449), Human Resources in the Public Sector

PPA 6550(455), Strategic and Program Planning for Nonprofit Organizations

BA 3451(343), Accounting for Governmental and Nonprofit Entities

BA 5100(405), Managerial Communication

BA 5900(412), Public Policies Toward Business

BA 5700(470), Contemporary Marketing Concepts

Psych 7412(412), Social Psychology

PPA 6680(468), Negotiating Workplace Conflict

PPA 6950(495), Internship (in assignment relevant to the emphasis area)

Students may be able to substitute another course for a specified elective, with MPPA Director's approval.

Individualized Emphasis Area

Prior to the completion of 15 hours in the MPPA program, the student must present a proposal for 12 hours of specific coursework for approval by the MPPA faculty. The 12 hours must include PPA6950(495), Internship (in an assignment relevant to the emphasis area) unless the student has significant public or nonprofit sector experience.

Internships

There currently exists a need for well-trained policy administrators and analysts. Frequent contact is maintained with public and nonprofit 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.

An internship is required for students without substantial experience in the public or nonprofit sectors. MPPA students employed in public agencies will receive 3 hours of credit for internships in those agencies. To do so, students must develop, in consultation with their advisors, 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.

Graduate Certificate Program in Nonprofit Organization Management and Leadership

Through the Public Policy Administration Master's 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 administration or a graduate degree in another field.

A. The graduate certificate in nonprofit management and leadership requires the completion of 18 credit hours. Nine of these are the following core courses:

1. Leadership and Management in Nonprofit Organizations (3 hours) Political Science 4940(394) same as Public Policy Administration 4940(394), Sociology, or Social Work 4940(308)

2. Management Issues in Nonprofit Organizations: Staff Management Issues (1 hour) Political Science, Public Policy Administration, and Social Work 4911(391-A)

3. Management Issues in Nonprofit Organizations: Legal Issues in Governing and Managing Nonprofit Organizations (1) (Political Science, Public Policy Administration, and Social Work 4912(391-B))

4. Management Issues in Nonprofit Organizations: Financial Issues (Political Science, Public Policy Administration, and Social Work 4913(391-C))

5. American Philanthropy and Nonprofit Resource Development (3 hours) Pol Sci and Soc Wk 4960(396)

B. Six hours of electives are to be taken from selected courses in accounting, business administration, economics, management, marketing, political science, psychology, public policy administration, and sociology. A student may choose among these courses or other courses approved by the program director. (All Graduate electives must be at the 6000 course level.)

C. Three hours of internship are also required, or 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 nonprofit 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 3 hours of electives from the selection in area B.

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 graduate certificate program are the same as those required for admission to the Graduate School: an undergraduate degree, and a GPA of 2.75 or better.

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, and the nonprofit sector.

Course Descriptions

4911(391A) Management Issues in Nonprofit Organizations: Staff Management Issues (1)
Prerequisite: Junior Standing. Same as Pol Sci 4911(391A) and Soc Wk 4911(391A). This course addresses issues involved in managing staff in nonprofit organizations. The course will cover the following topics: fundamentals of staff supervision; balancing supervisory processes with counseling and coaching; selecting, hiring, evaluating, and terminating staff; legal issues that affect these processes.

4912(391B) Management Issues in Nonprofit Organizations: Legal Issues in Governing and Managing Nonprofit Organizations (1)
Same as Pol Sci 4812(391B) and Soc Wk 4912(391B). This course addresses legal issues involved in managing and governing nonprofit 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); Missouri nonprofit law.

4913(391C) Management Issues in Nonprofit Organizations: Financial Issues (1)

Same as Pol Sci 4913(391C) and Soc Wk 4913(391C). This course addresses financial issues involved in governing and managing nonprofit organizations. The course will cover the following topics: Cash flow analysis; budgeting; fund accounting; 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.

4940(394) Leadership and Management in Nonprofit Organizations (3)

Prerequisite: Junior standing. Same as Pol Sci 4940(394), Soc Wk 4840(394), and Soc 4940(308). 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 the dynamics, functions and membership structure of NPOs, especially staff-board and other volunteer relations; governance and management of NPOs; resource mobilization; and program development management and evaluation.

4960(396) American Philanthropy and Nonprofit Resources Development (3)

Prerequisite: Junior standing or consent of instructor. Same as Pol Sci 4960(396) and Soc Wk 4960(396). This course addresses the history, philosophy, roles and scope of philanthropy in the United States, including its role in the nonprofit, voluntary sector. It further examines the contemporary forces which impact philanthropy and charitable giving, both by institutions and individuals. The course examines the effective planning and management of development programs (e.g., annual giving), fund raising vehicles (e.g., mail solicitations) and the fund raising process, form planning through donor relations.

6000(410) Introduction to Policy Analysis (3)

Same as Pol Sci 6410(410). Systematic development of a critical/analytic base for dealing with public policy.

6010(401) Introduction to Policy Research (3)

Same as Pol Sci 6401(401). Procedures for testing explanations, including research design, principles of measurement, probability sampling, methods of data collection, and techniques for analyzing data.

6080(408) Microeconomics for Policy Analysis (3)

Prerequisites: Graduate student standing. Same as Econ 5010(408). This course introduces microeconomic analysis of consumers, firms, and government, with an emphasis on policy applications. It assumes no prior training in economics and is appropriate for graduate students in public policy administration, nonprofit management, political science, gerontology, criminology and criminal justice, and other related fields.

6150(415) Directed Reading and Research in Public Policy (1-10)

Same as Pol Sci 6415(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.

6170(417) Income and Pension Policy for the Aged (3)

Prerequisite: Graduate standing or consent of instructor. Same as Pol Sci 6417(417), Ger 6417(417), and Soc Wk 6417(417). (MSW students normally take the social policy foundation course prior to enrolling in this course.) 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.

6180(418) Governmental Budgeting and Financial Control (3)

Prerequisite: BA 440. Same as BA 5450(418). 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.

6210(421) Public Sector Microeconomics (3)

Prerequisites: Econ 3001(251), or BA 5001(410), or PPA 6080(408). Same as Econ 6500(421). Application of tools of intermediate 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.

6340(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.

6350(435) Issues in Urban Management (3)

Designed to evaluate management issues that confront managers in local government from a political perspective. The format will include an intense review and discussion of original case studies from actual local government situations. The specific focus of this course will vary. Course may be repeated

6400(440) Proseminar in Public Administration (3)

Same as Pol Sci 6440(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.

6430(443) Health Care Policy (3)

Prerequisites: Graduate standing and consent of instructor. Same as Pol Sci 6443(443), Ger 6443(443), and Soc Wk 6443(443). (MSW students will normally take the social policy foundation course prior to enrolling in this course).

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.

6440(444) Seminar in Public Policy and Aging (3)

Prerequisite: Consent of instructor. Same as Ger 6444(444) and Pol Sci 6444(444). 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.

6460(446) Selected Topics in Health Care Policy (3)

Prerequisite: Consent of instructor. Same as Pol Sci 6446(446) and Soc 6446(446). The study of specialized issues and methods relating to health care policy. May be repeated for credit, provided the subject matter is different.

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Graduate Degree Program

6490(449) Human Resources in the Public Sector (3)

Prerequisite: PPA 6600(460) or consent of instructor. Same as Pol Sci 6449(449) and Soc Wk 6449(469). Presents an overview of personnel and labor relations in the public sector. Particular emphasis placed 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.

6510(451) Urban and Regional Planning and Public Policy (3)

Prerequisites: Graduate standing or consent of instructor. Focuses on the interdependent processes of urbanization and public policy. Students will acquire an understanding of urban planning and public policy in North America.

6550(455) Strategic and Program Planning for Nonprofit Organizations (3)

Prerequisites: Graduate standing or consent of instructor. Same as Pol Sci 6490(491) and Soc Wk 6491(455). Strategic and program planning enable an organization to concentrate on efforts and set priorities guided by a mission, vision, and an understanding of its environment. Focus is on preparing a strategic plan and a program plan for a nonprofit organization and analyzing an organization's ability to deliver goods and/or services to its constituents in today's economic, social and political climate.

6600(460) Organizational Behavior and Administrative Processes (3)

Same as MGMT 5600(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.

6680(468) Negotiating Workplace Conflict (3)

Prerequisites: PPA/MGMT 5600(460), and Graduate Standing. Same as MGMT 5612(419) and Soc 5451(468). Examines conflict and cooperation between individuals, groups, and organizations over the control of work. A central theme is how this conflict is expressed, controlled, and resolved. Students will participate in exercises to learn the basics of two-party negotiations.

6750(475) Introduction to Evaluation Research Methods (3)

Prerequisites: At least one course in Research Design and Statistics at the graduate level. Same as Psych 5475(475), Soc 5475(475), and CCJ 5475(475). 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.

6800(480) Management Information Systems (3)

rerequisite: Econ 3150(301). Same as MS/IS 6800(480). 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 applications.

6900(419) Cases in Public Policy Administration (3)

Prerequisites: 24 hours of public policy administration courses, at least 15 of which are in core courses. This capstone course intensively analyzes public policy administration cases drawn from a variety of issues and settings.

6950(495) Internship (3)

Independent study involving work with an appropriate public, private, or nonprofit agency.

6990(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.

Pierre Laclède Honors College

The Pierre Laclède Honors College mission 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.

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 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 in which courses are designed to meet students' general education and other breadth of study requirements.

- A four-year program open to entering freshmen and extending over a student's entire undergraduate career;
- 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.

The Honors College Writing Portfolio

Both programs include participation in the Honors College writing program, Writing through the Curriculum, which involves formal courses in composition (including *at least two* of **Honors 1200(10)**, **3100(210)**, and **4100(310)**) and informal consultations with the director of the writing program. In the final year, this culminates in the compilation of a personal Honors College writing portfolio.

Undergraduate Research

All Honors College students must fulfill a 6-credit-hour independent study requirement (see below under Curriculum). Many students meet all or part of this requirement by undertaking a research project supervised by faculty in their major department. Additional financial support is available for supervised undergraduate research projects in all majors.

Faculty

Honors College instructors are drawn from faculty in all academic divisions of the university but mainly from the "traditional disciplines" of the College of Arts and Sciences. What all these teachers share in common is a willingness to work closely with intellectually curious and academically high-achieving students. Faculty design courses directed toward such an audience and based on small discussion seminars. Thus the honors faculty is an organic body, growing each semester as new faculty join in the honors project. Their talents add to the Honors College's already rich instructional pool of more than 100 regular and full-time faculty, many of whose teaching and

scholarship have been singled out for special professional and university awards.

Honors Scholars

Honors College scholars are our students, highly qualified and motivated individuals from a broad range of public and private secondary schools and colleges. They enter the college with diverse backgrounds and interests and remain part of it while simultaneously enrolling in classes and pursuing bachelor's degrees in other academic divisions of the university.

Most honors students major in the traditional liberal arts disciplines spanning the humanities, social sciences, mathematics, and natural sciences, but about a third focus on using their undergraduate education to prepare for careers in business, education, nursing, or engineering. Whatever their undergraduate majors, most Honors College students plan to go on to graduate study or professional schools, although a significant number successfully seek employment immediately after graduation. Honors faculty and staff provide advice and guidance in both course choice and career plans.

Curriculum

Pierre Laclède Honors College offers both a four-year program (for students admitted as freshmen) and a two-year program (for transfer students from within the UM-St. Louis or from outside the university).

Four-Year Program (40 credit hours total):

Approximately one-third of the 120 hours honors students earn toward graduation are taken in the Honors College or under its auspices. Most of these credits are associated with a sequence of honors courses designed specifically for the college, 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 credits for work done within their major fields, work which includes the possibility of internships, independent study projects, and advanced undergraduate research.

First Year (15 credit hours):

Scholars take **Honors 1100(10)**, **1200(20)**, and **1300(30)**, and one course each from the Western Traditions and Non-Western Traditions seminar series. Students may take a seminar from the American Traditions series as an elective or in place of *either* a Western *or* a Non-Western Traditions seminar.

1100(10), Freshman Composition

1200(20), Cities and Good Lives: Knowledge, Decision, and Consequences.

1300(30), Critical Analysis

1110-1150(111-5), The Western Traditions Series

1210-1250(121-5), The American Traditions Series (elective)

1310-1350(131-5), The Non-Western Traditions Series

Second Year (6 credit hours):

Scholars take **two** of the following **Honors** classes:

- 2010(201)**, Inquiries in the Humanities
- 2020(202)**, Inquiries in the Fine and Performing Arts
- 2030(203)**, Inquiries in the Social and Behavioral Sciences
- 2040(204)**, Inquiries in Mathematics and Computing
- 2050(205)**, Inquiries in the Sciences
- 2060(206)**, Inquiries in Business
- 2070(207)**, Inquiries in Education
- 2080(208)**, Inquiries in Nursing

Honors students in the four-year program may also take **Honors 3100(210)** to meet their advanced composition graduation requirement.

During the first two years, honors scholars will 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.

Third and Fourth Years (19 credit hours):

Honors scholars in the four-year program *take at least four* seminars (12 credit hours) from the Advanced Seminar (3010-3080)(301-308) and/or Research Seminar (3510-3580)(351-358) series. They may take more, and many do where this is compatible with their major and/or minor requirements. In addition, honors students do 6 credit hours in independent study projects, normally in or closely related to their major field. These independent study projects normally carry credit in the major, but can be done as Honors College independent study or research projects (**Honors 4900-4990(390-399)**). During the final year, students also take **Honors 4100(310)**, a 1-credit capstone for the Honors College writing program.

Two-Year Program (22 credit hours total):

Scholars in this program will take a combination of Honors College courses and also earn honors independent study credit for work done in their major fields. The 22 credit hours must include 6 credits of independent study, as for the four-year program.

Third Year (9 credits):

During the first year of the two-year program, students take three honors seminars, including **3100(210)**, Advanced Composition: Writing the City; one course from the **Inquiries** series (**2010(201)-2080(208)**); one course from *either* the Advanced Seminar (**3010(301)-3080(308)**) or Research Seminar (**3510(351)-3580(358)**) series. In addition, 3 credit hours of independent study may be taken during this year, normally in or closely related to their major.

Fourth Year (7 credits):

The final year of the two-year program involves three courses chosen from the 3000(200) and 4000(300) level options, including **4100(310)**, the honors writing portfolio

(1 credit hour) and at least one course chosen from the **3010(301)-3080(308)** or **3510(351)-3580(358)** series. In addition, students will complete their independent study requirements with 3 or 6 hours of project, internship, or research work.

Other academic features and requirements.**Pass/Fail.**

The satisfactory/unsatisfactory option does not apply to any course work undertaken for Honors College credit.

Admission and Retention.

To be considered for admission to either the two-year or four-year honors program, a candidate must file a special Honors College application as well as a general university application. These application forms and additional information concerning scholarship and stipend awards, general eligibility guidelines, and the admissions process are available from the Honors College administrative office at (314)516-6870 or from the office of admissions.

Scholarships and stipends.

Every new freshman or transfer student admitted to the Honors College receives academic scholarship support. Scholars continue to receive these awards as long as they meet the criteria associated with their particular scholarship grant.

Good academic standing.

To remain in good standing, a student must maintain a cumulative GPA, in all his or her UM-St. Louis courses, of at least 3.2, and must continue to meet the requirements of the honors program for which he or she was initially admitted. Unless other arrangements have been made, Honors College students are also expected to be full time, that is, to register for and satisfactorily complete at least 12 credit hours per semester. Students wishing to enter the Honors College as part-time students, or to change to part-time status, must make prior arrangements with the Honors College dean.

UM-St. Louis: an Urban Land Grant Institution

Given its location in St. Louis, and because it is part of an urban land grant university, Pierre Laclède Honors College seeks to encourage awareness of the manifold benefits of pursuing an undergraduate education in a dynamic and varied urban community. This is accomplished partly through the Honors Curriculum (for instance, **Honors 1200(20)** and **3100(210)** are focused on "the city") through facilitating cultural and other outings in the city, and by encouraging students to include in their academic program courses, research projects, and/or internships which exploit the university's manifold connections with city people and its partnerships with leading city institutions such as the Missouri Botanical Gardens, the Missouri Historical Society, and the Mercantile Library of St. Louis. Many honors students fulfill all or part of their independent study requirements working through such partnerships.

International Study and Other Exchange Programs

Honors students are encouraged to consider a semester's or a year's study at another institution. This can be done through the University's Center for International Studies, which administers exchanges with more than 70 universities in Europe, Africa, Asia, Australia, and South and Central America. Students in the **Honors and International Business** program are normally required to spend at least a semester abroad as an exchange student or on an approved international business internship.

Or students may, through the **National Student Exchange**, which is administered for the university by the Honors College, attend any one of more than 100 universities in the United States and Canada.

Course Descriptions

Please note that all honors courses are planned to fulfill UM-St. Louis graduation requirements, primarily in general education and the state requirement for American history and government. For further guidance on these requirements, please see the university general education matrix.

Selected Honors courses may also meet divisional area study requirements, for instance in international studies or cultural diversity. Please note also that several Honors courses in the 3000(200) and 4000(300) levels, can be used to fulfill major, minor, and certificate requirements, where that has been agreed by other divisions or departments of the university.

Honors course lists and descriptions, published each semester before the beginning of the registration period, identify clearly those seminars that fulfill these various requirements. When in doubt, students are urged to consult their Honors College advisor.

Important note: Unless otherwise indicated, all Honors seminars and courses require students to obtain the consent of the dean or associate dean of the Honors College at registration.

1100(10) Freshman Composition (3) [C]

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.

1200(20) Cities and Good Lives: Knowledge, Decisions, and Consequences (3) [MI, SS]

Prerequisite: Consent of the dean of the Honors College. Introduces students to the city and to a wide range of academic disciplines relevant to acquiring knowledge about the city, to making decisions about the city, and to understanding the impact of those decisions on the lives of people who work, play, and live in the city. Involves students with city institutions, organizations, and people,

and introduces several main disciplinary areas offered by the University of Missouri-St. Louis.

1300(30) Critical Analysis (3) [C, H]

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.

1110-1150(111-115) Western Traditions (3)

Prerequisite: Consent of the dean of the Honors College. All Western Traditions seminars will be based on the reading and discussion of works of exceptional importance in the development of western culture and civilization. The works to be discussed in each seminar will follow a central theme (defined by its particular relevance to the traditional academic disciplinary areas of the humanities, arts, social sciences, mathematics, or sciences) but will relate that theme to wider developments in Western Traditions and to the American concept of a liberal education.

1110(111) Western Traditions: Humanities [C, H].**1120(112) Western Traditions: Arts****1130(113) Western Traditions: Social and Behavioral Sciences [C, SS]****1140(114) Western Traditions: Mathematics****1150(115) Western Traditions: the Sciences****1210-1250(121-125) American Traditions (3)**

Prerequisite: Consent of the dean of the Honors College. Honors seminars in the American Traditions series involve readings and discussion of major importance in the development of the culture, politics, ideologies, and values which are or have been characteristic of the United States of America. Every American Traditions seminar will cover a broad range of time, and each may include contemporary issues. American Traditions 1230(123) (Social Sciences) satisfies the American history and government requirement, and any course in the American Traditions sequence may be taken to satisfy one of the core requirements for the American Studies minor.

1210(121) American Traditions: Humanities (C, H)**1220(122) American Traditions: The Arts****1230(123) American Traditions: Social and Behavioral Sciences (V, SS)****1240(124) American Traditions: Mathematics****1250(125) American Traditions: The Sciences****1310-1350(131-135) Non-Western Traditions (3)**

Prerequisite: Consent of the dean of the Honors College. Study of Non-Western societies, "traditional" or "modern," offers a reminder that, however defined, "the West" does not encompass the full range of human potentiality

whether in terms of culture, values, behavior or ideas. Based on reading of significant primary texts and/or important secondary works, these seminars remind us of the realities of human diversity and provide perspectives on our own world. Non-Western Traditions seminars may be used to satisfy cultural diversity general education requirements.

1310(131) Non-Western Traditions: Humanities [MI, CD, H]

1320(132) Non-Western Traditions: The Arts [CD]

1330(133) Non-Western Traditions: Social and Behavioral Sciences [C, V, CD, SS]

1340(134) Non-Western Traditions: Mathematics [CD]

1350(135) Non-Western Traditions: The Sciences [CD]

2010-2080(201-208) Honors Inquiries (3)

Prerequisite: Consent of the dean of the Honors College. Inquiries seminars focus on the particular contributions academic disciplines can make to relatively broad areas of inquiry, and reading, discussion, writing and where appropriate, laboratory work or field trips will enhance students' understanding of the strengths, frailties, and particular characteristics of one or more disciplinary strategies. Inquiries courses may be used to meet relevant General education requirements. Where special arrangements have been agreed, they can meet more specific departmental and divisional requirements. The course number may be repeated for credit whenever the topic is substantially different.

2010(201) Inquiries in the Humanities [C, H]

2020(202) Inquiries in the Fine and Performing Arts [C, H]

2030(203) Inquiries in the Social and Behavioral Sciences [SS]

2040(204) Inquiries in Mathematics and Computing [MS]

2050(205) Inquiries in the Natural Sciences [C, MS]

2060(206) Inquiries in Business

2070(207) Inquiries in Education

2080(208) Inquiries in Nursing

3100(210) Honors Advanced Composition: Writing the City (3)

Prerequisite: Consent of the Dean of the Honors College. Enhances critical thinking, research, discussion, and writing skills by focusing on the city of St. Louis and on the specific fields of study of those enrolled in the course. Issues such as depth and development of content, voice, style, tone, correct expression, and research techniques are among the topics emphasized. Students maintain a Commonplace Book of journals, drafts, and creative writings; they also submit a minimum of four formal papers. This course is required for transfer students (two-year Honors Program) and an elective for students on the four-year program. For students on either program, Honors 3100(210) meets the Advanced Composition requirement of the university.

3010(301) Advanced Honors Seminar (3)

Prerequisite: Consent of the dean of the Honors College. Open only to Honors College Students and not acceptable for graduate credit. Usually restricted to juniors and seniors, these advanced seminars focus on in-depth study of a significant body of subject matter. The perspective employed will normally be interdisciplinary or multi-disciplinary and will underscore the value of making connections between diverse areas of study. These courses will not usually require specific prerequisites, but may (with the consent of the appropriate department or division) be taken as major or minor courses. The course number may be repeated for credit whenever the topic is substantially different.

3010(301) Advanced Honors Seminar in the Humanities

3020(302) Advanced Honors Seminar in the Fine and Performing Arts

3030(303) Advanced Honors Seminar in the Social and Behavioral Sciences

3040(304) Advanced Honors Seminar in Mathematics and Computing

3050(305) Advanced Honors Seminar in the Sciences

3060(306) Advanced Honors Seminar in Business

3070(307) Advanced Honors Seminar in Education

3080(308) Advanced Honors Seminar in Nursing

4100(310) Independent Portfolio Writing (1)

Prerequisites: Consent of the Dean of the Honors College and senior status. Open only to Honors College students and not acceptable for graduate credit. Students in this course will meet on a regular basis with the Director of Writing and other appropriate Honors faculty to revise and polish samples in the Honors writing portfolio which the student has compiled during his or her Honors College enrollment. With the assistance of the Director, the student will write an in-depth analysis of his or her writing and will select the best examples of writing in his or her Honors Portfolio. During this independent study, the student may request help with research skills, writing issues, or application procedures for post-graduate courses or employment. Required of all students admitted and enrolled after August 1998; optional for others.

3510-3580(351-358) Research Seminar (3)

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Modeled on and for some students affording a preview of the postgraduate or professional research seminar, Honors Research seminars bring students face to face with primary research, as appropriate in the library, the laboratory, and/or field work, utilizing appropriate disciplinary perspectives and secondary reading. These courses may be cross-listed with other advanced courses in appropriate departments/divisions of the university, and as such may carry specific course

prerequisites and/or require the specific consent of the instructor.

3510(351) Research Seminar in the Humanities
3520(352) Research Seminar in the Fine and Performing Arts
3530(353) Research Seminar in the Social and Behavioral Sciences
3540(354) Research Seminar in Mathematics and Computing
355 Research Seminar in the Sciences
3560(356) Research Seminar in Business
3570(357) Research Seminar in Education
3580(358) Research Seminar in Nursing

4900(390) Independent Study in Honors (1-6)

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Most Honors students will fulfill their Honors independent study requirements in another department or division of the university. Where this is not possible, and where academic credit seems an appropriate reward for the independent study in question, the project may be undertaken as Honors 4900(390), normally as a 3-credit course. This will involve substantial reading, research, and/or field work, and will be supervised by a permanent member of the Honors College academic staff. Completed proposal forms for this course must be submitted to the Honors College no later than the deadline for university registration.

4910-4990(391-399) Honors Independent Research (3)

Prerequisites: Consent of the Dean of the Honors College. Open only to Honors College students and not acceptable for graduate credit. Honors students who wish to conduct individual research projects under the supervision of a member of the university's regular or full-time faculty may register for undergraduate credit and receive financial support on a cost-of-research basis. Such projects will usually be given appropriate course numbers in the student's major (or minor) department. Where this is not possible or otherwise inappropriate, students may register for credit in the Honors 39xx Independent Research series. In order to qualify for financial support and academic credit, completed proposal forms, together with a brief description of the research project, must be approved and signed by an appropriate member of the faculty and submitted to the Honors College not later than the semester deadline for university registration. May be repeated for credit where the research topic/problem is substantially different or where it can be significantly extended. Faculty approval must be obtained for repeat credit.

4910(391) Honors Independent Research in the Humanities

4920(392) Honors Independent Research in the Fine and Performing Arts

4930(393) Honors Independent Research in the Social and Behavioral Sciences

4940(394) Honors Independent Research in Mathematics and Computing

4950(395) Honors Independent Research in the Sciences

4960(396) Honors Independent Research in Business

4970(397) Honors Independent Research in Education

4980(398) Honors Independent Research in Nursing

4990(399) Honors Independent Research in Engineering

Barnes College of Nursing and Health Studies

Faculty

Connie K. Koch, Clinical Associate Professor*,
Interim Dean
Ed.D., Southern Illinois University-Edwardsville
Roberta K. Lee, Hubert C. Moog Endowed Professor of
Nursing*,
Dr. PH, University of Texas-Houston
Jerry D. Durham, Vice-Chancellor Academic Affairs,
Professor*
Ph.D., Saint Louis University
Shirley A. Martin, Dean Emerita, Professor Emerita*
Ph.D., Saint Louis University
Jean Bachman, Associate Professor*
D.S.N., University of Alabama
Anne Fish, Associate Professor*
Ph.D., University of Michigan-Ann Arbor
Ruth L. Jenkins, Associate Professor*
Ph.D., Saint Louis University
Kuei-Hsiang Hsueh, Assistant Professor*
Ph.D., University of Arizona
Kimberly Stieglitz, Assistant Professor*
D.N.S., Rush University
Nancy Magnuson, Student Health Administrator and
Clinical Professor
DSN, University of Alabama at Birmingham
Judith Maserang, Clinical Professor*,
Extended Learning Director
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MSN, WNP, University of Missouri-Kansas City
Melodie Rowbotham, Clinical Assistant Professor
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Linda Sherman, Clinical Assistant Professor
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MSN, ANP, University of Missouri-St. Louis
Carol W. Trotter, Adjunct Assistant Professor**
RNC, Ph.D., NNP
Lyn Vargo, Adjunct Assistant Professor**
Ph.D., RNC, MSN, NNP

* Members of Graduate Faculty

**Affiliated Adjunct Faculty

General Information

Barnes College of Nursing & Health Studies 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 B.S.N. 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 Ph.D. in Nursing is offered in cooperation with the Schools of Nursing at University of Missouri- Columbia and Kansas City. Admission to the Ph.D. is available at the post B.S.N. and M.S.N. levels.

Undergraduate Studies

The Barnes College of Nursing provides course work leading to the Bachelor of Science in nursing. The program is accredited by the Commission on Collegiate Nursing Education and the Missouri Board of Nursing. The undergraduate program offers two means for achieving the bachelor's degree in nursing: studies that are preparatory for completion of the professional nurse licensure examination (pre-licensure track) and advanced placement for the professional registered nurse without repetition of fundamental nursing courses (RN/BSN track). An accelerated prelicensure option is available for qualified persons who hold earned degrees in nonnursing fields, for outstanding students who have completed all prescribed general education and science course work, and for highly motivated, qualified high school graduates. Baccalaureate

students meeting admission criteria may participate in the Pierre Laclède Honors College.

Admission Policies

Basic Baccalaureate

First-time freshman or students with fewer than 24 college credits:

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Cumulative high school grade point average of 2.5 (4.0 scale).
- High school rank in upper third of graduating class.
- GED score, if applicable.
- ACT composite score of 21 or higher.
- Basic computer literacy prior to beginning nursing courses required in nursing major.
- Cumulative grade point average of 2.5 (on 4.0 scale) required prior to beginning nursing courses required in nursing major.
- Completion of a minimum of 45 semester hours of general education course work applicable to BSN degree NS010, NS 2103(103) (or equivalent), and NS 2105(105) (or equivalent) prior to beginning nursing courses required in nursing major.

Students with 24 or more college credit hours:

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Minimum cumulative grade point average of 2.5 (4.0 scale) on 24 transferable credits from an accredited college or university..
- Cumulative grade point average of 2.5 (on 4.0 scale) required prior to beginning nursing courses required in nursing major.

Degree/Transfer Pathway to accelerated option

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Baccalaureate or higher degree from regionally accredited college or university. Applicants not holding a baccalaureate degree must have completed 62 semester hours of general education academic credit before beginning the program, including prescribed course work, as evidenced by official transcript.
- Minimum grade point average of 3.0 on 4.0 scale for students with baccalaureate or higher degree or 3.2 on a 4.0 scale for students not holding a baccalaureate degree.
- Completion of all prerequisite general education and science courses for major in nursing with grade of C or higher.

- Two letters of recommendation that address applicant's ability to be a self-directed learner.

Post High School Pathway to the accelerated option

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- ACT score of 24 or higher
- Minimum high school grade point average of 3.2 on 4.0 scale.
- Two (2) letters of recommendation that address applicant's ability to be a self-directed learner
- Minimum cumulative grade point average of 3.2 on 4.0 scale on general education coursework prior to beginning nursing courses
- Completion of all prerequisite general education and science courses for the nursing major with grade of C or better.
- Completion of at least 45 semester hours of designated general education credits at UM-St. Louis, including credit earned through advanced standing.
- Basic computer literacy prior to beginning nursing courses required in nursing major.

Honors pathway

- Meet all requirements for admission to the traditional four-year option.
- Apply to the Pierre Laclède Honors College.

Admission to Nursing Clinicals requirements

- Basic computer literacy prior to beginning nursing courses required in nursing major.
- Completion of a minimum of 45 semester hours of general education course work applicable to BSN degree and NS 0100(010), NS 2103(103)(or equivalent) prior to beginning nursing courses required in nursing major.

RN/BSN

- Admission to the university (see Undergraduate Admission and Application Procedure section in this *Bulletin*).
- Graduate of either an accredited diploma or associate degree program in nursing.
- Evidence of current licensure as a registered nurse with eligibility for licensure in Missouri.
- Cumulative grade point average of 2.5 (4.0 scale)* on all previous college-level course work. (excluding nursing coursework)
- Minimum of 30 academic hours of college credit applicable to a degree.
- *Cumulative GPA of 3.0 required of individuals seeking accelerated access to MSN option.

Students are required to furnish their own transportation to and from campus and clinical agencies. Students must have automobile access for all community experiences through the program. For specific information regarding the B.S.N. degree program, contact Nursing Student Services and Records office at (314) 516-6066 or 1-888-NURSEUM or <http://www.umsl.edu/divisions/nursing>.

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.

Degree Requirements

The bachelor of science in nursing degree requires comprehensive course work in general education and nursing. Basic undergraduate nursing course work includes theory, on-campus laboratory and clinical activities. Clinical experiences require weekday, evening, and/or weekend commitments. Full-time study in the prelicensure baccalaureate track can be completed in four academic years. The prelicensure accelerated track requires full-time study and can be completed in 15 months. RN/BSN course work is offered at selected metropolitan sites, on-campus, and by Internet. Clinical activities are community-based and may be completed in the student's home community.

Satisfactory/Unsatisfactory

Undergraduate nursing majors may not take required related area general education or nursing courses on a satisfactory/unsatisfactory basis.

Support Course Requirements

Nursing majors must complete all general education requirements of the university as outlined in this *Bulletin* (see Undergraduate Studies, General Education Requirements).

In addition to meeting the university's general education requirements, the following specific courses must be completed prior to initiation of the nursing major. See a curriculum planning guide for specific courses and proper sequencing.

1) Natural science course work

Biology 1131(113), Human Physiology and Anatomy I
Biology 1141(114), Human Physiology and Anatomy II
Biology 1162(116), General Microbiology
Chem 1052(5), Chemistry for Health Professions (or equivalent)

2) Behavioral science course work

Psych 1003(3), General Psychology
Psych 1268(268), Human Growth and Behavior
Econ 1000(40), Introduction to American Economy (or equivalent)

3) Humanities

Phil 2256(156), Bioethics (or equivalent)

4) Nursing

Nursing 0100, Orientation to Nursing
Nursing 2103(103), Nutrition and Health (or equivalent)
Nursing 2105(105), Communication in the Nursing Profession (or equivalent)
Nursing 3799(373), Quantitative Analysis in the Health Sciences (or equivalent)

Nursing Course Work Requirements

Prelicensure

3101(101), Nursing and Health*
3106(106), Assessment of Clients in Health and Illness*
3110(110), Pathophysiological Bases of Nursing Practice
3111(111), Pharmacotherapeutics in Nursing Practice
3205(205), Adult Health Nursing I*
3206(206), Adult Health Nursing II*
3807(207), Nursing Research
3214(214), Psychiatric Mental Health Nursing*
3215(215), Nursing of Women and Childbearing Families*
3216(216), Child and Family Health Nursing*
3817(217), Information Systems Utilized in Health Care
4300(300), Community Health Nursing*
3804(304), Ethical and Legal Dimensions of Nursing Practice
3808(308), Management and Leadership in Nursing
4310(310), Senior Synthesis*

RN/BSN

3900(200), Dimensions of Professional Nursing
3807(207), Nursing Research (or equivalent)
3817(217), Information Systems Utilized in Health Care*
3920(220), Health Assessment*
4901(301), Family and Community Nursing*
4905(305), Values in Professional Nursing
3808(308), Management and Leadership in Nursing
4911(311), Synthesis in Nursing Practice*
* Includes a laboratory and/or clinical component

Bachelor of Health Sciences with Emphasis in Clinical Laboratory Science or Cytotechnology

The bachelor of health science degree (B.H.S.) is designed to prepare students for two career areas: clinical laboratory science (CLS) and cytotechnology (CT). The B.H.S. combines course work taken at UM-St. Louis with clinical courses through Jewish Hospital College of Nursing and Allied Health.

The clinical laboratory science program prepares students to perform analytical tests on body fluids, cells and products. The students will learn to identify possible discrepancies in data, confirm abnormal results, and develop solutions to problems concerning the generation of laboratory data.

The cytotechnology program prepares students to be knowledgeable about all of the normal cells from numerous body sites, as well as those changes encountered

due to neoplasia, infectious agents, viruses, and other causative agents. Graduates will be able to perform cytologic evaluations of body fluids, cells, and fine-needle aspirations.

Courses in clinical laboratory science and cytotechnology are offered for students who are pursuing a career in one of these fields. Students develop a program of studies through the bachelor of health sciences degree.

The following courses are offered in this area through the Barnes College of Nursing and Health Studies. These courses are not acceptable for graduate credit:

Clinical Laboratory Science:

Courses (specific course or distribution area and credits):

Humanities (9)

State requirement (3):

Bio 1811(011) Intro Biology I (5)
Bio 1131(113), Anatomy & Physiology I (4)
Bio 1141(114), Anatomy & Physiology II (4)
Bio 2482(216), Microbiology (3)
Bio 2483(218), Microbiology Lab (2)
Bio 4842(317), Immunobiology (3)
Bus 1800(103), Comp and Info Systems (3)
Bus 3600(210), Mgt & Org Behavior (3)
Chem 1111(11), Intro to Chemistry I (5)
Chem 1121(12), Intro to Chemistry II (5)
Chem 2223(122), Quantitative Analysis (3)
Chem 2612(261), Organic Chemistry I (3)
Chem 2622(262), Organic Chemistry II (3)
Com 1030(30) or 1040(40), Interpersonal Com or Public Speaking (3)
Eng 1100(010), English Comp (3)
Math 1035(35), Trigonometry (2)
NS 3110(110), Patho Bases of Nrsng Practice (3)
Psy 1003(003), General Psychology
Psy 2268(268), Growth & Development
Soc 1010(10), Intro to Sociology

Clinical Requirements:

Bio 4810(303a), Issues and Trends in Role Development (3)
Bio 4010(303b), Clinical Bacteriology (3)
Bio 4110(303c), Bacteriology Practicum (4)
Bio 4250(303d), Parasitology and Mycology (2)
Bio 4410(303e), Clinical Immunology (2)
Bio 4450(303f), Immunology Practicum (1)
Bio 4510(303g), Immunohematology (3)
Bio 4550(303h), Immunohematology Practicum (3)
Bio 4601(303i), Hematology (4)
Bio 4661(303j), Hematology Practicum (3)
Bio 4701(303k), Clinical Chemistry (3)
Bio 4750(303l), Chemistry Practicum (4)
Bio 3807(393), Research Methods Health Sciences (3)

Cytotechnology:

Courses (specific courses of distribution area and credits)

Humanities (9):

State requirement (3)

Bio 1811(011), Intro Biology I (5)
Bio 1131(113), Anatomy & Physiology I (4)
Bio 1141(114), Anatomy & Physiology II (4)
Bio 1162(116), General Microbiology (4)
Bio 118, General Microbiology Lab (4)
Bio 3631(234), Histology and Microtech (5)
Bio 4842(317), Immunobiology (3)
Bus 1800(103), (or CIS 1010(101) Intro to Computers (3)
Bus 3600(210), Mgt & Org Behavior (3)
Chem 1111(11), Intro to Chemistry I (5)
Chem 1121(12), Intro to Chemistry II (5)
Chem 2612(261), Organic Chemistry I (3)
Com 1030 (30) or 1040(40), Interpersonal or Public Speaking (3)
Eng 1100(010), English Comp (3)
Eng 3130(213), Technical Writing (3) OR Eng 3160(216) Writing in the Sciences (3)
Math 1030(30), College Algebra (3)
Math 1035(35), Trigonometry (2)
NS 3110(110), Pathophysiological Bases of Nursing Practice (3)
Psy 1003(003), General Psychology
Psy 1268(268), Growth and Development
Soc 1010(10), Intro to Sociology (3)

Clinical requirements:

HS 4000(302a), Intro to Cytology (3)
HS 4100(302b), Female Genital Tract I (4)
HS 4200(302c), Female Genital Tract II (3)
HS 4300(302d), Processing Lab (2)
HS 4400(302e), Respiratory and Order (3)
HS 4600(302f), Body Fluid Cytology (3)
HS 4700(302g), Gastro Genitourinary Cytology (3)
HS 4800(302h), Fine Needle Aspiration (4)
HS 4900(302i), Adv Practices in Cytology (12)
HS 3520(302j), Leadership and Mgmt Cytology (3)
HS 3807(393), Research Methods Health Science (3)

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 three ways of completing the master of science in nursing degree: completion of a minimum of 36 credit hours with emphasis in the role of the nurse educator; completion of a minimum of 36 credit hours with emphasis in the role of the nurse leader of health systems; and completion of a minimum of 43 credit hours with emphasis in the role of advanced practice nurse (clinical nurse specialist or nurse practitioner). Those selecting the practitioner functional role option will be eligible to complete national certifying examinations. Opportunities are also available for completion of post M.S.N. requirements leading to eligibility for practitioner certification. **Graduates completing the clinical specialization or practitioner functional options are eligible for endorsement as advanced practice nurses in Missouri.**

Admission Requirements

Nurse Educator:

- B.S.N. from an accredited nursing program or B.S.N. program comparable to UM-St. Louis College of Nursing and Health Studies B.S.N. degree.
- Minimum cumulative grade point average of 3.0 (4.0 scale).
- Current professional licensure with eligibility for licensure in Missouri.
- Successful completion of an undergraduate descriptive and inferential statistics course.
- Successful completion of an undergraduate health assessment course or equivalent
- Computer literacy.
- Basic cardiac life support certification

Nursing Leadership of Health Systems

B.S.N. from an accredited nursing program or B.S.N. program comparable to UM-St. Louis College of Nursing and Health Studies B.S.N. Program

Minimum cumulative grade point average of 3.0 (4.0 scale)

Current professional licensure with eligibility for licensure in Missouri

Successful completion of an undergraduate descriptive and inferential statistics course

Computer literacy

Successful completion of an undergraduate health assessment course or equivalent.

Basic cardiac life support certification

Advanced Practice Nurse (Clinical Nurse Specialist or Nurse Practitioner)

B.S.N. from accredited nursing program or B.S.N. program comparable to UM-St. Louis College of Nursing and Health Studies B.S.N. Program

Minimum cumulative grade point average of 3.0 (4.0 scale)

Current professional licensure with eligibility for licensure in Missouri

Basic cardiac life support certification

Successful completion of an undergraduate descriptive and inferential statistics course

Successful completion of an undergraduate health assessment course

Computer literacy

The Nurse Practitioner option also requires:

Two letters of reference

Narrative outlining goals.

Two years of clinical experience with chosen population

Availability of clinical resources may limit the number of applicants accepted to the practitioner option.

Degree Requirements

Nurse Educator

6104, Values and Diversity in Health Care

6106(406), Policy, Organization, and Financing of Health Care

6309(409NE), Role of the Nurse Educator

6140(410), Health Promotion Across the Life Span

6111(411), Theoretical Foundations of Nursing Practice

6112(412), Nursing Research Methods

6114(114), Evidenced-Based Nursing

6320(420), Nursing Program and Curriculum Development

6321(421), Instructional Strategies in Nursing Education

6952(452), Synthesis Practicum

Educ 6410(410), The Adult Learner

Ed Rem 6707(420), Classroom Measurement and Evaluation OR

Ed Rem 6709(421), Educational and Psychological Measurement

Nursing Leadership of Health Systems

N6104 Values and Diversity in Health Care

6106(406), Policy, Organization and Financing of Health Care

6409(409NL), Role of the Nurse Leader

6140(410), Health Promotion Across the Life Span

6111(411), Theoretical Foundations of Nursing Practice

6112(412), Nursing Research Methods

6114(414), Evidenced Based Nursing

6425(425), Managed Care Services

6426(426), Health Resources Management

6428(428), Theory and Practice in Nursing Leadership

6952(452), Synthesis Practicum

Elective from Nursing, Business, or Managerial Decision Making and Informatics

Advanced Practice Nurse (Clinical Nurse Specialist or Nurse Practitioner)

- 6104 Values and Diversity in Health Care
6106(406), Policy, Organization and Financing of Health Care
6509(409NS/NP), Role of the Clinical Nurse Specialist/ Nurse Practitioner
6140(410), Health Promotion Across the Life Span
6111(411), Theoretical Foundations of Nursing Practice
6112(412), Nursing Research Methods
6114(414), Evidence Based Nursing
6518(418), Pathophysiology for Advanced Nursing Practice
6524(424), Health Assessment for Advanced Nursing Practice
6520(427), Pharmacology for Advanced Nursing Practice
6730(439), Adult Primary Care I: Diagnosis & Management in Advanced Nursing Practice OR
6741(441), Family Health I: Diagnosis & Management in Advanced Nursing Practice OR
6743(443), Child Health I: Diagnosis & Management in Advanced Nursing Practice OR
6746(446), Women's Health I: Diagnosis & Management in Advanced Nursing Practice OR
6740(440), Adult Primary Care II: Diagnosis & Management in Advanced Nursing Practice OR
6742(442), Family Health II: Diagnosis & Management in Advanced Nursing Practice OR
6744(444), Child Health II: Diagnosis & Management in Advanced Nursing Practice OR
6747(447), Women's Health II: Diagnosis & Management in Advanced Nursing Practice
6954(454A), Advanced Practice Nursing: Internship I
6955(454B), Advanced Practice Nursing: Internship II

Doctor of Philosophy in Nursing

The Ph.D. in nursing program at the University of Missouri-St. Louis affords students with academic, clinical, and research resources of the University of Missouri system through a cooperative arrangement with the Schools of Nursing in Kansas City and Columbia.

Students receive a strong foundation in scientific inquiry with a focus on a clinically relevant area for scholarship and research, hands-on research skills, strategies to promote nursing scholarship, and knowledge of the discipline of nursing. The program provides knowledge in theories, research methods, and empirical findings related to nursing science and advanced nursing practice.

Admission Requirements

Applicants must meet the following:
Graduate of CCNE Baccalaureate program or equivalent with 3.2 minimum GPA (4.0 scale).
Graduate of CCNE Master's program or equivalent with 3.5 minimum GPA (4.0 scale).
GRE (composite score of 1500 or better desired).
Three letters of reference.

Original essay (37 pages) addressing doctoral study and research interests related to Health Promotion and Protection, Health Restoration and Support, and/or Health Care Systems.

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 72 hours of graduate-level course work that include a minimum of 12 hours for the dissertation. M.S.N. 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, or 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 advances 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

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.

Black Student Nurses' Association

The College is a constituent of the Black Student Nurses' Association. The purpose of this organization is to provide black nursing students in the prelicensure baccalaureate track the opportunity to serve as a support group for African-American students, collaborate with other African-American groups to compile archives relevant to African-American nurses, and to promote participation in interdisciplinary activities.

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.

Course Descriptions

All general education requirements must be successfully completed before beginning 3100 level nursing courses.

All previous level nursing courses must be successfully completed to progress to the next level nursing courses.

0100(10) Orientation to Professional Nursing (0)

Prerequisites: Admission to four-year baccalaureate program. Mandatory six-week introduction to the nursing program provides a comprehensive orientation to the program. Students are introduced to the academic and clinical expectations of the curriculum. Concerns critical for academic success (i.e., time management, effective study skills, stress management and dealing with test anxiety) are addressed.

2100(100) Introduction to the Nursing Discipline (3)

This course introduces the historical and theoretical development of nursing as a discipline. Nursing is examined as an emerging practice profession. Variables that influence nursing and health care are discussed. Concepts and skills introduced in this course guide the student's educational experience within the nursing major.

2103(103) Nutrition and Health (3)

This course examines the nutritional needs throughout the life span with emphasis on nutritional principles related to health promotion and protection. Content includes assimilation, digestion and absorption of nutrients and cultural and economic influences on dietary practices.

2105(105) Communication in the Nursing Profession (3)

Prerequisite: None. This course focuses on the development of communication abilities utilized in professional nursing. The individual's relationship with self, others, and groups is discussed. Students learn verbal and non-verbal communication skills, self-awareness, and

sensitivity to others. Interpersonal skills are introduced to enable the student to develop effective human caring relationships with a diverse population of clients and colleagues.

3101(101) Nursing and Health (6)

Prerequisites: Biology 1131(113), Biology 1141(114), Biology 1162(116), Chemistry 1052(5), Nursing 1010(10); pre- or co- requisites: Nursing 3106(106), Nursing 3110(110), Nursing 3111(111). An introduction to the discipline of nursing, the historical and theoretical development of nursing is explored with an emphasis on critical thinking, the teaching/learning process, and foundational practice concepts. Through modular laboratory experiences, the student acquires psychomotor skills to provide safe and effective nursing care to clients promoting health and wellness. Includes classroom, laboratory and clinical experiences.

3106(106) Assessment of Clients in Health and Illness (3)

Prerequisite: Biology 1131(113), Biology 1141(114) Biology 1162(116), Chemistry 1052(5), Psychology 1268(268), Nursing 0100(10). This course integrates theoretical knowledge and interpersonal skills in the assessment of clients, focusing on differentiating normal from abnormal findings. It emphasizes the use of problem solving, critical thinking and cultural competency in identifying multidimensional health variations across the life span. The course includes classroom and laboratory experiences.

3110(110) Pathophysiological Bases of Nursing Practice (3)

Prerequisite: Biology 1131(113), Biology 1141(114), Biology 1162(116), Chemistry 1052(5) (or equivalent), Nursing 0100(10). This course focuses on the nature of disease, its causes, and the bodily changes that accompany it. Includes a study of general principles of disease, specific diseases of individual organs and systems and the clinical implications.

3111(111) Pharmacotherapeutics in Nursing Practice (3)

Prerequisite: Biology 1131(113), Biology 1141(114), Biology 1162(116), Chemistry 1052(5), Nursing 0100(10); pre/co requisite: Nursing 3110(110). This course introduces key terminology, legal foundations, general principles and clinical applications of pharmacology.

3205(205) Adult Health Nursing I (5)

Prerequisite: All 3100 level nursing courses, Psych 1268(268) This course focuses on the nursing care of the adult experiencing selected pathophysiological processes affecting body regulatory mechanisms. These mechanisms are related to immune responses, problems of oxygenation, ventilation, transport and perfusion; kidney function; regulatory mechanisms and digestion, absorption and elimination. Emphasis is placed on health restoration,

maintenance and support as well as the continued development of the nurse-client relationship, critical thinking processes, and research-based nursing practice. This course includes classroom and clinical activities in a variety of settings.

3206(206) Adult Health Nursing II (5)

Prerequisite: All 3100 level nursing courses, Psych 1268(268). This course focuses on the nursing care of the adult experiencing selected pathophysiological processes affecting body regulatory mechanisms. These mechanisms are related to endocrine, sensory-perceptual, gynecological, and genitourinary functions. Emphasis is placed on health restoration, maintenance and support as well as the continued development of the nurse-client relationship, critical thinking processes, and research-based nursing practice. This course includes classroom and clinical activities in a variety of settings.

3214(214) Psychiatric Mental Health Nursing (4)

Prerequisite: All 3100-level nursing courses; Psychology 1268(268). This course focuses on health and illness across the lifespan of clients who have acute and chronic emotional and psychosocial difficulties and psychiatric illnesses. The course emphasizes development of students' decisional capabilities, self-awareness and professional behaviors as they utilize theory and research from nursing, psychology and related disciplines for the provision of nursing care to individuals, families and groups. Clinical experiences in community and acute care settings are designed for students to engage in individual and group strategies that promote and maintain mental health. Course includes classroom and clinical activities in a variety of settings.

3215(215) Nursing of Women and Childbearing Families (4)

Prerequisite: All 3100 level nursing courses, Psychology 1268(268). This course focuses on the childbearing family and women's reproductive health, including family dynamics and growth and development. Health promotion, protection, maintenance and restoration are covered in experiences that include hospital and community settings. Health care policy and systems as relevant to these populations are included. Course includes classroom and clinical activities in a variety of settings.

3216(216) Child and Family Health Nursing (4)

Prerequisite: all 3100 level nursing courses, Psychology 1268(268). This course focuses on pediatric health and illness with emphasis on family dynamics, growth and development and communication with children and their families. Health promotion, protection, restoration, maintenance and support concepts are covered in experiences that include hospital and community settings. Health care policy and systems are studied as relevant to this population. Course includes classroom and clinical activities in a variety of settings.

3799(373) Quantitative Analysis in the Health Sciences (3)

Prerequisite: Math 1030(30) or equivalent. This course focuses on concepts and applications of statistics in the health sciences. Topics include descriptive and inferential statistics, probability distributions of random variables, sampling and estimation. The course uses examples and content from health sciences to provide the basic conceptual structure for quantitative analysis.

3804(304) Ethical and Legal Dimensions of Nursing Practice (3)

Prerequisites: Philosophy 2256(156) or equivalent. This course explores the ethical and legal dimensions of nursing practice. The relationship between ethical and legal issues is examined within nursing situations. The student participates in dialogue addressing ethical-legal issues in professional nursing practice to explore personal value, increase sensitivity to others and to develop ethical reasoning abilities.

3807(207) Nursing Research (3)

Prerequisite: Nursing 3799(373) (or equivalent). This course introduces the values and characteristics of quantitative and qualitative research within an ethical perspective. Students examine the research process through analysis and critique of nursing research.

3808(308) Management and Leadership in Nursing (3)

Prerequisites: All 3200 level nursing courses; NS3807; NS3817. Economics 1000(40) or equivalent. This course prepares the nurse to coordinate and manage client care in diverse health care settings. Emphasis is placed on leadership and management theory and related skills, collaboration, delegation, coordination, and evaluation of multi-disciplinary work and the application of outcome-based nursing practice.

3817(217) Information Systems Utilized in Health Care (3)

Prerequisite: None. This laboratory course establishes competency in health information systems. The course incorporates the impact of information systems on health care delivery.

3873(399) Guided Study in Nursing (1-3)

Prerequisite: Consent of instructor. This course is an in-depth independent study of selected topics in nursing under the guidance of a specific instructor. No more than six hours may be taken under this option.

3900(200) Dimensions of Professional Nursing Practice (3)

Prerequisites: Admission to the College of Nursing as RN. Investigates the roles and responsibilities of the professional nurse within a rapidly changing health care delivery system. Key issues are explored with emphasis on health promotion and health. Graduates of diploma nursing programs will be awarded college credit for successful validation of basic nursing knowledge as part of this course.

3920(220) Health Assessment (3)

Prerequisites: Nursing 3900(200) and Nursing 3817(217) (may be taken concurrently) or consent of instructor. This laboratory course focuses on the knowledge, communication abilities, and technical skills necessary for comprehensive assessment of individuals of all ages.

4300(300) Community Health Nursing (4)

Prerequisites: All 3000-level nursing courses. This course provides a conceptual foundation for nursing that recognizes the community as client in society. The course examines socioeconomic, environmental, epidemiological, and legislative influences, ethical/legal issues, and the impact of health beliefs and practices on health promotion and protection in communities and society. The student applies various theories and concepts when encountering families, groups and communities with diverse value systems and cultural backgrounds. Course includes classroom and clinical activities in a variety of settings.

4310(310) Senior Synthesis (5)

Prerequisites: all 3000 level nursing courses, Nursing 4300(300) and 3808(308) may be taken concurrently. This course integrates theory and practice from previous nursing and general education courses with the goal of preparing the student for entry into professional nursing practice. Within a seminar context, students explore a variety of clinical and professional nursing topics. The course includes research-based strategies utilized for health promotion and protection, health restoration, maintenance and support. Areas of study are selected from across the lifespan, including diverse populations in a variety of health care systems. Course includes classroom and clinical experiences in a variety of settings. Not for graduate credit.

4338(338) Sociology of Health (3)

Same as Sociology 4338(338). Prerequisites: Sociology 1010(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.

4720(320) Perioperative Nursing (3)

Prerequisite: Consent of instructor. Provides experiences in preoperative, intraoperative, and postoperative settings. Includes a clinical component.

4722(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.

4723(326) Nurse Externship (3)

Prerequisites: Senior level status; GPA 3.0 (4.0 scale) This course provides the opportunity to apply theoretical and conceptual knowledge and skills in a structured clinical environment under the guidance of a mentor.

4724(327) Emergency/Trauma Nursing (3)

Prerequisites: Nursing 3205(205) and 3206(206) or consent of instructor. This course provides a framework for the roles and responsibilities of the professional registered nurse in Emergency and Trauma nursing care.

4725(325) Education and the Psychology of Human Sexuality (3)

Same as Ed Psy 3525(325). 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.

4741(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.

4742(342) Critical Care Nursing of the Adult (3)

Prerequisite: RN or completion of Nursing 3205(205) and 3206(206) or equivalent. Focuses on health restoration, health maintenance, and health support of individuals with dysfunctions or trauma to major organ systems. Emphasis is on understanding pathophysiology and psychosocial processes related to nursing and collaborative interventions, and the development of a functional framework for data organization and analysis.

4752(352) Primary Care Nursing (3)

Prerequisites: Completion of all junior level courses; Corequisite: Nursing 4911(311). 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.

4765(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.

4770(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.

4901(301) Family and Community Nursing (5)

Prerequisites: Nursing 3900(200), 3817(217) and 3920(220). This practicum course introduces the concepts, principles, skills, and professional nursing roles essential to practice community-based professional nursing with families and groups.

4905(305) Values in Professional Nursing (3)

Prerequisites: All 3000 level RN/BSN nursing courses or consent of instructor. Explores values and beliefs as they shape professional nursing practice and influence clinical decision making and interventions in the evolving health care system. Attention is given to the impact of sociocultural factors and health/illness beliefs and practices of the diverse populations served by the professional nurse. Students examine their own understanding of the moral nature of professional nursing within the context of a diverse society.

4911(311) Synthesis in Nursing Practice (5)

Prerequisites: Nursing 4901(301). 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 achieved while in the BSN Completion Program.

5000(401) Health and Wellness in the Elderly (3)

Prerequisite: Graduate standing and consent of instructor. Same as Gerontology 6401(401). 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. Introduces the "Putting Prevention into Practice" model adapted to health promotion in the elderly.

5100(462) Nursing Case Analyses in Long-term Care of the Elderly (3)

Prerequisite: Nursing 5110(451), 6740(440) or 6742(442). From clinical practice with the elderly, nursing case analyses in long-term care of commonly living/frail elderly and nursing care of elderly in residential long-term care are developed. This is a clinical course, requiring an approved preceptor.

6104(404) Values and Cultural Diversity in Advanced Nursing Practice (3)

Prerequisites: Admission to MSN Program. This course explores the diversity of cultural influences and the moral/ethical influences on advanced nursing practice. The values and cultural beliefs of the individual student and the underlying values of the health care system are analyzed for their impact on communities and health care. Health/illness beliefs and practices of individuals, families and communities are explored as well as folk health care and complementary medicine.

6106(406) Policy, Organization and Financing in Health Care (3)

Prerequisite: Admission to MSN program or consent of instructor. This course is designed to explore the underpinnings of health policy as it relates to advanced nursing practice. It provides an overview of health care policy, organization and financing with emphasis on current health care trends within the framework of the workplace, government, professional organizations, and community. The policy making process at the organizational, local, state, national, and international level is explored. The variety of forces influencing policy and the policy making process are analyzed with emphasis on the nurses' role in influencing health care delivery, outcomes of client care, and nursing professional issues. Use of Health services and nursing research to influence policy is introduced.

6111(411) Theoretical Foundations in Nursing (3)

Prerequisite: Admission to the MSN program. This course analyzes major concepts and theories relevant to nursing. Ethical issues and dilemmas inherent in advanced nursing practice are also addressed.

6112(412) Nursing Research Methods (3)

Prerequisites: Nursing 3799(373) or equivalent; Nursing 6111(411) (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.

6114(414) Evidence Based Nursing (3)

Prerequisites: Nursing 6112(412). 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 nursing is examined. Opportunities are provided to

develop a research utilization plan to address a clinical area of practice.

6115(457) Qualitative Methods in Nursing Research (3)

Prerequisites: Nursing 6111(411) and 6112(412) 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.

6140(410) Health Promotion Across the Life Span (3)

Pre or corequisite: Nursing 6111(411). This course is designed to provide students with a conceptual basis of health promotion and health protection for clients across the life span. Clients are conceptualized as individuals, families and populations. An application of various developmental theories for the child, adult, older adult, and family will provide the basis to individualize health care needs for various age and family groups. Core concepts include theories of health, health promotion and protection, epidemiology, disease and injury prevention, health education, growth and development, nutrition, and family systems theory.

6220(473) Measurement of Nursing Phenomenon (3)

The theoretical basis of measurement is presented in a foundation for the development and evaluation of measurement instruments and procedure for use in nursing research. Content is presented regarding measurement theories, techniques of construction, statistical analysis of reliability and validity and strengths and limitations of selected measures of nursing research.

6309(409NE) Role of the Nurse Educator (3)

Prerequisite: Admission to the MSN program or consent of instructor. Examines roles and responsibilities of the nurse educator in a variety of settings.

6320(420) Nursing Program and Curriculum Development (3)

Prerequisite: Nursing 6309(409NE). Identifies and analyzes factors that determine content and organization of curricula in nursing programs and health care agencies. Addresses principles and processes for initiating and revising curricula. Examines systematic evaluation of curriculum at all levels.

6321(421) Instructional Strategies in Nursing Education (3)

Prerequisite: Nursing 6320(420) or consent of instructor. Focuses on analysis and development of teaching and learning strategies and skills in nursing education. Considers relationship of content and learning style to instructional methods utilized. Attention given to integration of technology in instructional design and delivery. Techniques for evaluating learner and teacher also explored.

6409(409NL) Role of the Nurse Leader (3)

Prerequisite: Admission to the MSN program or consent of instructor. Examines roles and responsibilities of the nurse leader in a complex health care system.

6425(425) Managed Care Services (3)

Prerequisite: Admission to MSN or consent of instructor. Provides analysis of health care environment in managed care and its impact on nurse's role.

6426(426) Health Resources Management (3)

Prerequisite: Nursing 6409(409 NL). Focuses on roles and responsibilities of nurse leader for fiscal and human resource management in both public and private sectors. Includes analysis of environment, health care organization within the system, and impact of resource management on nursing and health care.

6428(428) Theory and Practice in Nursing Leadership (3)

Prerequisite: Nursing 6409(409NL). Focuses on theories and practices of advanced nursing leadership and management within complex health care organizations.

6509(409NS/NP) Role of the Clinical Nurse Specialist/Nurse Practitioner (2)

Prerequisite: Admission to the MSN program. In this course, the student explores professional role issues affecting advanced practice nurses (APNs). The course facilitates the role development of nurses who desire to function as primary care providers (nurse practitioners) or as specialists within a particular clinical area (clinical nurse specialists). Core concepts include: communication, collaboration, advocacy, negotiation, standards of practice, and subroles of advanced nursing practice.

6518(418) Pathophysiology for Advanced Nursing Practice (3)

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.

6519(418P) Advanced Pediatric Pathophysiology (3)

This course focuses on embryology of the major organ systems, as well as specific physiologic and pathophysiological processes relevant to the child from birth through age 18. Implications for advanced nursing practice which result from alterations of normal physiologic functioning in cellular, tissue, and organ systems are examined. Emphasis is placed on the relationship between pathophysiology, decision making, and standards of advanced nursing practice.

6520(427) Pharmacology for Advanced Nursing Practice (3)

Prerequisite: Nursing 6518(418) or equivalent 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

6524(424) Health Assessment for Advanced Nursing Practice (3)

Prerequisite: Nursing 6518(418)(may be taken concurrently). Designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of individuals across the lifespan. This course builds on basic health assessment knowledge and skills, emphasizing advanced assessment skills, laboratory work interpretation, validation, documentation and analysis of assessment findings.

6526(424P) Advanced Health Assessment for Pediatric Nursing Practice (3)

Comprehensive assessment of children through adolescence, including those with significant health and/or developmental deviations, using advanced diagnostic reasoning processes. Emphasis on health history, cultural diversity, differentiations, interpretation, and documentation of findings.

6528(427N) Pharmacology for the Neonate (3)

Prerequisites: Nursing 6518(418) or consent of the instructor. Pharmacological agents used in the management of neonates are discussed. Pharmacologic principles are reviewed and applied to the use of drugs in the level II or III NICU. The clinical use of drugs in the management of specific illnesses of the neonate are explored. In addition, legal considerations for the Advanced Practice Nurse are stressed.

6529(427P) Advanced Pharmacology for Pediatric Nursing Practice (3) Prerequisites: Admission to Master of Science in Nursing or permission of the instructor.

The major focus of this course is the pharmacotherapeutic use of medications for primary health care management of children from birth to eighteen years of age by advanced practice nurses.

6739(439) Adult Primary Care I: Diagnosis & Management in Advanced Nursing Practice (5)

Prerequisites: Nursing 6105(405), 6106(406), 6108(408), 6140(410), 6111(411), 6112(412), 6518(418), 6524(424), 6520(427); 6509(409NS/NP) & 6114(414) may be taken concurrently. Clinical course designed to provide a theoretical and practical base for advanced practice nursing students to diagnose and manage health problems of adults. Emphasis is placed on clinical assessment and decision-making in the provision of direct patient care within a defined scope of practice. The student is expected to clinically apply the concepts and theories discussed in class in the advanced nursing care of adults who are experiencing problems related to the upper and lower respiratory system, cardiovascular system, gastrointestinal system, skin and infectious diseases. Clinical experiences

are designed to enhance assessment and technical skills needed in diagnosing common health problems.

6740(440) Adult Primary Care II: Diagnosis & Management in Advanced Nursing Practice (5)

Prerequisites: Nursing 6739(439). Clinical course designed to provide a theoretical and practical base for advanced practice nursing students to diagnose and manage health problems of adults. Emphasis is placed on clinical assessment and decision-making in the provision of direct patient care within a defined scope of practice. The student is expected to clinically apply the concepts and theories discussed in class in the advanced nursing care of adults who are experiencing problems related to the musculoskeletal, neurological, endocrine/metabolic, genitourinary, reproductive systems, the eye, and mental health. Clinical experiences are designed to enhance assessment and technical skills needed in diagnosing common health problems.

6741(441) Family Health I: Diagnosis & Management in Advanced Nursing Practice (5)

Prerequisites: Nursing 6106(406), 6108(408), 6140(410), 6111(411), 6112(412), 6518(418), 6524(424), 6520(427), 409 NS/NP & 6114(414) may be taken concurrently. Clinical course designed to provide students with the opportunity to gain the concepts and skills essential to advanced practice nursing care of families experiencing acute and chronic health problems, with particular focus on women's and children's health issues. Emphasis is given to those health needs most commonly encountered by the Family Nurse Practitioner. A research- and theory-based approach to nursing interventions is used. Core concepts include family adaptation to acute and chronic conditions, health promotion, clinical decision-making and ethical decision-making.

6742(442) Family Health II: Diagnosis and Management in Advanced Nursing Practice (5)

Prerequisites: Nursing 6741(441). Clinical course designed to provide students with the opportunity to gain the concepts and skills essential to advanced practice nursing care of families experiencing acute and chronic health problems, with particular focus on adult clients. Emphasis is given to those health problems most commonly encountered by the Family Nurse Practitioner. A research- and theory-based approach to nursing interventions is used. Core concepts include family adaptation to acute and chronic conditions, health promotion, clinical decision-making, and ethical decision-making.

6743(443) Child Health I: Diagnosis & Management in Advanced Nursing Practice (5)

Prerequisites: Nursing 6105(405), 6106(406), 6108(408), 6140(410), 6111(411), 6112(412), 6518(418), 6524(424), 6520(427), 6114(N409 NS/SP & N414) may be taken concurrently. Clinical course designed to provide students the opportunity to apply skills from advanced physical assessment, pathophysiology, pharmacology, and theory to

advanced nursing care of the child and family. Emphasis is placed on child and family developmental issues for advanced practice pediatric nurses. Normal cognitive, motor, social/emotional and language development and usual developmental challenges of each age group are addressed. Implications of the developmental stage of the child and family, level of developmental skill and developmental problems for the maintenance of health and management of illness by the advanced practice nurse are discussed. Core content includes information related to APN management of cultural and ethnic variations of growth and development problems; health maintenance; common pediatric behavioral problems; and recognition of circumstances that require interdisciplinary collaboration and referral. Clinical practice opportunities are arranged in collaboration with the instructor and planned in a variety of pediatric settings.

6744(444) Child Health II: Diagnosis & Management in Advanced Nursing Practice (5)

Prerequisite: Nursing 6743(443). Clinical course designed to provide students the opportunity to apply skills from advanced physical assessment, pathophysiology, pharmacology, and theory to advanced nursing care of the child and family. Emphasis is placed on using models and theories that guide advanced practice care for clients with common pediatric problems. Implications of the developmental stage of the child and family, level of developmental skills and developmental problems for the maintenance of health and management of illness by the APN nurse are discussed. The SOAP format is used and includes pertinent history, physical examination, laboratory findings and differential diagnosis relevant to the individual client. Focus is on development of a plan of care that encompasses the various treatment modalities used in managing common pediatric health problems including specific pharmaceutical and symptomatic treatment. Clinical practice opportunities are arranged in collaboration with the instructor and planned in a variety of pediatric settings.

6746(446) Women's Health I: Diagnosis & Management in Advanced Nursing Practice (5)

Prerequisites: Nursing 6105(405), 6106(406), 6108(408), 6140(410), 6111(411), 6112(412), 6518(418), 6524(424), 6520(427), 6114(N409NS/SP & N414) may be taken concurrently. Clinical course designed to provide students the opportunity to apply knowledge and skills from advanced physical assessment, pathophysiology, pharmacology, and theory to advanced nursing care of women and families throughout the childbearing continuum. Emphasis is placed on using models and theories that guide advanced nursing practice and research-based care. Focus is on educating the advanced practice nurse to collaborate with women and their families to promote health and prevent disease. Within this context, the focus is on assessing, diagnosing, and planning care for women and families experiencing an uncomplicated childbearing continuum, as well as acute and/or chronic

health care problems during preconception, pregnancy and the postpartum period, within a health promotion framework. The format includes pertinent history, physical examination, laboratory findings and differential diagnoses relevant to the individual client. Core concepts include adaptation of women through developmental stages, health risk assessment, health promotion, disease prevention, health education, primary care of women throughout the childbearing continuum, reproductive options, ethical decision-making, and grief and loss.

6747(447) Women's Health II: Diagnosis & Management in Advanced Nursing Practice (5)

Prerequisite: Nursing 6746(446). Clinical course designed to provide students the opportunity to apply knowledge and skills to advanced practice nursing care of women and families throughout the lifespan. Emphasis is placed on using models and theories that guide advanced nursing practice and research-based care. Focus is on educating the advanced practice nurse to collaborate with women and their families to promote health and prevent disease. Within this context, the focus is on assessing, diagnosing, and planning care for women, as well as women experiencing common health problems within a health promotion framework. The format includes pertinent history, physical examination, laboratory findings and differential diagnoses relevant to the individual client. Core concepts include adaptation of women through developmental stages, health risk assessment, health promotion, disease prevention, health education, primary care of well women, ethical decision-making, and grief and loss. Focus is on the development of a plan of care that encompasses the various treatment modalities used in managing common women's health problems including specific pharmacological and non-pharmacological therapies.

6870(470) Special Topics in Advanced Practice Nursing (1-3)

Prerequisite: Consent of Instructor. Explore special topics for the advanced practice nurse in the areas of research, theory, education and administration. No more than three hours shall be applied toward the degree. This course is for graduate MSN or Ph.D. levels.

6875(475) Special Study in Graduate Nursing (1-3)

Prerequisites: Admission to the MSN program and/or consent 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.

6877(477) Thesis/Directed Research Seminar (1)

Prerequisites: Nursing 6112(412) and permission of thesis/directed research chair. Presentation and discussion of selected research problems in nursing.

6878(478) Directed Research (1-6)

Prerequisites: Nursing 6112(412) 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.

6879(479) Research Thesis (1-6)

Prerequisites: Nursing 6112(412) and permission of faculty. Individual investigation of a research problem of relevance to nursing. Student works under the direction of a faculty committee to prepare and orally defend a thesis.

6952(452) Synthesis Practicum (3)

Prerequisites: All required courses in Nurse Educator or Nursing Leadership of Health Systems option or consent of instructor. Serves as opportunity to operationalize role of nurse educator or nurse leader in selected academic and/or clinical settings. Includes frequent clinical seminars.

6954(454A) Advanced Practice Nursing: Internship I (2)

Prerequisite: All required courses in the Advanced Practice Nurse option or consent of instructor. Provides opportunity to initiate the Advanced Practice Nurse role with selected populations. Students participate in precepted experiences with clinical nurse specialists, certified nurse practitioners, and/or primary care physicians for a minimum of 225 hours. Frequent clinical seminars included.

6955(454B) Advanced Practice Nursing: Internship II (2)

Prerequisite: 6954(454A). Continuation of precepted clinical experiences with selected populations initiated in Nursing 6954(454A). Students satisfy a minimum of 225 precepted hours with clinical nurse specialists, certified nurse practitioners, and/or primary care physicians and participate in frequent clinical seminars.

6956(454C) Advanced Practice Nursing: Internship III (2)

Prerequisite: All required courses in the Advanced Practice Nurse neonatal option or consent of instructor; may be taken concurrently with Nursing 6954(454A) and Nursing 6955(454B). Serves as culminating precepted experience for students enrolled in the neonatal nurse practitioner option. Students work within Level III neonatal unit with certified neonatal nurse practitioners and/or neonatologists for a minimum of 150 clinical hours. Must be taken final semester of study.

6980(480) Guided Nursing Research Seminar (3-6)

Prerequisites: Advanced graduate status and/or consent of instructor. Provides opportunity to work in collaboration with senior faculty and peers on a focused research topic relevant to nursing. May be repeated twice on unduplicated topics.

7481(481) Nursing Theory Analysis and Development (3)

Prerequisites: Admission to Ph.D. in Nursing Program and N6111(411) 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.

7485(485) Nursing Research I: Quantitative Methods in Nursing Research (3)

Prerequisites: Admission to the Ph.D. in Nursing program. Focuses on quantitative research methods appropriate for nursing. Students examine research questions related to nursing phenomena and methods to address these questions. This course is designed to provide in-depth analysis of research design including such areas as measures, designs and interpretation. There is an emphasis on outcomes research related to relevant clinical nursing problems.

7487(487) Integrative Review of Nursing Literature (3)

Prerequisites: Admission to Ph.D. in Nursing program and consent of instructor. Focuses on critical analysis of theoretical and conceptual models that are commonly used as a basis for nursing research projects. Students examine the frameworks that are commonly used to guide research on nursing problems. Students prepare an integrative research review, including areas such as conceptual models, measurement, statistical analysis and interpretation of findings.

7488(488) Qualitative Methods in Nursing Research (3)

Prerequisites: Nursing 7485(485) or consent of instructor. Explores qualitative research methods used to build nursing's body of knowledge. Emphasis is placed on design, data generation and analysis, and dissemination of findings. Issues regarding qualitative research are identified and analyzed in respect to traditional and emerging designs.

7490(490) Nursing Research II: Advanced Methods in Nursing Research (3)

Prerequisites: Nursing 7485(485). Focuses on advanced methods in nursing research that are applied in the student's preparation of a National Research Award Grant Application. Peer and faculty panels assist students in the critique and revision of their grant applications. Designed to provide students with hands-on experience in the preparation of grant applications that focus on outcomes research related to relevant clinical nursing problems.

7491(491) Nursing Theory Analysis and Development (3)

Prerequisites: Nursing 7487(487). Examines conceptual and theoretical development in nursing through in-depth scholarly inquiry. A concept map showing relationships between and among terms in accomplished.

7492(492) Nursing Research II: Quantitative Analysis of Nursing Data (3)

Prerequisites: Nursing 7490(490). Consolidates prior knowledge of quantitative analysis methods as applied to nursing phenomena, focusing on design and analysis issues

that affect validity. Techniques commonly used in the analysis of health data are considered.

7493(493) Psychometrics (3)

Prerequisites: Nursing 7490(490) and doctoral level statistics course and/or consent of instructor. Focuses on application of psychometric theories and practices related to instrumentation in nursing research. Basic methodologies and techniques for constructing, testing, and evaluating instruments will be discussed and applied. Content will focus on theoretical foundations of measurement, item construction, instrument design, item analysis, validity and reliability assessment. Criteria for evaluating existing instruments will also be discussed.

7494(494) Structural Equation Modeling (3)

Prerequisites: Working knowledge of SPSS and consent of instructor. An advanced seminar in statistical techniques commonly used in nursing data analysis. Students develop a working knowledge of several covariance-modeling techniques including path analysis, confirmatory factor analysis and covariance structural modeling.

7498(498) Doctoral Seminar (1-12)

Prerequisites: Admission to Ph.D. in Nursing Program and consent of instructor. Presentation and discussion of pertinent methodological and clinical issues related to doctoral candidate's research. Continuous enrollment is required.

7499(499) Dissertation Research (1-12)

Prerequisites: All required course work; successful completion of written comprehensive examination. . Investigation of an advanced nature culmination in successful defense of dissertation. Continuous registration is required.

Bachelor of Health Science

The B.H.S. curricula were developed in collaboration with the Jewish Hospital College of Nursing and Allied Health. Following are course descriptions for the cytotechnology and clinical laboratory technician clinical requirements.

3520(HS 302j) Leadership and Management Cytology (4)

Prerequisite: Economics 1001(51) or Business 3600(210) or equivalents. Examines theories of leadership, management and organizations as applied to cytotechnology. Healthcare economics, political issues and healthcare systems are investigated within a systems theory framework. Utilizes computer spreadsheets and delivery patterns. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

3807(HS 393) Research Methods in the Health Sciences (3)

Prerequisite: Psychology 2201(201) or equivalent. Develops an understanding of the research process as applied to allied health. The value and purpose of research within an ethical/legal context is explored. Qualitative and quantitative research methods and approaches to solve problems are examined. Students are actively involved in evaluating, critically analyzing and interpreting data to determine implications for practice. Offered exclusively for students meeting Clinical Lab Science or Cytotechnology requirements in the Clinical Program at Jewish Hospital College of Nursing and Allied Health.

4000(HS 302a) Introduction to Cytotechnology (3)

Prerequisite: Admission to the Cytotechnology program at Jewish Hospital College of Nursing and Allied Health. An introduction to the profession of cytotechnology including basic cell biology, ethics, the microscope, and the history of the profession. Basic concepts of pathology, anatomy, normal histology, and benign cellular processes are taught.

4010(HS 303b) Clinical Bacteriology (3)

Prerequisite: Biology 2482(216) and 2483(218) or consent of instructor. Studies morphology, cultural and growth characteristics of bacteria and viruses which cause infectious disease. Specimen and media selection, collection, transport, storage and processing are also studied. Students learn to differentiate normal from pathogenic microorganisms. Disease correlation with laboratory data is stressed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4100(HS 302b) Female Genital Tract I (4)

begin to differentiate diagnosis presented diseases on kodachromes and glass slides. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4110(HS 303c) Bacteriology Practicum (4)

Prerequisite: Biology 4010(303b) or consent of instructor. Morphology, cultural and growth characteristics of bacteria and viruses which cause infectious diseases. Specimen and media selection, collection, transport, storage, and processing covered. Differentiation between normal and pathogenic microorganisms and disease correlation with laboratory data stressed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4200(HS 302c) Female Genital Tract II (3)

Prerequisite: Biology 4100(302b) or consent of instructor. Emphasis on the study of lesions of the uterine corpus, metastatic lesions, and lesions of the vulva and vagina. The student is expected to differentiate between malignant

and premalignant diseases of the uterine corpus and to begin differential diagnosis of endometrial adenocarcinoma and endocervical adenocarcinoma from glass slides and kodachromes. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4250(HS 303d) Parasitology and Mycology (2)

Prerequisite: Biology 2482(216) or 2483(218) or consent of instructor. Lectures and laboratory exercises focus on identification and differentiation of selected parasites, medically important fungi, and common contaminants. Common methods and techniques and instruments explored. Classification, diagnostic states of fungi and parasites, and life cycles and vectors for parasites studied. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4300(HS 302d) The Processing Laboratory (2)

Prerequisite: Biology 4200(302c) or consent of instructor. Includes routine procedures for processing, receipt, staining, coverslipping, and filing of specimens. Cytology laboratory experience includes performing laboratory techniques under the supervision of a cytotechnologist. Offers exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4400(HS 302e) Respiratory and Order (3)

Prerequisite: Biology 4900(302d) or consent of instructor. Designed to acquaint the student with the anatomy and histology of the upper and lower respiratory areas. Epithelial appearances and changes associated with normal, benign, and malignant processes are emphasized. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4410(HS 303e) Clinical Immunology (2)

Prerequisite: Biology 4842(317) or consent of instructor. Introduce the principles of both normal and abnormal responses of the immune system through the molecules, cells, organs, and systems responsible for the recognition and disposal of foreign materials. Immunological manifestations of diseases are discussed. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4450(HS 303f) Immunology Practicum (1)

Prerequisite: Biology 4410(303e) or consent of instructor. The focus of the clinical practice is on serologic and immunologic testing. Data interpretation, troubleshooting in test systems and disease correlation with laboratory data are stressed. Offered exclusively for students meeting

clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4510(HS 303g) Immunohematology (3)

Prerequisite: Biology 4842(317) or consent of instructor. Studies theory and principles in immunology and genetics that determine blood types. Transfusion services stressed. Aspects of red cells, platelets and components discussed regarding selection, collection, transport, storage, processing, and their use for transfusion. Donor requirements and laboratory operations included. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4550(HS 303h) Immunohematology Practicum (3)

Prerequisite: Consent of instructor. Clinical practice focuses on basic and special testing to assure safe blood supply and safe transfusion therapy. Adverse reactions investigated to identify cause of reaction. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4600(HS 302f) Body Fluid Cytology (3)

Prerequisite: Biology 4400(302e) or consent of instructor. Examines the cytopathology of effusions, cerebral spinal fluid and other body fluids, and the cytologic changes associated with benign and malignant processes. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4601(HS 303i) Hematology (4)

Prerequisite: Consent of instructor. Study of fundamentals of hematology and hemostasis. Hematopoiesis, pathogenesis of anemia and disease process resulting in abnormal erythrocyte morphology will be presented. Focus on leukocyte disorders, leukemias, lymphomas, and lipid storage disease. Platelet structure and function, vascular and platelet disorders, defects of clotting factors, and interaction of fibrinolytic coagulation and kinin systems discussed. Provides an overview of the use of flowcytometric and molecular diagnostics in hematology. Laboratory component will be part of comprehensive clinical experience in hematology. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4661(HS 303j) Hematology Practicum (3)

Prerequisite: Biology 4601(303i) or consent of instructor. Clinical practice focuses on basic and special testing in hematology as well as phlebotomy. Identification of normal and abnormal cell morphology is studied, and diseases are correlated with abnormal cells. Coagulation testing to identify coagulation defects and hemostatic diseases performed. Offered exclusively for students

meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4700(HS 302g) Gastrointestinal Genitourinary Cytology (3)

Prerequisite: Biology 4600(302f) or consent of instructor. The study of the cytology of the gastrointestinal and genitourinary systems. The anatomy of each body site is discussed along with the Normal, benign and malignant cellular changes of each system. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4701(HS 303k) Clinical Chemistry (3)

Prerequisite: Consent of instructor. Focus on biochemical theory and physiology of carbohydrates, lipids, and lipoproteins, heme derivatives, liver and renal function, non-protein nitrogenous compounds, proteins, enzymes, electrolytes, and acid-base balance, hormones, and endocrine system. Normal and abnormal manifestations of diseases and correlation with other laboratory tests presented. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4750(HS 303I) Chemistry Practicum (4)

Prerequisite: Consent of instructor. Clinical practice focuses on basic and special test methods and focuses on basic and special test methods and instrumentation used in quantifying metabolites and analytes discussed in Biology 303k. Quality control, correlation of test data and disease states presented. Biological and chemical safety practiced. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4900(HS 302i) Advanced Practices in Cytology (12)

Prerequisite: Biology 4800(302h) or consent of instructor. This clinical course requires the student to examine a variety of specimens for cytologic evaluations from all body sites. Students must have achieved minimum screening accuracy in prerequisite courses to begin practicum. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4800(HS 302h) Fine Needle Aspiration Cytology (4)

Prerequisite: Biology 4700(302g) or consent of instructor. Examines the anatomy and histology of the breast, thyroid, and lymph nodes with emphasis on the cytologic patterns associated with normal benign, and malignant processes. In addition, the student will have opportunity to observe and assist the cytopathologist and/or cytotechnologist with fine needle aspiration procedures

from various body sites to observe techniques for processing and rapid cytologic assessment. Offered exclusively for students meeting clinical lab science or cytotechnology requirements in the clinical program at Jewish Hospital College of Nursing and Allied Health.

4810(HS 303a) Issues and Trends in Role Development (3)

Prerequisite: Admission to the clinical laboratory science program at Jewish Hospital College of Nursing and Allied Health. Presents overview of educational principles and teaching. Selected laboratory management issues considered.

College of Optometry

This section contains an abbreviated version of the College of Optometry Bulletin. Some information is omitted.

For the most complete and accurate information regarding the Optometry program at UM-St Louis, please go to: <http://www.umsl.edu/divisions/optometry/optometry.html> and link to the College of Optometry Bulletin. It is a downloadable document in PDF format.

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O.D., University of Missouri-St. Louis

David Seibel, Adjunct Assistant Professor
O.D., University of Missouri-St. Louis

Don Simpson, Adjunct Assistant Professor
O.D., Indiana University

Craig Sorce, Adjunct Assistant Professor
O.D., University of Missouri-St. Louis

Joe Sullivan, Adjunct Assistant Professor
O.D., Illinois College of Optometry

Scott Tomasino, Adjunct Assistant Professor
O.D., Illinois College of Optometry

Paul Varner, Adjunct Assistant Professor
O.D., University of Missouri-St. Louis

Claude Valenti, Adjunct Assistant Professor
O.D. University of Pennsylvania

Pauline Weichler, Adjunct Assistant Professor
O.D., Pacific University

Melissa Wisniewski, Adjunct Assistant Professor
O.D., Pennsylvania College of Optometry

Jack Yaeger, Adjunct Assistant Professor
O.D., Ohio State University

Dwayne Young, Adjunct Assistant Professor
Clinical Assistant Professor
O.D., Indiana University

Heather Zutaut, Adjunct Assistant Professor
O.D., Pennsylvania College of Optometry

General Information

The UM-St. Louis College of Optometry enrolled its first class in 1980, graduating 32 students in May 1984. The college 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 college's classrooms, laboratories, research facilities, administrative offices, library, and the Center for Eye Care campus facility (the University Eye Center).

Center for Eye Care

The Center for Eye Care provides a patient care learning environment for third-year and fourth-year optometric students and residents. The Center for Eye Care includes four locations: the University Eye Center on the UM-St. Louis south campus, the Optometric Center in the Central West End of St. Louis, the East St. Louis Eye Center, and the Harvester Eye Center in St. Charles, MO. These and other affiliated health centers in the St. Louis area provide an instructional setting where student interns are exposed to a wide variety of patients under the direct supervision of full-time or part-time clinical faculty. Equally important is that these Centers provide exemplary, comprehensive and state-of-the-art optometric care to their patients.

The Centers provide a full range of optometric services to patients including primary eye care, contact lens, pediatric/binocular vision, low vision, and eye health management. These services are described below in greater detail.

Situated in Missouri's largest metropolitan area, the college enjoys the city's strong community and professional support. The urban setting offers many opportunities for outreach programs, expanding the scope of optometric 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 and the College of Optometrists in Vision Development, 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 clinical specialties.

Fourth-Year Externship Program

In addition to the patient care experiences available through the University Eye Center, Optometric Center, the East St. Louis Center, the Harvester Eye Center, the College of Optometry also has a diverse Externship Program. Students must receive approval from the faculty and the Director of Externships for assignments to each Externship site. This program allows fourth-year students to spend a portion of their final year of training in a variety

of patient care environments (i.e., military bases, Veterans Administration Hospitals, Indian Health Services Hospitals, various specialty practices and private practices).

These eight (8) week Externships are selected and scheduled according to the individual student's interest, needs and future practice intentions. In this program, students leave the academic environment and begin working with selected practicing optometrists while continuing to be monitored by the Centers through weekly reports of all patient experiences and activities. These are some of the most frequently used sites: Becherer and Becherer, Belleville, IL; Carl Albert Indian Health Service, Ada, OK; Koetting and Associates, St. Louis, MO; Missouri Eye Institute, Springfield, MO; Morey/Mulqueeny Eye Center, St. Louis, MO; O'Donnell Eye Institute, St. Louis, MO; Omni Eye Services of Georgia, Atlanta, GA; Optometric Clinic, Kaneohe Bay, HI; Resler-Kerber Optometric, Inc., St. Louis, MO; St. Louis Comprehensive Neighborhood Health Center, St. Louis, MO; Southwest Medical Center, St. Louis, MO; Veterans Administration Hospital, Columbia, MO; Veterans Administration Hospital-Cochran/Jefferson Barracks, St. Louis, MO; Veterans Administration Hospital, Kansas City, MO; Veterans Administration Hospital, Marion, IL; Washington University Eye Center, St. Louis, MO.

Students may arrange their own off-campus clinical experiences with the approval of the director of externships.

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 College of Optometry is a member of the Association of Schools and Colleges of Optometry and is accredited by the Accreditation Council on Optometric Education (ACOE).

All optometry students enrolled in the University of Missouri-St. Louis College 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 College 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.

"3+4" Scholars Programs

The College of Optometry currently has a program with the Pierre Laclède Honors College which allows students to complete both their undergraduate studies and a Doctor of Optometry degree in seven years. Students can qualify for this program while they are seniors in high school. Exceptional academic performance is required. They are granted provisional acceptance into the College of Optometry after admission to the Honors College. This program offers professional and academic advisement by the College of Optometry faculty throughout the Honors College undergraduate experience, as well as offering early exposure to clinically related activities and participation in Optometry student association activities. Undergraduate students in this program may apply for formal admission to the College of Optometry after completion of Optometry prerequisites and three years at the Honors College. The first year of Optometry school will complete the undergraduate requirements. Similar 3 + 4 programs also exist in cooperation with the departments of Biology, Physics and Chemistry.

College of Optometry

Admission Requirements

Semester:

English - 2

Biology (including laboratory)* - 3

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)* - 4

Physics (including laboratory) - 3

Chemistry**

General (including laboratory) - 3

Organic (including laboratory) - 2

Mathematics ***

Calculus - 1

Statistics - 1

Psychology - 2

Liberal Arts - 2

*One semester (or one quarter) of Microbiology is a requirement. One semester of Anatomy or Physiology is recommended.

**One semester of Biochemistry is recommended.

***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) before 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 have a degree. Applicants to the college 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 each year in February and October. Results are sent to the applicant and schools of optometry approximately six to eight weeks after 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 College 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.
Suite 1846
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. \$50.00 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 Optometry Admission Test (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.

Official transcripts must be mailed from every college attended, regardless of whether or not credit was earned.

Letters of recommendation must be mailed directly to the college by the originator. All applicants will be required to sign a form to waive their right to review the letters of recommendation. It is the applicant's responsibility to ensure all application materials are received in the office of Student Services by March 15 to be considered for admission to the class entering in August of the same year. Facsimile (faxed) application material will be not accepted or acknowledged. Application material received after March 15 will not be evaluated for the class entering in August of the same year. To be considered for merit scholarships, there is an early enrollment deadline. All materials must be received by December 15 in order to be considered for the early application deadline. Applications received after that time will still be considered for admission but not additional awards.

All correspondence, inquiries and application material should be addressed to:

UM-St. Louis College of Optometry
Office of Student Services
8001 Natural Bridge Road
St. Louis, MO 63121-4499

Applications may also be submitted online by accessing an application at
www.umsl.edu/divisions/optometry/programs/applpro.html

Students From Other Countries

In addition to the standard application procedures, applicants living outside the United States and its possessions must take the Test of English as a Foreign

Language (TOEFL) and receive a minimum score of 500
Write to:

Test of English as a Foreign Language (TOEFL)
Educational Testing Service
Princeton, NJ 08530

To complete their credential file, applicants are required to furnish original and official transcripts from each school and college attended both in this country and abroad. The Educational Credentials Evaluators, Inc. or the World Education Services must evaluate all foreign school and college transcripts and their evaluation submitted as part of the application requirement. For information contact:

Educational Credentials Evaluators, Inc.
Post Office Box 514070
Milwaukee, WI 53203
(414) 289-3400
Fax: (414) 289-3411
E-mail: eval@ece.org

World Education Services
P.O. Box 745
Old Chelsea Station
New York, N.Y. 10113-0745
(212) 966-6311
Fax: (212) 966-6395

The University of Missouri-St. Louis maintains an Office of International Student Services to assist applicants who have been offered admission. All new international students are required to attend a formal orientation program before matriculation. For more information, contact:

University of Missouri-St. Louis
Office of International Student Services
8001 Natural Bridge Road
St. Louis, MO 63121-4499
(314) 516-5229

Selection Procedures

Applications are reviewed beginning in August with interviews scheduled and initiated starting in October. The college uses a 'rolling admissions' process that allows qualified applicants to be admitted on an ongoing basis until the class is filled. Therefore, applicants are encouraged to apply as early as possible to ensure full consideration for admission.

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 OAT. Concurrently, candidates are evaluated on less quantitative measures such as extracurricular activities and interests, related o:

unrelated work experience, written narrative, and letters of recommendation.

Those applicants whom the committee feels to be most competitive will be invited for an on-campus interview. The on-campus interview facilitates an assessment of the applicant's communication skills, interests, motivation, and personal characteristics. In addition, the on-campus interview allows the applicant to tour the facilities, meet with currently enrolled students, present questions regarding financial aid and housing, and learn more about the University of Missouri-St. Louis and the College of Optometry. From this group of interviewed applicants, the entering class of approximately 44 students will be selected.

The policies of the University of Missouri-St. Louis and the College of Optometry comply with the provisions under those laws that forbid discrimination on the basis of race, color, sex, national origin, religion, age, handicap, or veteran status.

Admission Process

Notices of acceptance may be received as late as June of the year in which the students enter the program. 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.

Students offered admission have 15 days from the date on the offer of admission letter to make a required \$200 acceptance deposit. The \$200 deposit will be credited toward tuition when the student matriculates. The deposit is considered a non-refundable administration fee should the student not matriculate. A certain number of applicants are placed on an alternate list. If an applicant who has been offered admission declines the offer, their position will be allocated to the next individual on the alternate list.

Notification of denial is sent by mail. If an applicant is interested in reapplying, they should contact the College of Optometry's Office of Student Services and request a reapplication packet.

Financial Aid

The University of Missouri-St. Louis maintains an Office of Student Financial Aid to assist students with the cost of their education.

Financial assistance is available in the form of grants, loans, scholarships, and work-study. Funds for these programs are available from federal, private, state, and institutional resources. To apply for financial aid, students must complete a Free Application for Federal Student Aid

(FAFSA). Preference will be given to those students who have completed the FAFSA by April 1. Preference means that the Student Financial Aid Office will begin awarding FWS (Federal College Work-Study), Federal SEOG (Federal Supplemental Educational Opportunity Grant) and Federal Perkins Loan funds. A completed financial aid application means that the Financial Aid Office has received an official Student Aid Report from the Federal Processing Center.

The Student Financial Aid Office maintains a Web site at www.umsl.edu/services/finaid, where students will find useful information along with the ability to contact the office electronically via e-mail. Also included is a scholarship directory that is updated biweekly.

To be considered for all university scholarships offered through the Financial Aid Office, a student must be accepted for admission. A scholarship application must be completed to apply for scholarships awarded through Student Financial Aid. All incoming students should complete the Incoming Freshman Scholarship Application. Continuing students should complete the Continuing Student Scholarship Application.

Many state optometric associations and their auxiliaries offer scholarships and grants. Application is generally made directly to the state association or auxiliary and selection is generally made on the basis of state residence and other criteria. Information may be obtained by writing to the various state optometric associations and/or auxiliaries.

The College of Optometry will provide additional information about scholarships and the school's Handbook of Loans, Scholarships, Grants, and Awards to applicants during the interview process.

Fees

Detailed information regarding current fees and residency regulations is furnished in the *Schedule of Courses*, a newspaper schedule distributed before each semester registration, available at the Registrar's Office in Woods Hall. Students should be aware that fees shown are current as this publication goes to press, but fee changes may occur while this *Bulletin* is still in use.

The university reserves the right to change fees and other charges at any time without advance notice.

Education Fees

All students enrolled in the University must pay educational fees based on either the schedule for Missouri residents or the schedule for non-residents. All optometry students will be required to pay the non-resident educational fee if they do not meet the University of Missouri residency requirements at the time of enrollment.

	Resident	Non-resident
Fall 2003	8,078.40	16,105.60
Winter 2004	8,078.40	16,105.60
Summer 2003*	\$4,039.20	\$8,314.84

The Educational Fees plateau is 16.0 credit hours. Any student enrolled for less than 16.0 credit hours will be charged per credit hour at \$504.90. Nonresidents pay a nonresident fee of \$501.70 per credit hour.

*A Summer Session is required between the third and fourth professional year.

Other Required Fees

All students are required to pay the following fees each semester: Instructional Computer Fee \$9.60 per credit hour (no maximum); Student Facility, Activity, and Health Fee \$27.22 per credit hour (maximum six credit hours for Summer/12 credit hours for the Fall and Winter).

Parking Fee

All vehicles parked on campus require a parking permit. It is the responsibility of the student to be aware of the parking policies and procedures while using the lots at the University of Missouri St. Louis. The College of Optometry cannot be responsible for violations from students who do not purchase parking permits or adhere to the campus policies and procedures.

Parking fee \$18.00 per credit hour for Fall and Winter Semesters. All fourth year students who are away on externship rotation must pay a minimum of \$18.00 per semester for parking.

Student Health Insurance (optional)

An Accident and Sickness Insurance plan is available to students and their dependents. Information concerning premiums and coverage is available upon request from University Health Services. Their phone number is: (314) 516-5671.

*Nonresident Students

Students who do not meet the residency requirements must pay the nonresident educational fee according to the schedule above. A definition of "residency" is outlined in *Tuition and Residency Rules*, available in the cashier's office. Students are responsible for registering under the proper residence and paying the proper educational fees.

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
700 S.W. Harrison, Suite 1410
Topeka, KS 66603
(785) 296-3517.

Optometry students will be required to pay nonresident 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	Credit Hours	Lecture	Lab
8040(504) Neuroanatomy	4	3	2
8020(505) Geometric Optic	4	3	2
8030(506) Practice Management I	2	2	-
8010(509) Gross Anatomy, Physiology and Disease Processes	5	4	2
8060(512) Biochemistry	3	3	-
8350(535) Epidemiology	2	2	-

Winter Semester

8140(513) Physical Optics and Photometry	2	2	-
8180(514) Clinical Optometry I	2	1	2
8120(515) Ocular Optics	3	3	-
8130(516) Physiological Optics Laboratory	1	-	2
8160(518) Anatomy and Physiology of the Eye	5	4	2
8150(519) Physical Optics and Photometry Lab	1	-	2
8110(510) Gross Anatomy, Physiology and Disease Processes II	4	3	2

Second Year

Fall Semester

8220(520) Ophthalmic Optics	4	3	2
8280(521) Clinical Optometry II	5	3	4
8250(524) Monocular Sensory Processes	4	4	-
8290 Physiological Optics Lab II	1	-	2
8260(555) General Pharmacology	3	3	-
8230(541) Practice Management II	2	1	2
8240(517) Ocular Motility	3	3	-

Winter Semester

8320(530) Ophthalmic Dispensing	1	-	2
8380(531) Clinical Optometry III	5	3	4
8340(532) Binocular Vision and Space Perception	4	3	2
8370(533) Ocular Disease I	4	3	2
8360(565) Ocular Pharmacology	3	3	-
8560(596) Public Health	2	2	-

Third Year

Fall Semester	Credit			Category 5 Specialty	Credit		
	Hours	Lecture	Lab		Hours	Lecture	Lab
8500(550) General Clinic I	6	-	2	8810(578) External Rotation in Contact Lens Patient Care	7	-	14
8520(553) Contact Lenses I	3	2	2	554(8540)			
8540 Binocular Vision Anomalies	4	3	2	8800(579) External Rotation in Pediatric/Binocular Vision Patient Care	7	-	14
8570(556) Ocular Disease II				8820(592) External Rotation in Low Vision Patient Care	7	-	14
8550(565) Low Vision	3	2	2				
8390(568) Clinical Medicine 2	2	2	-				
Winter Semester				Category 6 Elective			
8610(557) Environmental Vision 2	2	-	-	8830(570) External Rotation in General Patient Care	7	-	14
8680(559) Ophthalmic Lasers I	1	-	-	8850(580) Supplementary Rotation in General Patient Care	7	-	14
8600(560) General Clinic II	6	-	12	8840(581) External Supplementary Rotation in General Patient Care	7	-	14
8690(561) Pediatric /Binocular Specialty Clinic I	1	-	2				
8620(563) Contact Lens Specialty Clinic	1	-	2				
8660(563) Contact Lenses II	3	3	-				
8650(558) Geriatric Optometry	2	2	-				
8670(566) Ocular Assessment	1	1	-				
8640(567) Pediatric Optometry	3	3	-				
8630(565) Practice Management III	3	3	-				

Fourth Year**Category 1 UM-St. Louis**

Note: Must enroll in 8700(573), 8710(574), and 8720(575) concurrently

8700(573) UM-St. Louis Pediatric/Binocular Vision Patient Care	3	-	6
8710(574) UM-St. Louis Contact Lens Patient Care	3	-	6
8720(575) UM-St. Louis Eye Health Management Patient Care	1	-	2

Category 2 Institutional

8780(586) External Rotation in Institutional Patient Care	7	-	14
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Category 3 Ocular Disease

8790(585) External Rotation in Ocular Disease Patient Care	7	-	14
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Category 4 Intern

Note: Must enroll in 8730(576) and 8740(577) concurrently

8770(571) Community Service in Rotation in Patient Care	7	-	14
8750(572) East St. Louis Center Patient Care	7	-	14
8730(576) Optometric Center Patient Care	6	-	12
8740(577) Optometric Center Eye Health Management Patient Care (8760) Harvester Eye Center Patient Care	1	-	2

Required Courses

8870(583) Practice Management IV			
Vision Science	2	2	-
8880(593) Clinical Seminar	1	1	-

Elective Courses in the College of Optometry

8400(589) Directed Readings			
8410(588) Directed Research			
8420(569) Ocular Photography			
8440(598) Clinical Applications of Current Topics in Visual Science			

Graduate Physiologic Optics Courses Approved for Elective Credit*

6400(400) Sensory Processes and Perception			
6401(401) Visual Optics			
6402(402) Ocular Anatomy and Physiology			
6403(403) Psychophysical Methods and Experimental Design			
6404(404) Sensory Neuroscience			
6405(405) Neuroanatomy			
6406(406) Geometric Optics			
6451(451) Corneal Physiology			
6452(452) Growth and Development of the Visual System			
6453(453) Advanced Physiology of Other Sensory Systems			
6454(454) Binocular Vision			
6455(455) Visual Information Processing			
6456(456) Oculomotor Systems			
6457(457) Comparative and Evolutionary Aspects of Vision			
6458(458) Noninvasive Assessment of the Visual System			
6459(459) Introduction to Computer Programming for Vision Research			
6470(470) Individual Studies in Physiological Optics			
6490(490) Graduate Research in Physiological Optics			
6497(497) Interdisciplinary Geriatric Care			
6499(499) Current Topics in Optometry and Vision Science			

*Due to advances in the optometric profession, sequencing of courses may change. The courses listed above are subject to change through normal academic procedures

Grades

All courses taken for credit in the professional program must be passed with a "C-" or better in order for a student to qualify for graduation. Furthermore, in order to qualify for graduation, a student must be in good academic standing and the cumulative professional GPA must be 2.5 or higher. Beginning in May 2003, students must submit evidence to the Office of Student Services that they have taken the 3 part NBEO examinations prior to graduation. Such evidence may include a copy of the score report received from NBEO.

To assure graduating at the end of a specific semester, all work for that semester and any delayed grades from previous semesters must be completed with the grades sent to the Office of Student Services no later than the official date for submission of final semester grades.

Time limitations

All of the required courses during the first 6 semesters of first course enrollment and all required courses for the O.D. degree must be completed within 6 years after the first course enrollment.

Graduate Studies

Physiological Optics

Physiological optics is a multidisciplinary area concerned with the study of normal and anomalous vision. The goal of this program is to train the next generation of researchers in clinical and basic vision science, to conduct research, and to educate faculty for schools and colleges 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 College 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 the United States. 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 postbaccalaureate academic work. Students must arrange for transcripts to be submitted from all postsecondary 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 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 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 College 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 6400(400), Sensory Processes and Perception (3 credits)

Physiological Optics 6401(601), Visual Optics (3 credits)

Physiological Optics 6402(402), Ocular Anatomy and Physiology (3 credits)

Physiological Optics 6403(403), Psychophysical Methods and Experimental Design (3 credits)

Physiological Optics 6404(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 whom 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.

Written qualifying examinations will be offered each semester. Students must declare their intent to take the examinations at least one month prior to the beginning of that semester or 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 month prior to the beginning of that semester or summer session.

The preparation of the dissertation will be supervised by a dissertation committee which will be appointed by the Graduate Dean upon the recommendation of the Director of Graduate Programs in the College of Optometry. Input from the student's advisor will be solicited by the Director prior to finalization of the recommendation by vote of the Graduate Faculty. An oral examination of the written dissertation proposal will be conducted by the Committee. A public oral defense of the completed written dissertation is also required.

The core courses for this program are:

Physiological Optics 6400(400), Sensory Processes and Perception

Physiological Optics 6401(401), Visual Optics

Physiological Optics 6402(402), Ocular Anatomy and Physiology

Physiological Optics 6403(403), Psychophysical Methods and Experimental Design

Physiological Optics 6404(404), Sensory Neuroscience

Special Topics, Individual Studies, and Advanced Topics courses in Physiological Optics are also offered.

Continuing Education

The College of Optometry offers continuing education programs for optometrists throughout the Midwest region as well as nationwide. Courses on management of ocular diseases, ocular anomalies, and visual skills are held on a frequent basis. In addition to College of Optometry faculty, optometric specialists, medical educators, and researchers have input into course development as well as participation in course presentations.

All CE courses offered by the school are accepted by those states requiring continuing education credit for relicensure.

Continuing Education course information may be obtained by contacting:

University of Missouri-St. Louis College of Optometry
Office of Continuing Education
8001 Natural Bridge Road
St. Louis, MO 63121-4499
(314) 516-5615

Career Outlook

Doctor of Optometry Degree

A doctor of optometry 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. They examine the eyes and related structures to determine

the presence of vision problems, eye disease, and other ocular abnormalities.

Doctors of optometry 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.

Doctors of optometry 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 practice 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, they are the only primary care provider. As such, doctors of optometry provide the major portion of primary eye care services in the United States.

Studies have indicated that a ratio of one practicing doctor of optometry to every 7,000 people (a ratio of 14.3 practicing doctors of optometry 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 doctors of optometry 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. Doctors of optometry 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, clinical or hospital practice, teaching, and research.

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.

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 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.

Course Descriptions

The following 8000 (500)-level courses are taken in the Doctor of Optometry (O.D.) program.

8010(509) Gross Anatomy, Physiology and Disease Process I (5)

First in a two-semester course sequence that will detail the general anatomy of the human body along with the histology (microanatomy), physiology and disease processes of major organ systems. Course content will be presented in a modular format. Areas of discussion will include cardiovascular, respiratory, endocrine, digestive, reproductive, integumentary, and peripheral and autonomic nervous systems. The laboratories will emphasize and augment important concepts introduced in the classroom environment.

8020(505) Geometric Optics (4)

Prerequisite: Consent of instructor. The principles of geometric 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.

8030(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 the theories and principles of normative ethics, biomedical ethics and the responsibilities of the health care practitioner, professional codes of ethics and ethical issues that arise in the practice of optometry. Ethical case studies will be extensively used. This is an interactive course, requiring active participation on the part of the student.

8040(504) Neuroanatomy (4)

Prerequisite: Consent of instructor. Detailed gross and microscopic anatomy of the human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system.

8060(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.

8110(510) Gross Anatomy, Physiology and Disease Process II (4)

Prerequisite: Opt 8010(509). Continuation of Human Anatomy and Physiology and Disease Processes I. (Three hours lecture, two hours laboratory/week.)

8120(515) Ocular Optics (3)

Prerequisite: Opt 8020(505). The eye as an image forming mechanism, the schematic eyes, the optical role of the pupil, the retinal image and its evaluation. Nature, classification, and etiology of ametropia. Experimental models of refractive errors. Entoptic phenomena. Mechanism and optical aspects of accommodation.

8130(515) Physiological Optics Laboratory (1)

Experiments designed to accompany Opt 8120(515).

8140(513) Physical Optics and Photometry (2)

Prerequisite: Optometry 8020(505) or consent of instructor. Basic photometric concepts, measurements of light levels, applications in ergonomics, visual and photographic optics. Physical optics including diffraction, interference, polarization, birefringence, and lasers.

8150(519) Physical Optics and Photometry Laboratory (1)

Prerequisite: Concurrent enrollment in Opt 8140(513). Experiments designed to accompany Opt 8140(513).

8160(518) Anatomy and Physiology of the Eye (5)

Prerequisite: Opt 8040(504) and Opt 8090(508) or consent of instructor. 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.

8180(514) Clinical Optometry I (2)

Selected tests for ocular assessment including case history, visual acuity, and ophthalmoscopy.

8220(520) Ophthalmic Optics (4)

Prerequisite: Opt 8140(513), 8120(515) and 8150(519). Ophthalmic materials, physical characteristics of lenses and frames, paraxial optics of ophthalmic lenses, ophthalmic prisms, lens specifications, special lenses, multifocal lenses, unique designs, aniseikonic lenses, aberration theory and its application to lens design, lenses for low vision, protective eyewear, selecting and dispensing eyewear, management of a dispensary.

8230(541) Practice Management II (2)

Prerequisite: Opt 8030(506). Principles of human interpersonal relationships. The enhancement of listening and verbal skills will be provided. Emphasis will be preparing the student to understand and manage the many human interpersonal relationships necessary in the practice of optometry.

8240(517) Ocular Motility (3)

Prerequisite: Opt 8040(504) or consent of instructor. The anatomy, physiology, neurology, measurement, characteristics, and control of the intra and extraocular system.

8250(524) Monocular Sensory Processes (4)

Prerequisite: Opt 8160(518) or consent of instructor. 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.

8260(555) General Pharmacology (3)

Prerequisite: Opt 8110(510). General principles of drug actions on the organ systems, central and peripheral nervous systems, methods of administration, pharmacological actions, side effects, and drug interactions. Regulatory agencies, laws, and drug abuse.

8280(521) Clinical Optometry II (5)

Prerequisite: Opt 8180(514). Continuation of clinical optometry. Patient care in the areas of refraction, binocular integration, perimetry, and bimicroscopy.

8290 Physiological Optics Lab II (1)

Prerequisite: Opt 8130(516). Experiments designed to accompany Opt 8240(517) and Opt 8250(524).

8320(530) Ophthalmic Dispensing (1)

Prerequisite: Opt 8220(520). Clinical experience in verification and dispensing of ophthalmic materials.

8340(532) Binocular Vision and Space Perception (4)

Prerequisite: Opt 8240(517), 8280(521), and 8250(524) or consent of instructor. Binocular vision and space perception. Visual direction, theory of correspondence, fusion, rivalry, ocular dominance, and stereopsis. Developmental aspects and neurophysiological mechanisms.

8350(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.

8360(565) Ocular Pharmacology (3)

Prerequisite: Opt 8260(555). Pharmacology principles, methods of administration, doses, contraindications, and adverse effects of drugs used for the diagnosis and treatment of abnormalities of the eye, adnexa and visual system. Ocular manifestations of systemic medications.

8370(533) Ocular Disease I (4)

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.

8380(531) Clinical Optometry III (5)

Prerequisite: Opt 8280(521). Correlation and analysis of optometric data. Emphasis on diagnosis, prognosis, and therapy of visual problems.

8390(568) Clinical Medicine (2)

Prerequisite: Opt 8290(522) and 8260(555). Diagnostic principles and medical management. Comprehensive health history, physical examination and neurological screening with particular association to ocular health conditions. Clinical chemistry and interpretation of clinical laboratory tests, criteria for referral to other providers and emergency office procedures. Comanagement practice with other primary care physicians will be emphasized.

8400(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.

8410(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.

8420(569) Ocular Photography (2)

Prerequisite: Consent of instructor. 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.

8440(598) Clinical Applications of Current Topics in Visual Science (2)

(elective) Prerequisite: Consent of instructor. 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.

8500(550) General Clinic I (6)

Prerequisite: Opt 8380(531) and successful completion of all first and second year course work. The clinical examination and care of general clinic patients, along with the fitting and dispensing of lenses and frames.

8520(553) Contact Lenses I (3)

Prerequisite: Opt 8380(531). 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. Lens care and patient education. Patient and practice management considerations.

8540(554) Binocular Vision Anomalies (4)

Prerequisite: Opt 8310(531) and 8340(532) or consent of instructor. 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.

8550(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.

8560(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.

8570(556) Ocular Disease II (4)

Prerequisite: Opt 8370(533). The etiology, epidemiology, systems, signs, course sequelae and management of posterior segment ocular disease and the anomalies and ocular manifestations of systemic diseases. Disease, abnormalities and management of neurological conditions which affect the lids, pupils, extraocular muscles, optic nerve and visual system.

8600(560) General Clinic II (6)

Prerequisite: Opt 8500(550) and successful completion of all Fall semester third year course work. Same as General Clinic I.

8610(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.

8620(563) Contact Lenses II (3)

Prerequisite: Opt 8520(553). Advanced contact lens fitting, theories, and clinical methods for astigmatic, presbyopic, keratoconic, and aphakic designs. Special considerations include the use of corneal topography, orthokeratology, disposable lenses, lenses for extended wear and lenses for color deficiencies.

8630(582) Practice Management III (3)

Prerequisite: Opt 8030(506) and Opt 8230(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.

8640(567) Pediatric Optometry (3)

Prerequisite: Opt 8380(531). 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.

8650(558) Geriatric Optometry (2)

Same as Gerontology 6458(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.

8660(562) Contact Lens Specialty Clinic (1)

Prerequisite: Opt 8520(553) and successful completion of all Fall semester third year course work. The clinical examination and care of patients in the optometric specialty area of contact lenses.

8670(566) Ocular Assessment (1)

Prerequisite: Enrollment in General Clinic I or II. Discussion of the diagnosis and management of common clinic patient encounters via Socratic teaching techniques. Interns are encouraged to present actual cases which have been particularly challenging for them.

8680(559) Ophthalmic Lasers (1)

Principles and applications of lasers for ophthalmic use. Emphasis will be placed on demonstration where possible. Topics will include the principles, physics and safety concerns of ophthalmic lasers. Lasers used in retinal imaging, and in the care of glaucoma, cataract, refractive conditions, and cosmetic conditions will be discussed and demonstrated. Comanagement of patients requiring ophthalmic laser treatment will also be covered.

8690(561) Pediatric/Binocular Vision Specialty Clinic (1)

Prerequisite: Opt 8540(554) and successful completion of all Fall semester third year course work. The clinical examination and care of patients in the optometric specialty areas of binocular vision and pediatric vision.

8700(573) UM-St. Louis Pediatric/Binocular Vision Patient Care (3)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients in pediatric/binocular vision clinic at the University of Missouri-St. Louis University Eye Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with 8710(574) Opt and Opt 8720(575).

8710(574) UM-St. Louis Contact Lens Patient Care (3)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care in the contact lens clinic at the University of Missouri-St. Louis University of Eye Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 8700(573) and Opt 8720(575).

8720(575) UMSL Eye Health Management Patient Care (1)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care in the eye health management clinic with ophthalmologists at the University of Missouri-St. Louis University Eye Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 8700(573) and Opt 8710(574).

8730(576) Optometric Center Patient Care (6)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients at the University of Missouri-St. Louis Optometric Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 8740(577).

8740(577) Optometric Center Eye Health Management Patient Care (1)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients in the eye health management clinic with ophthalmologists at the University of Missouri-St. Louis Optometric Center. This course fulfills one of the clinic courses required for graduation. This course must be taken in conjunction with Opt 8730(576).

8750(572) East St. Louis Center Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients at the East St. Louis Eye Center. This course fulfills one of the clinic courses required for graduation.

8760(584) Harvester Eye Center Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients at the Harvester Eye Center. This course fulfills one of the clinic courses required for graduation.

8770(571) Community Service Rotation in Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients at St. Louis area community health centers. This course fulfills one of the clinic courses required for graduation.

8780(586) External Rotation in Institutional Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of primary care patients at external sites approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

8790(585) External Rotation in Ocular Disease Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of patients with ocular disease at external sites approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

8800(579) External Rotation in Pediatric/Binocular Vision Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of pediatric/ binocular vision patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

8810(578) External Rotation in Contact Lens Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of contact lens patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

8820(592) External Rotation in Low Vision Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of low vision patients at an external site approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

8830(570) External Rotation in General Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of a general population of optometric patients at external sites approved by the College of Optometry's Externship Council. This course fulfills one of the clinic courses required for graduation.

8850(580) Supplementary Rotation in General Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of general population of optometric patients at the UM-St. Louis University Eye Center, UM-St. Louis Optometric Center, or the UM-St. Louis East St. Louis Eye Center.

8840(581) External Supplementary Rotation in General Patient Care (7)

Prerequisite: Successful completion of all first, second, and third year course work. Comprehensive clinical care of general population of optometric patients at an external site approved by the College of Optometry's Externship Council.

8870(583) Practice Management IV (2)

Prerequisite: Successful completion of all first, second, and third year course work. Further in-depth discussion in practice management.

8880(593) Clinic Seminar (1)

Prerequisite: Successful completion of all first, second, and third year course work. 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.

8910(594) Topics in Geriatric Optometry (3)

Prerequisite: Opt 8910(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.

8970(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.

The following 6000(400)-level courses may be taken in the master of science or doctor of philosophy programs in Physiological Optics.

6400(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.

6401(401) Visual Optics (3)

Prerequisite: Opt 6406(406), Opt 8020(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.

6402(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.

6403(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.

6404(404) Sensory Neuroscience (3)

Prerequisite: Opt 6405(405), Opt 8040(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.

6405(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 Opt 6405(405) and Opt 8040(504).

6455(455) 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.

6456(456) 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

synkinetic relationship in the near triad. The anatomy, physiology, and pharmacology of the muscles, kinematics, methods of measuring eye movements, neurophysiology of eye movements, and perceptual phenomena are also discussed.

6470(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.

6490(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.

6497(497) Interdisciplinary Geriatric Care (2)

(Same as Gerontology 6497(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.

6499(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.

*UM-St. Louis/Washington University Joint
Undergraduate Engineering Program*

**UM-St. Louis/Washington University Joint
Undergraduate Engineering Program**

Administration

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Mario P. Gomez, Adjunct Professor
Ph.D., Stanford University

William J. Murphy, Adjunct Professor
D.Sc., Washington University
Matthew G. Dreifke, Adjunct Associate Professor
M.S., Washington University
John D. Corrigan, Adjunct Professor and Adviser
Ph.D., University of Missouri-Rolla

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. 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 in the evenings and on Saturdays on the Washington University campus: this schedule permits students to co-op during the day at local engineering firms. 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 (B.S.C.E.), a bachelor of science in electrical engineering (B.S.E.E.), or a bachelor of science in mechanical engineering (B.S.M.E.).

The B.S.C.E., the B.S.E.E., and the B.S.M.E. are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone: (410)347-7700.

Program Goal

The goal of the UMSL/WU Joint program is consistent with the mission of UM-St. Louis, which is to provide a high-quality education to enhance the occupational and professional careers of citizens in the entire region, including the minorities and economically disadvantaged population and to provide a well-trained, sophisticated work force for the St. Louis region. The partnership is an appropriate way for Washington University to share its campus, resources, and personnel with the citizens of Missouri.

Degree Program Educational Objectives

B.S. in Civil Engineering

The mission of the Civil Engineering Program is to provide the students with a high quality civil engineering education. So these students will have the ability to practice civil engineering in the areas of structural, transportation, environmental engineering and construction. We also make the students aware of the critical issues pertaining to the civil engineering profession

*UM-St. Louis/Washington University Joint
Undergraduate Engineering Program*

and its impact on society. Graduates of the program will have:

- an ability to apply knowledge of basic scientific, mathematical and engineering principles to solve civil engineering problems in its four sub-disciplines,
- an ability to design and conduct experiments as well as to analyze data,
- an ability to conceive and complete a comprehensive design project in one of the sub-disciplines using design standards in the context of realistic constraints,
- a sound understanding of the issues pertaining to professional practice and societal implications thereof.
- the ability to contribute as team members and leaders in the workplace, as well as in the community,
- an ability to communicate effectively through oral, written, visual, and graphic media,
- an ability to function in multi-disciplinary engineering teams in the design of a major project,
- an understanding of the need for life-long learning, professional, and ethical responsibility,
- an awareness of regional and global opportunities and challenges, contemporary issues and professionalism through exposure to practicing civil engineer and,
- an ability to relate academic learning to practical experience so that they enhance each other.

B.S. in Electrical Engineering

The mission of the Electrical Engineering program is to instill knowledge and understanding of the fundamental principles necessary to become proficient in electrical circuits, computer systems, digital and linear electronics, electromagnetic engineering, signal analysis and electrical laboratory methods. Graduates will have:

- an ability to design and analyze advanced and complex systems in at least one of the following areas:
Solid-state devices and circuits
Control components and systems
Communications
Computer software and hardware
Electrical power and energy.
This ability will include the integration of thoroughly mastered mathematics and science in solving engineering problems,
- a proficiency with experimental instrumentation and techniques spanning areas of electrical energy systems and digital systems. This proficiency will include the ability to design and conduct

experiments, as well as ability to analyze and interpret data,

- a proficiency in engineering design of a system, component, or process to meet desired needs,
- the ability to communicate, both orally and in writing, with special emphasis on technical writing,
- an ability to interact effectively with other people by providing experience in working with other students in teams as both a team leader and a team member,
- an understanding and appreciation of one's professional and ethical responsibility and historical and contemporary global and societal issues and
- a recognition of the need for and an ability to engage in life-long learning.

B.S. in Mechanical Engineering

Mechanical engineers are concerned with the technologies of manufacturing, energy conversion, machine design, instrumentation and control of physical processes and the environment. The mission of this undergraduate program is to prepare students for professional practice with a solid, scientifically-grounded foundation in all four major stems of mechanical engineering: mechanisms and mechanical design, dynamics and control, fluid mechanics, and thermal science and materials science. The following objectives or goals are key focal points in the mechanical engineering program. Graduates will:

- apply fundamental scientific and engineering concepts involving dynamics and systems, material science, mechanics and solids and the thermal-fluid sciences in order to identify, formulate and solve a variety of mechanical engineering problems,
- design, modify, conduct, and analyze experiments in the areas of thermal-fluid sciences, solid mechanics, and dynamical systems,
- directly perform system, process and component selection in order to satisfy specific engineering-related needs through the application of mechanical design philosophy in engineering practice,
- communicate in oral and written presentations using graphic and/or visual media appropriate for an engineering business environment,
- operate productively in individual or multidisciplinary, team-oriented projects,
- be exposed to modern developments, products and tools as they relate to engineering practice,
- be exposed to practicing engineers and their jobs and be taught the importance of high ethical and professional standards,
- obtain the broad-based education necessary to understand the impact of engineering solutions in their global and societal contexts,

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- recognize the need for, and obtain tools necessary to engage in, life-long learning,
- be afforded opportunities to participate in cooperative education, internships, research experiences or international exchange programs in order to gain experience beyond the classroom.

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 and dynamics). Students with less than a 2.75 grade point average, but at least a C in all their science and math courses, may be admitted on a probationary basis. These students must pass a mathematics workshop with a grade of B or better, and then pass JEMT 3170(217) (Engineering Mathematics) and JEE 2800(180) (Introduction to Electrical Networks) with a C- or better, in order to continue in the program.

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 127 semester hours is required for the Bachelor of Science in Electrical Engineering, and a program of 139 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, to be eligible to take the other upper-level engineering courses (those with course numbers starting with the letter "J"):

All students must first complete JEMT 3170(217), Engineering Mathematics, with a minimum grade of C-.

Mechanical and Electrical Engineering majors must also complete JEE 2800(180), Introduction to Electrical Networks with a minimum grade of C-.

Civil engineering majors must complete either JEE 2800(180), Introduction to Electrical Networks, or JCHE 4430(343), Environmental Engineering Chemistry, with a minimum grade of C-.

A minimum grade of C- is necessary to meet the prerequisite requirement for any course.

Pre-Engineering Requirements

Mathematics 1800(80), Analytic Geometry/Calculus I

Mathematics 1900(175), Analytic Geometry/Calculus II

Mathematics 2000(180), Analytic Geometry/Calculus III

Mathematics 2020(202), Differential Equations

Chemistry 1111(11), Introductory Chemistry I

Chemistry 1121(12), Introductory Chemistry II

Physics 2111(111), Physics: Mechanics and Heat

Physics 2112(112), Physics: Electricity, Magnetism and Optics

Engineering 2310(144), Statics

Engineering 2320(145), Dynamics

English 1100(10), Composition

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:

- Three courses in the humanities and 3 courses in social sciences must be taken
- One of the social sciences must be a course in American history or government or in Missouri history or government
- One of the humanities or social science courses must be at the junior level or above
- The cultural diversity requirement must be fulfilled.
- Some courses that fulfill the humanities [H] or social sciences [SS] breadth of study requirement do not count as Humanities and Social Science 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 advisor.

Engineering Core Requirements

JCS 1360(36), Introduction to Computing

JEMT 3170(217), Engineering Mathematics

JEC 3100(210), Engineering Communications

JME 3200(220), Thermodynamics

JME 4310(331)/JEE 4310(331), Control Systems I*

JEE 2800(180), Introduction to Electrical Networks* OR

JCHE 4430(343), Environmental Engineering Chemistry

JEE 2500(150), Electrical Laboratory I*

*Required for electrical and mechanical engineering majors only.

Civil Engineering Major Requirements

JCE 1451(45), Engineering Graphics

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JCE 2160(116), Surveying
 JCE 3410(241), Structural Analysis
 JCE 3420(242), Structural Design
 JCE 3520(252), Environmental Engineering Science
 JCE 3760(276), Open Channel Hydraulics
 JCE 4190(319), Soil Mechanics
 JCE 4200(320), Soil Exploration and Testing
 JCE 4740(374), Economic Decisions in Engineering
 JCE 4750(375), Introduction to Urban Planning
 JCE 4760(376), Site Planning and Engineering OR
 JCE 4820(382), Design of Water Quality Control Facilities
 JCE 4840(384), Probabilistic Methods in Civil Engineering Design
 JCE 4990(399), Senior Civil Engineering Seminar
 JCE 4720(372), Legal Aspects of Construction OR
 JEP 4610(361), Introduction to Environmental Law and Policy
 JME 2410(141), Mechanics of Deformable Bodies
 JME 3251(236), Materials Science
 JCE 3360(236), Civil Engineering Materials Lab
 JME 3700(270), Fluid Mechanics
 JME 3721(280), Fluid Mechanics Laboratory
 Civil Engineering Electives (200-399)

Electrical Engineering Major Requirements

JEMT 3261(226), Probability and Statistics for Engineering
 JEE 2609(160), Digital Computers I
 JEE 2900(190), Introduction to Digital and Linear Electronics
 JEE 3149(214), Engineering Electromagnetic I: Fundamentals
 JEE 3270(227), Power, Energy, and Polyphase Circuits
 JEE 3790(279), Signal Analysis for Electronic Systems and Circuits
 JEE 4160(316), Electrical Energy Laboratory
 JEE 4550(355), Digital Systems Laboratory
 JEE 4800(380), Senior Design
 Electrical Engineering Electives (200-399)

Mechanical Engineering Major Requirements

JEMT 3261(226), Probability and Statistics for Engineering
 JME 1414(041A), Introduction to Engineering Design: Project
 JME 1415(041B), Introduction to Engineering Design: CAD
 JME 2410(141), Mechanics of Deformable Bodies
 JME 3210(221), Energetics for Mechanical Engineers
 JME 3221(224), Mechanical Design and Machine Elements
 JME 3250(225), Materials Science
 JME 3700(270), Fluid Mechanics
 JME 3721(280), Fluid Mechanics Laboratory
 JME 3710(271), Principles of Heat Transfer
 JME 3722(281), Heat Transfer Laboratory

JME 4170(317), Dynamic Response of Physical Systems
 JME 4180(318), Dynamic Response Laboratory
 JME 4040(390), Mechanical Engineering Design Project
 JME 4041(395), Current Topics in Mechanical Engineering Design
 Mechanical Engineering Electives (200-399)

Graduation Requirements

In addition to the requirements of the University of Missouri-St. Louis that apply to all candidates for undergraduate degrees, the student must earn a minimum campus grade point average of 2.0 and a minimum grade point average of 2.0 for all engineering courses attempted at the University of Missouri-St. Louis.

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 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 be awarded only 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.

JCHE 4430(343), Environmental Engineering Chemistry
 JCE 3520(252), Environmental Engineering Science (EE, ME majors) OR
 JCE 4750(375), Introduction to Urban Planning (CE majors)
 JCE 4080(308), Environmental Engineering Laboratory - Water/Soil OR
 JCE 4090(309), Environmental Engineering Laboratory - Air
 JCE 4820(382), Design of Water Quality Control Facilities
 JEP 4370(337), Environmental Risk Assessment
 JEP 4610(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 hours of engineering design, engineering science, and basic science content. Engineering topics is the sum of engineering science hours and engineering design hours. The following table shows the design hours and engineering science hours for courses in the engineering programs.

Each engineering student must complete a curriculum that contains at least 48 hours of engineering topics semester hours, 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 3000(200) and 4000(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.

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.

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 rating of promising jobs for the 21st 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.

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Course Number	Semester Hours	Engineering Design	Engineering Science	Course Number	Semester Hours	Engineering Design	Engineering Science
Engr 1010(10)	1.0	0.0	0.0	JEE 4160(316)	3.0	1.5	1.5
Engr 2310(144)	3.0	0.0	3.0	JEE 4210(321)	3.0	1.2	1.8
Engr 2320(145)	3.0	0.0	3.0	JEE 4270(327)	3.0	1.0	2.0
JCE 1451(45)	3.0	1.0	2.0	JEE 4310(331)	3.0	1.0	2.0
JCE 2160(116)	3.0	0.0	3.0	JEE 4320(332)	3.0	1.0	2.0
JCE 3360(236)	1.0	0.0	1.0	JEE 4450(345)	3.0	1.0	2.0
JCE 3410(241)	3.0	0.5	2.5	JEE 4550(355)	3.0	2.2	0.8
JCE 3420(242)	3.0	2.5	0.5	JEE 4580(358)	3.0	1.5	1.5
JCE 3520(252)	3.0	1.0	2.0	JEE 4600(360)	3.0	1.3	1.7
JCE 3740(274)	3.0	0.0	3.0	JEE 4640(364)	3.0	1.0	2.0
JCE 3760(276)	3.0	0.5	2.5	JEE 4681(368)	3.0	1.0	2.0
JCE 4000(300)	1.0-6.0	Varies	Varies	JEE 4800(380)	3.0	3.0	0.0
JCE 4080(308)	3.0	0.0	2.0	JEMT 3170(217)	4.0	0.0	0.0
JCE 4090(309)	3.0	0.0	0.0	JEMT 3261(226)	3.0	0.0	0.0
JCE 4100(310)	3.0	3.0	0.0	JEP 3810(281)	3.0	1.5	1.5
JCE 4190(319)	3.0	1.0	2.0	JEP 4370(337)	3.0	0.8	2.2
JCE 4200(320)	1.0	0.0	1.0	JEP 4610(361)	3.0	0.0	0.0
JCE 4390(339)	3.0	1.0	2.0	JEE 4640(364)	3.0	1.0	2.0
JCE 4600(360)	3.0	3.0	0.0	JME 1414(041A)	2.0	1.5	0.5
JCE 4630(363)	3.0	3.0		JME 1415(041B)	2.0	0.0	2.0
JCE 4640(364)	3.0	1.5	1.5	JME 2410(141)	3.0	0.5	2.5
JCE 4690(369)	3.0	3.0	0.0	JME 3200(220)	3.0	0.0	3.0
JCE 4720(372)	3.0	0.0	0.0	JME 3210(221)	3.0	0.0	3.0
JCE 4730(373)	3.0	1.0	2.0	JME 3221(224)	4.0	4.0	0.0
JCE 4740(374)	3.0	0.8	2.2	JME 3250(225)	4.0	0.0	4.0
JCE 4750(375)	3.0	1.5	1.5	JME 3251(236)	3.0	0.0	3.0
JCE 4760(376)	3.0	3.0	0.0	JME 3611(262)	3.0	0.0	3.0
JCE 4770(377)	3.0	0.0	0.0	JME 3700(270)	3.0	0.0	3.0
JCE 1780(378)	3.0	1.0	2.0	JME 3710(271)	3.0	0.0	3.0
JCE 4820(382)	3.0	3.0	0.0	JME 3721(280)	1.0	0.0	1.0
JCE 4840(384)	3.0	1.5	1.5	JME 3722(281)	1.0	0.0	1.0
JCE 4860(386)	3.0	3.0	0.0	JME 4000(300)	1.0-6.0	Varies	Varies
JCE 4940(394)	3.0	0.0	3.0	JME 4160(316)	3.0	0.5	2.5
JCE 4990(399)	1.0	0.0	0.0	JME 4170(317)	4.0	1.0	3.0
JCHE 4430(343)	3.0	0.0	2.0	JME 4190(319)	3.0	0.0	0.0
JCS 1360(36)	4.0	2.0	2.0	JME 4240(324)	3.0	0.5	2.5
JEC 3100(210)	3.0	0.0	0.0	JME 4250(325)	3.0	2.0	1.0
JEE 2500(150)	3.0	1.0	2.0	JME 4290(329)	3.0	1.0	2.0
JEE 2609(160)	3.0	1.5	1.5	JME 4310(331)	3.0	1.0	2.0
JEE 2800(180)	3.0	0.8	2.2	JME 4500(350)	3.0	1.0	2.0
JEE 2900(190)	3.0	0.8	2.2	JME 4530(353)	3.0	3.0	0.0
JEE 3149(214)	3.0	1.0	2.0	JME 4720(372)	3.0	0.0	3.0
JEE 3270(227)	3.0	1.3	1.7	JME 4740(374)	3.0	1.5	1.5
JEE 3629(262)	3.0	1.0	2.0	JME 4760(376)	3.0	0.5	2.5
JEE 3790(279)	3.0	1.0	2.0	JME 4780(378)	3.0	1.5	1.5
JEE 3800(280)	3.0	1.0	2.0	JME 4810(381)	3.0	0.5	2.5
JEE 3900(290)	3.0	1.0	2.0	JME 4820(382)	3.0	0.5	2.5
JEE 3920(292)	3.0	1.0	2.0	JME 4040(390)	4.0	4.0	0.0
JEE 4100(310)	3.0	1.0	2.0	JME 4041(395)	1.0	1.0	0.0
JEE 4140(314)	3.0	1.0	2.0				

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.

Course Descriptions

Prerequisites may be waived by consent of the joint program faculty.

Engineering**1010(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. Introduction to team building and the teamwork approach to projects and problem-solving common in an engineering curriculum and in the engineering profession. Guest lecturers will participate.

2310(144) Statics (3)

Prerequisites: Math 1900(175) and Physics 2111(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.

2320(145) Dynamics (3)

Prerequisite: Engineering 2310(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.

All courses listed below require admission to candidacy for a degree in the UM-St. Louis/ Washington University Joint Undergraduate Engineering Program. Prerequisites may be waived by consent of the Joint Program faculty. Audits are not permitted.

Chemical Engineering**JCHE 4430(343) Environmental Engineering Chemistry (3)**

Prerequisite: Chemistry 1121(12). Introduction to the engineering aspects of air, water, soil, and geosphere chemistry. Toxicology and hazardous wastes. Pollution sources, dynamics, and ultimate fates. Sampling, control strategies, and regulations.

Civil Engineering**JCE 1451(45) Engineering Graphics (3)**

Prerequisite: Junior standing. Techniques in graphic communication and problem solving and design utilizing freehand sketches and computer graphics. Principles of orthographic projection, pictorial drawing, sectional views, dimensioning and tolerancing. Computer drawing and modeling: layout techniques, editing commands, drawing management, and plotting. Design project: individual or small group assignments, the design process, preliminary sketches, analysis, project modeling, detail and assembly drawings. This course is required for civil engineering majors.

JCE 2160(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 2620(162) Introduction to Environmental Engineering (3)

Prerequisites: Math 2000(180) and Chemistry 1121(12) The objective of this course is to introduce students to the field of environmental engineering. The course will emphasize basic principles of mass and energy conservation which govern physical, chemical and biological processes. Applications include the estimation of contaminant concentrations and the design of environmental controls.

JCE 3360(236) Civil Engineering Materials Lab (1)

Testing procedures, testing machines, use of laboratory equipment, analysis of data, and presentation of results. Laboratory tests on static tension, compression, bending and torsion of metal specimens. Tests on wood. Determination of compressive and tensile strengths of concrete. Design of concrete mixes and verification of strength. Experiments in advanced topics in mechanics of materials.

JCE 3410(241) Structural Analysis (3)

Prerequisite: JME 2410(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 3420(242) Structural Design (3)

Prerequisites: JME 3250(225) and JCE 3410(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 3520(252) Environmental Engineering Science (3)

Prerequisite: JME 3700(270) (may be taken concurrently) or permission of instructor. Application of the basic principles of chemistry, microbiology, and fluid mechanics to the 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 3740(274) Hydraulics and Hydrology (3)

Prerequisite: JME 3700(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 3760(276) Open Channel Hydraulics (3)

Prerequisite: JME 3700(270). The principles of open channel flow will be discussed and illustrated with practical examples. Methods for channel design, storm sewer, culvert and bridge analysis will be presented using the concepts of gradually-varied, steady flow. A design project using computerized analysis and design is used to implement concepts in a large practical application.

JCE 4000(300) Independent Study (1-6)

Prerequisites: Junior standing and consent of faculty adviser. Independent investigation of a civil engineering topic of special interest to a student performed under the direction of a faculty member.

JCE 4080(308) Environmental Engineering Laboratory - Water/Soil (3)

Prerequisite: JCHE 4430(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 4090(309) Environmental Engineering Laboratory - Air (3)

Prerequisite: JCHE 4430(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 4100(310) Design of Timber Structures (3)

Prerequisites: JCE 3410(241) and JCE 3420(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 4160(316) Introduction to Elasticity (3)

Prerequisites: JCE 141. Introduction to elasticity: indicial notation, stress and strain, material laws. Plane stress and plane 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.

JCE 4190(319) Soil Mechanics (3)

Prerequisites: JME 2410(141) and JME 3700(270). Basic geology as it relates to index and classification properties of soil. Exploration, sampling, and testing techniques. Soil 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 4200(320) Soil Exploration and Testing (1)

Prerequisite: JCE 4190(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 4220(322) Pre-Stressed Concrete Design (3)

Prerequisites: Senior status. Analysis and design of prestressed concrete members. Direct design of composite and noncomposite members for flexure. Design of continuous beams. Flexural strength, shear strength, and design of anchorage zone.

JCE 4250(325) Professional Engineering Services (3)

Prerequisites: Senior standing. An introduction to the use and integration of professional services for Project Design and Delivery Systems in construction projects will be presented. The relationship between owner and the

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professional service personnel, architects, engineers, contractors and construction managers will be explored in detail. The role, techniques, procedures, management principles, and professional responsibilities will be presented and discussed. Real projects will be presented to illustrate the various project delivery systems used in design and construction. These points will be illustrated through a semester long team project.

JCE 4370(337) Matrix Structural Analysis (3)

Prerequisites: JCE 3410(241). This course will cover analysis of framed structures, planar and 3-D, using beam-column elements and shear walls and floors. Flexibility and stiffness analyses are performed by generating the matrices and carrying through the analyses step by step with a matrix manipulator program. A commercially available program is used to check at least one problem.

JCE 4390(339) Computational Structural Mechanics (3)

This course is an introduction to analysis and design of structures using finite elements. The topics covered include: elementary theory of elasticity, plate theories and buckling of plate structures, finite element formulation of 2-D elasticity and plate problems. Hands on use of commercial finite element software is emphasized throughout. A major design project is included.

JCE 4580(358) Structural Stability (3)

Prerequisites: Senior standing. This course will cover the following topics: classification of instability phenomena; imperfection sensitivity; illustration with mechanical models; systems with finite degrees of freedom; postbuckling analysis using perturbation techniques; stability and nonlinear behavior of struts, plates, and cylindrical shells; nonconservation problems; and numerical methods.

JCE 4600(360) Highway and Traffic Engineering (3)

Prerequisites: JCE 2160(116) and senior standing. Study of basic highway design and traffic circulation principles. Study of design elements of alignment, profile, cross-section, intersection types, interchange types, and controlled-access highways. Investigation of functional highway classification. Traffic volume, delay and accident studies. Analysis of highway capacity of uninterrupted flow, interrupted flow. Freeway, ramp, and weaving sections.

JCE 4620(362) Transportation Planning (3)

Prerequisites: Senior standing. This course will cover the following topics: fundamentals of multimodal transportation planning; urban study components, including study design and organization, origin-destination analysis, traditional traffic model processes of trip generation, distribution and assignment; urban transportation entity analysis (shopping centers, terminals,

etc.); state and regional study components, including state and national needs and capital improvement programs, regional funding capabilities and related national transportation policy and legislative acts.

JCE 4630(363) Design of Steel Structures (3)

Prerequisites: JCE 3410(241), JCE 3420(242). Behavior and design of steel frames by "allowable stress" and "maximum strength" based on deterministic and LRFD (Load-resistance factor design) methods. Design of beams, columns, beam-columns, plate girders, connections, multistory frames, and bridge girders. Torsional design of steel structures. Plastic analysis and design of steel structures. Miscellaneous topics in structural steel construction and design.

JCE 4640(364) Foundations (3)

Prerequisites: JCE 3420(242), JCE 4190(319) and JCE 4200(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 4650(365) Airport Planning and Construction (3)

Prerequisites: Senior standing. Fundamentals of airport planning location, construction, and legislative and fiscal implementation. Location principles with respect to the region and the site. Analysis of air travel demand mode s. Air control systems and navigation principles affecting airport design. Design of the site for runway, taxiway, and terminal location. Pavement and construction principles with respect to design. Current federal policy and fiscal programming for airport planning. Principles of integration with ground transport systems.

JCE 4660(366) Advanced Design of Concrete Structures (3)

Prerequisites: JME 3250(225), JCE 3410(241), JCE 3420(242). Flexural behavior and design, strength and deformation of rectangular and nonrectangular sections, shear strength, beam-columns, long columns, slab systems, design of frames, and footings will be covered.

JCE 4690(369) Construction Management Project (3)

Prerequisites: JCE 4730(373) and JEP 3810(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 4720(372) Legal Aspects of Construction (3)

Prerequisite: Junior standing or permission of instructor. 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 4730(373) Construction Operations and Management (3)

Prerequisite: 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 4740(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 4750(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 4760(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 uses. Case studies and review of current legislation affecting site planning and engineering are undertaken, culminating in a major design project.

JCE 4770(377) Decision Analysis and Construction Applications (3)

Introduction and application of systems engineering and statistics toward solving construction and civil engineering problems. Included are the following topics: network and linear programming models, construction and evaluation of decision trees to clarify choice of actions under uncertainty, probability distributions, sample statistics, linear regression models, sampling plans for quality

assurance. Personal computer usage emphasized for problem solving.

JCE 4780(378) Knowledge-Based Expert Systems in Civil Engineering (3)

Prerequisite: JCS 1360(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 4800(380) Computer Applications in Construction Management (3)

Prerequisite: JCE 4730(373). A comprehensive study of computer applications in construction management. Topics include: configuration of hardware/software requirements for the management of a typical project; application programs used in project data base management and project schedule/cost control systems; data management techniques and development of custom reports for use in project management and control.

JCE 4820(382) Design of Water Quality Control Facilities (3)

Prerequisite: JCE 3520(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 4840(384) Probabilistic Methods in Civil Engineering Design (3)

Prerequisite: JCE 3420(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 4850(385) Bridge Analysis and Design (3)

Prerequisites: JCE 3420(242) Study of fundamental bridge design philosophy and theory of analysis using AASHTO Specifications. Strong emphasis on practical design aspects of steel, and concrete bridges and associated analytical approaches. Introduction to commercially available design software providing real world solutions to various design challenges. Seismic design and analysis are also included.

JCE 4860(386) Design of Masonry Structures (3)

Prerequisite: JCE 3420(242). History of masonry construction; masonry materials and components; loadings for masonry structures; fundamentals of working stress design; fundamentals of strength design; design of gravity load resisting elements; design of lateral load resisting elements; details, connections and joints; design of low-rise buildings; design of high-rise buildings; design for water penetration resistance; quality control/inspection.

JCE 4940(394) Public Transportation Technology (3)

Prerequisites: JCE 4620(362). An in-depth study and analysis of conventional and emerging public transportation state-of-the-art systems. Brief review of conventional transportation systems, study of bus-rapid systems, demand responsive bus systems, personal rapid transit, dual-mode, guide-way and automated freeway systems, and high-speed rail TACV systems. Review of current Department of Transportation Administration-Urban Mass Transportation Administration New Systems Research and Demonstration Programs. Students will be responsible for a major project endeavor at conclusion of course.

JCE 4990(399) Senior Civil Engineering Seminar

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 1360(36) Introduction to Computing (4)**

Workshop course (lectures and supervised laboratory sessions) covering the fundamental organization and operating principles of digital computers and the systematic design and development of well-structured programs. After an intensive exposure to algorithmic principles and programming techniques and practices using the JAVA language, students learn about a computer's internal structure through the use of a simple Von Neumann machine simulator.

Electrical Engineering**JEE 2500(150) Electrical Laboratory I (3)**

Prerequisite: JEE 2800(180). Lectures and laboratory exercises related to sophomore topics in introductory networks and basic electronics.

JEE 2609(160) Digital Computers I: Organization and Logical Design (3)

Prerequisite: JCS 1360(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. Occasional laboratory exercises.

JEE 2800(180) Introduction to Electrical Networks (3)

Prerequisites: Physics 2112(112) and Math 2020(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 2900(190) Introduction to Digital and Linear Electronics (3)

Prerequisite: JEE 2800(180). Introduction to contemporary electronic devices and their circuit applications. Terminal characteristics of active semiconductor devices. Incremental 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 3149(214) Engineering Electromagnetics I: Fundamentals (3)

Prerequisite: JEMT 3170(217). 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 lines; and pulse propagation; introduction to guided waves; introduction to radiation and scattering concepts.

JEE 3270(227) Power, Energy, and Polyphase Circuits (3)

Prerequisite: JEE 2800(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 3629(262) Digital Computers II: Architecture (3)

Prerequisite: JEE 2609(160). Study of interaction and design philosophy of hardware and software for digital computer systems: Machine organization, data structures,

I/O considerations. Comparison of minicomputer architectures.

JEE 3790(279) Signal Analysis for Electronic Systems and Circuits (3)

Prerequisites: JEE 2800(180) and JEMT 3170(217). Elementary concepts of continuous-time and discrete-time signals and systems. Linear time-invariant (LTI) systems, impulse response, convolution, Fourier series, Fourier transforms, and frequency-domain analysis of LTI systems. Laplace transforms, Z-transforms, and rational function descriptions of LTI systems. Principles of sampling and modulation. Students participate weekly in recitation sections to develop oral communications skills using class materials.

JEE 3800(280) Network Analysis (3)

Prerequisite: JEE 3790(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 3900(290) Principles of Electronic Devices (3)

Prerequisite: Physics 2112(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 3920(292) Electronic Devices and Circuits (3)

Prerequisite: JEE 2900(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. Transistor 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 4100(310) Engineering Electromagnetics II: Applications (3)

Prerequisite: JEE 3149(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 4140(314) Solid State Power Circuits & Applications (3)

Prerequisites: JEE 2900(190), JEE 3790(279). Study of the strategies and applications of power control using solid-state semiconductor devices. Survey of generic power electronic converters. Applications to power supplies, motor drives, and consumer electronics, Introduction to power diodes, thyristors, and MOSFETs.

JEE 4160(316) Electrical Energy Laboratory (3)

Prerequisite: JEE 2500(150). Experimental studies of principles important in modern electrical energy systems. Topics: power measurement, transformers, batteries, static frequency converters, thermoelectric cooling, solar cells, electrical lighting, induction, commutator, and brushless motors, synchronous machines.

JEE 4210(321) Communications Theory and Systems (3)

Prerequisites: JEE 3790(279) and JEMT 3261(226). Introduction to the concepts of transmission of information via communication channels. Amplitude and angle modulation for the transmission of continuous-time signals. Analog-to-digital conversion and pulse code modulation. Transmission of digital data. Introduction to random signals and noise and their effects on communication. Optimum detection systems in the presence of noise. Elementary information theory. Overview of various communication technologies such as radio, television, telephone networks, data communication, satellites, optical fiber, and cellular radio.

JEE 4270(327) Special Topics in Real-Time Processing (3)

Prerequisite: Senior Standing. Microcontrollers and digital signal processors are often utilized in applications such as communications systems, automotive control systems, biomedical instrumentation, consumer appliances, and industrial control systems. The purpose of this course is to examine a variety of issues regarding the real-time

application of embedded microprocessor systems. Topics will include digital processing, the operation of sensors and transducers, signal representation, system design and software development. Classes will include lecture and laboratory sessions. Depending on student interest, exemplary applications from the following list will be studied: automotive control, biomedical instrumentation, communication systems, speech processing, data compression, and audio and acoustic processing.

JEE 4310(331) Control Systems I (3)

Prerequisites: JEMT 3170(217), JEE 2800(180) [same as JME 4310(331)] Introduction to automatic control concepts. Block diagram representation of single and multiloop 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.

JEE 4320(332) Control Systems II (3)

Prerequisite: JME 4310(331). The control of physical systems with a digital computer, microprocessor, or special-purpose digital hardware is becoming very common. Course continues JME 4310(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 4450(345) Digital Signal Processing (3)

Prerequisite: JEE 3790(279). Introduction to analysis and synthesis of discrete-time linear time-invariant (LTI) systems. Discrete-time convolution, discrete-time Fourier transform, Z-transform, rational function descriptions of discrete-time LTI systems. Sampling, analog-to-digital conversion and digital processing of analog signals. Techniques for the design of finite impulse response (FIR) and infinite impulse response (IIR) digital filters. Hardware implementation of digital filters and finite-register effects. The discrete Fourier transform and the fast Fourier transform (FFT) algorithm.

JEE 4550(355) Digital Systems Laboratory (3)

Prerequisites: JEE 2609(160) and JEE 2900(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 4580(358) Computer-Aided Design of Electronic Systems (3)

Prerequisites: JEE 2900(190) and 3790(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.

JEE 4600(360) Digital Computers: Switching Theory (3)

Prerequisite: JEE 2609(160). 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 4630(363) Digital Integrated Circuit Design and Architecture (3)

Prerequisite: JEE 2900(190) and JEE 3629(262). Brief review of device characteristics important to digital circuit operation, followed by detailed evaluation of steady-state and transient behavior of logic circuits. Implications of and design techniques for very large-scale integrated circuits including architecture, timing, and interconnection. Students must complete detailed design and layout of a digital circuit. Major emphasis on MOS digital circuits with some comparisons to other technologies.

JEE 4640(364) Digital Systems Engineering (3)

Prerequisite: JEE 2900(190). Design and characterization of digital circuits, reliable and predictable interconnection of digital devices, and information transfer over busses and other connections. Topics include: Review of MOSFET operation; CMOS logic gate electrical characteristics; System and single-point noise margin and noise budget; Figures of merit for noise-margin and poser-delay product, and tradeoff between noise margin and propagation delay; Transmission-line driving including reflection, termination, non-zero transition time; lumped and distributed capacitance loads, non-linear terminations, and applicable conditions for lumped approximations; Coupled

transmission lines, forward and backward crosstalk, short line approximations, ground bounce, and simultaneous switching noise; Timing, clocking, and clock distribution for digital circuits; Prediction of metastability error rates and design for acceptable probability of failure. Examples and design exercises using systems and interconnections selected from current Computer Engineering practice such as RAMBUS, PCI bus, GTL, LVDS, and others.

JEE 4681(368) Applied Optics (3)

Prerequisite: JEE 3149(214). 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 4800(380) Senior Design Project (3)

Prerequisite: Senior standing. Working in teams, students address design tasks assigned by faculty. Each student participates in one or more 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 3810(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.

JEP 4370(337) Environmental Risk Assessment (3)

Prerequisite: JCE 4740(374) or JEMT 3261(226). Definition of risk and uncertainty. Risk assessment concepts and their practical application. Principles of human health and ecological toxicology. Bioassays. Exposure characterization, modeling, and measurement. Qualitative and quantitative evaluation of human and animal studies. Dose-response models and parameter estimation. Low-dose extrapolation. Structure activity relationships. Estimating individual risk and aggregate risk. Risk assessment methods in regulatory decision

making and standard setting. Application of risk assessment in hazardous waste site evaluation and remediation.

JEP 4610(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 3100(210) Engineering Communications (3)

Prerequisites: English 1100(10) 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 3170(217) Engineering Mathematics (4)

Prerequisite: Math 2020(202). 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.

JEMT 3261(226) Probability and Statistics for Engineering (3)

Prerequisite: Math 2000(180). Study of probability and statistics together with engineering applications. Probability and statistics: random variables, distribution functions, density functions, expectations, means, variances, combinatorial probability, geometric probability, normal random variables, joint distribution, independence, correlation, conditional probability, Bayes theorem, the law of large numbers, the central limit theorem. Applications: reliability, quality control, acceptance sampling, linear regression, design and analysis of experiments, estimation, hypothesis testing. Examples are taken from engineering applications. This course is required for electrical and mechanical engineering majors.

Mechanical Engineering**JME 1414(41A) Introduction to Engineering Design: Project (2)**

An introduction to engineering design in the context of mechanical engineering. Students first complete a series of experiments that introduce physical phenomena related to mechanical engineering. Understanding is achieved by designing and building simple devices and machines. The course proceeds to a design contest in which the students design and build from a kit of parts a more significant machine that competes in a contest held at the end of the course. The course is open to all and is appropriate for anyone interested in mechanical devices, design, and the design process

JME 1415(41B) Introduction to Engineering Design: CAD (2)

An introduction to engineering design in the context of mechanical engineering. Students learn the fundamentals of spatial reasoning and graphical representation. Freehand sketching, including pictorial and orthographic views, are applied to the design process. Computer modeling techniques provide accuracy, analysis, and visualization tools necessary for the design of devices and machines. Topics in detailing design for production, including fasteners, dimensioning, tolerancing, and creation of part and assembly drawings are also included.

JME 2410(141) Mechanics of Deformable Bodies (3)

Prerequisites: Math 1900(175) and Engineering 2310(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 3200(220) Thermodynamics (3)

Prerequisites: Math 1900(175), Chemistry 1111(11) and Physics 2111(111). Classical thermodynamics, thermodynamic properties, work and heat, first and second laws. Entropy, irreversibility, availability. Application to engineering systems.

JME 3210(221) Energetics for Mechanical Engineers (3)

Prerequisite: JME 3200(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 3221(224) Mechanical Design and Machine Elements (4)

Prerequisites: JME 1415(041B), JME 2410(141), JEMT 3170(217). Provides a thorough overview of the steps in the engineering design process and introduces analytical/quantitative techniques applicable to each step. Topics include recognition of need, specification formulation, concept generation, concept selection, embodiment and detail design. Includes an introduction to several classes of machine elements such as bearings, gears, belts, brakes, and springs. Underlying analytical model of the machine elements are presented along with guidelines about designing and choosing such elements for practical applications. A case study from industry will emphasize how the steps of the design process were done as well as the rationale for choosing particular machine elements

JME 3250(225) Materials Science (4)

Prerequisite: Chemistry 1111(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 3251(236) Materials Science (3)

Prerequisite: Chemistry 1111(11). Same as JME 3250(225) but without the laboratory. 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 3611(262) Materials Engineering (3)

Prerequisite: JME 3250(225). This course deals with the application of fundamental materials science principles in various engineering disciplines. Topics covered include design of new materials having unique property combinations, selection of materials for use in specific service environments, prediction of materials performance under service conditions, and development of processes to produce materials with improved properties. The structural as well as functional use of metals, polymers, ceramics, and composites will be discussed.

JME 3700(270) Fluid Mechanics (3)

Prerequisites: JEMT 3170(217) and Engineering 2320(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.

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JME 3710(271) Principles of Heat Transfer (3)

Prerequisites: JME 3200(220), JME 3700(270) and JEMT 3170(217). 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 3721(280) Fluid Mechanics Laboratory (1)

Prerequisite: JME 3700(270). Physical laboratory exercises focusing on fluid properties and flow phenomena covered in JME 3700(270). Calibration and use of a variety of equipment; acquisition, processing, and analysis of data by manual as well as automated methods.

JME 3722(281) Heat Transfer Laboratory (1)

Prerequisites: JME 3721(280) and JME 3710(271). Physical laboratory exercises, including some numerical simulations and computational exercises, focusing on heat-transfer phenomena covered in JME 3710(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 4000(300) Independent Study (1-6)

Prerequisites: Junior standing and consent of the faculty adviser. Independent investigation of a mechanical engineering topic of special interest to a student performed under the direction of a faculty member.

JME 4160(316) Advanced Strength and Introductory Elasticity (3)

Prerequisite: JME 2410(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.

JME 4170(317) Dynamic Response of Physical Systems (2)

Prerequisites: Engineering 2320(145) and JEMT 3170(217); JME 4170(317) and JME 4180(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 4180(318) Dynamic Response Laboratory (2)

Prerequisite: JME 4170(317) and JME 4180(318) must be taken during the same semester. Laboratory problems focusing on materials covered in JME 4170(317).

JME 4190(319) Experimental Methods in Fluid Mechanics (3)

Prerequisites: JME 3700(270), JME 3721(280) and consent of instructor. Experimental approach to problem solving and validation of theoretical/computational methods. Uncertainties in measurement. Review of fundamental equations of fluid dynamics, properties of gases and liquids, similarity laws. Boundary layers, transition turbulence, flow separation. Viscoelastic and multi-phase flows. Wind tunnels, water channels, simulation of phenomena in processing equipment. Pressure sensors, including optically-reactive surface paint. Measurement of velocity with pitot- and venturi-tubes, hot-wire anemometry, ultrasonic probes, laser-Doppler (LDV) and particle-image (PIV) instruments. Compressibility corrections. Measurement of skin friction by direct force sensors, Preston- and Stanton-tubes, diffusion analogies, liquid crystals. Flow visualization with laser light sheet; Schlieren, shadowgraph and interferometric methods. Future trends; flow control, impact of microelectronic sensors and actuators. Laboratory demonstrations using available instrumentation.

JME 4240(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 4250(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.

JME 4290(329) Flexible Manufacturing Automation (3)

Prerequisite: Senior standing. Survey of the application of robots in the automation of manufacturing industries. Use of robots to increase productivity, to improve quality or to improve safety. Special studies of applications of robots in painting, welding, inspection and assembly.

JME 4310(331) Control Systems I (3)

Prerequisite: JEMT 3170(217), JEE 2800(180) (same as JEE 331). 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 4440(344) Solar Energy (3)

Prerequisites: JME 3200(220), JME 3700(270), and JME 271. This course will cover the following topics: extraterrestrial solar radiation; solar radiation on the earth's surface; weather bureau data; review of selected topics in heat transfer; methods of solar energy collection including flat panel and concentrating collectors; solar energy storage; transient and long-term solar system performance.

JME 4500(350) Computer-Integrated Manufacturing (3)

Prerequisite: Senior standing. Analysis and design of computer-integrated systems for discrete parts and assemblies manufacturing. Process planning, control, manufacturing decision support systems, microcomputers and networks. Programming of spatially oriented tasks, code generation, system integration. CIMLab assignments.

JME 4510(351) Computer Controlled Manufacturing (3)

Prerequisites: JCS 1360(036), JME 4320(331). Practical applications of mini- and microcomputer based systems for production control, numerical control and robotics. Processors, hardware interfacing, I/O configuration, D/A and A/D conversion. Real time process control. Flexible manufacturing. CIMLab assignments.

JME 4530(353) Facilities Design (3)

Prerequisite: Senior standing. The goal of the course is to provide the student with the information and analytical tools necessary to take a product design into production and for the design of an efficient manufacturing facility that will make the production feasible. Quantitative methods in the design of manufacturing facilities. Space allocation, assembly line design, material-handling systems, utilities and environmental design for manufacturing facilities. Facility-location selection. Plant-layout development. Building, organization, communications and support system design. Material-handling equipment, flow and packaging. Automated storage and retrieval systems design. Computer aided design of manufacturing facilities. Environmental requirements and design. Utilities design. In a major project, students will be required to analyze the design of a

product and plan the manufacturing facility for its production.

JME 4720(372) Fluid Mechanics II (3)

Prerequisites: JME 3200(220) and JME 3700(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 4740(374) Analysis and Design of Turbomachinery (3)

Prerequisite: Senior standing. The principles of thermodynamics and fluid dynamics applied to the analysis, design and development of turbomachinery for compressible and incompressible flows. Momentum transfer in turbomachines. Design of axial and radial compressors and turbines, diffusers, heat exchangers, combustors, and pumps. Operating characteristics of components and performance of power plants.

JME 4760(376) The Engineering Properties of Materials (3)

Prerequisite: Junior standing. A detailed look at themechanical, 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 4780(378) Analysis and Design of Piston Engines (3)

Prerequisite: Senior standing. The principles of thermodynamics and fluid dynamics applied to the analysis, design and development of piston engines. Examination of design features and operating characteristics of diesel, spark-ignition, stratified-charge, and mixed-cycle engines. Study of the effects of combustion, fuel properties, turbocharging and other power-boosting schemes on the power, efficiency and emission characteristics of the engines.

JME 4800(380) Building Environmental Systems Parameters (3)

Sustainable design of building lighting and HVAC systems considering performance, life-cycle cost and downstream environmental impact. Criteria, codes and standards for comfort, air quality, noise/vibration and illumination. Life cycle and other investment methods to integrate energy consumption/conservation, utility rates, initial cost, system/component longevity, maintenance cost and building productivity. Direct and secondary contributions to acid rain, global warming and ozone depletion.

JME 4810(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 4820(382) Air-Conditioning Systems and Equipment II (3)

Prerequisite: Senior standing. 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 4040(390) Mechanical Engineering Design Project (5)

Prerequisite: JME 2410(141), JEMT 3170(217), JME 3200(220), JME 3221(224) and JME 3700(270)
Corequisites: JME 3250(225), JME 3710(271) and JME 4170(317). Working individually, students initially perform a feasibility study for a mechanical design project. Projects consisted of an open-ended, original design or a creative redesign of a mechanical component or system requiring the application of those engineering science principles inherent to mechanical engineering. Feasibility is considered subject to economic, safety, legal, environmental, ethical, aesthetic, and other constraints in a competitive manufacturing environment. Feasible projects are then selected by teams of three to five students who perform the detailed design and optimization of the design concept developed in the feasibility study. The designs are carried out to detailed shop drawings and where possible a mockup or prototype is built. Periodic oral presentations and written reports give students practice in engineering and business communication. Guidance and consultation for the design projects are provided by the course and department faculty.

JME 4041(395) Current Topics in Mechanical Engineering Design (1)

Prerequisites: Senior Standing. Case studies of engineering failures, class discussion and short written papers are used to illustrate and stress the importance of engineering teamwork, ethics, and professional standards within the mechanical engineering discipline. Working in teams, students develop and present a case study on a topic of their choice. Guest lecturers introduce contemporary topics such as product liability, environmental regulations, green design, appropriate technologies, and concurrent engineering.

UM-Rolla Engineering Education Center

The UM-Rolla Engineering Education Center, housed on the University of Missouri-St. Louis campus, is an engineering graduate program administered by UM-Rolla for nontraditional students in the St. Louis area. The program is conducted in the evening, making it suitable for students who are employed full time. Graduate work leading to the Master of Science degree is available in aerospace, civil, computer, electrical manufacturing and mechanical engineering, engineering management engineering mechanics, and information science and technology.

The center provides information to St. Louis area residents about UMR programs in Rolla. Advisers can assist area pre-engineering students with transfer to the Rolla campus and with entry into the Cooperative Training Program that exists 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.

The center also assists St. Louis area companies by offering noncredit short courses, in-house training courses and engineering consultation services in the technical areas of competence of UMR faculty. The center may be contacted at (314) 516-5431 or refer to the web site containing comprehensive information about these programs: www.umn.edu/~umreec.

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.

The Center for International Studies provides UM-St. Louis students with opportunities to study at over 75 different universities in more than 30 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.

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 and 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

Generally, applications are due at the end of January for fall, mid-February for summer, and the end of September for winter semester. Some programs require application two semesters prior to participation. Students should plan to spend at least one or two months researching a program before applying.

Participant selection is 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, 261 Millennium Student Center, (314) 516-6497.

ROTC

Students interested in Reserve Officer Training Corps 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 Saint 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 Military Science Department at Washington University, telephone 935-5537 or check out our Web site at <http://userfs.cec.wustl.edu/~rotc>. For information on the Air Force ROTC program, contact the Aerospace Science Department at Saint Louis University, telephone 977-8227

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 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 \$27,000. Within four years he/she should be promoted to captain with a salary and allowances of nearly \$48,000. Reserve officers attend one weekend per month and an annual two-week training camp.
- 2) College financing. All advance course and Army ROTC scholarship students receive \$250-400/month stipend. Only scholarship students receive \$450 for books and supplies. Also, advance course students may join the Reserves as an office trainee and receive pay while in college.
- 3) Full-time enrolled students may compete for the Army ROTC scholarship. The scholarship pays for tuition, fees, and books.
- 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 reserve duty. Reserve officers spend one weekend a month being a soldier. 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 ROTC program 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 students a perspective on 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 \$4,000) 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) The students must be in good academic standing (minimum 2.0 GPA) and pass an Army medical examination.

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 ROTC currently has scholarships in effect, which pay toward tuition, fees, and books, and provide \$200/month for the academic year.

These scholarships cover either four, three, or two years. UM-St. Louis freshmen and sophomores should apply in January for the two- and three-year scholarships. Scholarship students may incur a four-year active duty

obligation; however, they may request reserve duty to serve with the Army National Guard or Reserve.

Qualifications

All students who desire to enter the Army Reserve Officer Training Corps must be U.S. 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 consist of two parts:

- 1) Earning a degree in the student's chosen academic subject.
- 2) Completing 22 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 College of Business Administration and the College 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 Thursday afternoon from 4 p.m. to 6 p.m., unless otherwise designated. In addition, students attend one field training exercise 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 extracurricular 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 Drill Team, Color Guard, and Ranger Challenge Team.

Course Descriptions

Military Science

1101(101) Introduction to ROTC (2)

Make your first new peer group at college one committed to performing well and enjoying the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations and basic marksmanship. Learn fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments.

1102(102) Introduction to Leadership (3)

Learn/apply principles of effective leading. Reinforce self-confidence through participation in physically and mentally challenging exercises with upper division ROTC students. Develop communication skills to improve individual performance and group interaction. Relate organizational ethical values to the effectiveness of a leader.

1201(201) Self/Team Development (3)

Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation and basic military tactics. Learn fundamentals of ROTC's Leadership Development Program.

1202(202) Individual/Team Military Tactics (3)

Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security and methods of pre-execution checks. Practical exercises with upper division ROTC students. Learn techniques for training others as an aspect of continued leadership development.

1301(301) Leading Small Organizations I (3)

Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Uses small unit defensive tactics and opportunities to plan and conduct training for lower division students both to develop such skills and as vehicles for practicing leading.

1302(302) Leading Small Organizations II (3)

Continues methodology of MS 1301(301). Analyze tasks; prepare written or oral guidance for team members to accomplish tasks. Delegate tasks and supervise. Plan for and adapt to the unexpected in organizations under stress. Examine and apply lessons from leadership case studies. Examine importance of ethical decision making in setting a positive climate that enhances team performance.

1401(401) Leadership and Management (3)

Prerequisite: Military Science 302.

Leadership and Management, begins with a series of lessons enabling the students to make informed career decisions as they prepare for accession into the United States Army. The lessons concentrate on Army operations, training management, communications, counseling, leadership skills, and they support the final transition from cadet to lieutenant.

1402(402) Officership/Transition to Lieutenant (3)

Prerequisite: Military Science 401.

Transition to Lieutenant completes the evolution from cadet to lieutenant by focusing on three areas: first, students are given a basic foundation in military law; second, students build on previous courses to successfully negotiate case studies and practical exercises; third, students will complete a Senior Leadership Project whereby students integrate, apply, and demonstrate their knowledge of military operations.

Air Force ROTC

The objective of the Air Force Reserve Officer Training Corps 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 Saint Louis University.

The four-year program is tailored for students with three or more years of undergraduate studies remaining. Students 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.

To be commissioned, AFROTC students/cadets must:

- 1) Pass a medical exam at a military medical facility.
- 2) Obtain a favorable evaluation on an Armed Forces personal history security investigation.
- 3) 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.
- 4) Be of good character (as determined by a favorable record with law enforcement authorities).
- 5) Successfully complete all AFROTC course requirements.
- 6) 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.

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 \$1,000 per semester federal AFROTC scholarship.

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.

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 (314) 977-8227, or at Southern Illinois University at Edwardsville (SIUE), call (618) 692-3180.

Aerospace Studies

The Aerospace studies program is divided into two parts: the general military course, the freshman/sophomore level curriculum, and the professional officer course, 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 familiarize 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 lab consist of activities classified as advanced leadership experiences. They involve planning and controlling military activities of the cadet corps, preparation and presentation of briefings and other oral and written communications, and providing 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.

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 Headquarters Reserve Officers Training Corps, 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.

Course Descriptions

AS-1001/1002(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-2001/2002(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-3001(301) through AS-4002(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-3001/3002(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 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-4001/4002(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.

Video Instructional Program

The video instructional program offers an alternative for the student who is far from campus, whose physical disability, work schedule, or other responsibilities make it difficult for him/her to attend traditional classes. Video lessons for various courses are available for viewing on cable television stations as well as in UM-St. Louis libraries.

St. Louis Area Cable Stations

Continental Cable, and United Video in St. Louis County; AT&T Cable in the city will air courses over the Higher Education Channel (HEC). (Charter, Continental, United Video & AT&T Cable).

Course Listings

The following courses from the UM-St. Louis curriculum are offered:

Anthropology

1019(019) Archaeology [SS]

This telecourse uses dramatic onsite filming to enable students to explore how archaeologists reconstruct ancient societies and explain how they evolved. Students will understand how archaeology and anthropology interact, with emphasis on how people have behaved in the past.

1025(025) World Cultures [CD, SS, V]

This telecourse is an ethnographic survey of the major culture areas of the world. It is an introductory cultural anthropology course that studies the structure and process of culture.

2124(124) Cultures of Africa [CD]

This telecourse offers a basic ethnographic survey of African cultures, with attention to social groupings, tribalism, religion, language, social change, the ecological relationship between humans and nature.

4350(350) Special Studies

This telecourse offers a glimpse into the science of anthropology through a variety of approaches, theories, controversies, and solutions encountered in the field. Students will gain insight into the practices of foreign cultures and the beliefs of their own culture in addition to the importance of diversity of human behavior.

Biology

1012(001) General Biology (For Non-Science Majors) [MS]

This telecourse provides a firm foundation in the fundamental principles of biology.

Communication

1070(070) Introduction to Cinema

This telecourse examines the history, rhetoric, and aesthetics of film. The content is designed to bring Hollywood filmmaking into clear focus as an art form, as an economic force, and as a system of representation and communication. Film theory and criticism will be studied, as well as major genres, authors, and artists. Introduction to Cinema explores how Hollywood films work technically, artistically, and culturally. The course also probes the deeper meaning of American movies--the hidden messages of genres, the social and psychological effects of Hollywood film style, and the mutual influence of society and popular culture on filmmaking.

2232(232) Effective Communication in the Organization: Tool for Leadership (3)

Prerequisites: Junior standing or consent of instructor. Telecourse designed to equip students with communication skills applicable to the organizational context. The course will present effective strategies for the articulation of ideas, with particular emphasis on the development of leadership skills.

Education

308 Foundations of Adult Basic Education (3)

This telecourse discusses the various characteristics of the adult learner, including needs, interests, physiological factors, interpersonal relations, and communications. The video demonstrations present teaching practices in adult basic education. This course focuses on the need of corporate and industry trainers as well as ABE and GED teachers.

You will work with topics in teaching basic reading: word recognition, comprehension, writing for the student's needs, basic and intermediate mathematical skills, selection and use of materials, learning contracts, learning styles, and other methods to individualize instruction, as well as student recruitment and retention and corporate classroom management. This is an important class offered at a time when there are more adult students than teachers.

History

1031(031) Topics in European Civilization: Emergence of Western Europe to 1715 [SS]

This telecourse offers lectures and discussions on the development of Western European society and tradition from approximately 800 to 1715.

1032(032) Topics in European Civilization:1715 to the Present [SS]

This telecourse offers lectures and discussions on the development of Western European society and tradition from 1715 to the present.

History 1031(31) or History 1032(32) may be taken separately.

2300(150) The People's Century, Part I

This telecourse provides unique insight into the turbulent events of the last 100 years by combining rare archival film footage with the testimony of ordinary people who lived through the century's sweeping changes and who recount their firsthand experiences.

Psychology

1003(003) General Psychology [SS]

This telecourse is an introductory college level course that covers the fundamental principles and major concepts of psychology. The content is designed to provide a broad introductory survey of the general principles of human behavior.

2245(245) Abnormal Psychology

Prerequisite: Psych 1003(03), General Psychology. This telecourse introduces the major theoretical models for explaining and treating disorders - psychodynamic, behavioral, cognitive and biological. 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. This approach serves the introductory abnormal psychology student, while allowing individual faculty latitude to underscore the approach to which they subscribe.

1268(268) Human Growth and Behavior [SS]

Prerequisites: Psych 1003(03). This telecourse uses special readings, reports, and/or field research as well as video and audio courses to explore the stages of life as an introduction to developmental psychology.

4280(280) The Psychology of Death and Dying

Same as Gerontology 4280(280). Prerequisite: Psych 1003(3). This telecourse 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.

Social Work

4200(280) Human Behavior in the Social Environment (3)

Prerequisite: Biology 1012(1) and Sociology 2160(160) or Psych 2160(160) or permission of instructor. This telecourse 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

4601(312) Women's Social Issues

Prerequisites: Social Work 4200(280) or consent of the instructor. This telecourse is designed to help students identify gender stereotypes and barriers and how they impact on women's lives. This course will help students become more sensitive to the social and welfare concerns of women. The course also explores how gender intersects with other social systems, such as age, class, disability, ethnicity, race, religion, and sexual orientation. Emphasis will be placed on integrating a knowledge base of women's needs with professional social work practice.

Sociology

1010(010) Introduction to Sociology [V, SS]

This telecourse is an introductory college level course designed to give students an in-depth look at sociological approaches to human behavior, including types of social organizations, patterns of social interaction, and social influences on individual conduct.

Philosophy

1090(90) Philosophy and Other Disciplines [H, V]

Prerequisites: Video course offering. General introduction to philosophy examines its connections to works of art and related areas. Course does not satisfy any requirements for philosophy major or minor

1091(91) Significant Figures in Philosophy [H, V]

Video course introduces philosophy through a survey of the ideas of some of the important figures in the history of the discipline. Course cannot be used to satisfy any requirements for philosophy major or minor.

Appendix

The University of Missouri-St. Louis Honor Statement

The University of Missouri-St. Louis encourages students to pursue excellence within a respectful and collegial environment and to assume responsibility for the consequences of personal actions. For that reason the University requires students to reject any type of dishonest behavior.

Honest precludes seeking, providing, or receiving any form of authorized assistance on tests or any other type of assignment. It requires giving credit through appropriate citation to the author of materials used in written or oral assignments.

The full Student Standard of Conduct is found at <http://system.missouri.edu:80/uminfo/rules/programs200010.htm>. By registering for a class at UM-St. Louis, students agree to follow this standard of integrity.

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; (i) 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 regulations 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 distribution 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 8 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, A 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 (3) 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, A 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 (1) 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 (7) calendar days.

D. RECORDS RETENTION. Student conduct records shall be maintained for five (5) 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 alleged misconduct and the student shall attend 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 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 (5) Committee members, which may include a maximum of two (2) 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 (1) 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 (3) students to sit with the Committee or two (2) 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 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. Student 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 adviser 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 (1) 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.

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 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-Senate 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.

The final university appeal would be for the President to refer a case to the Board of Curators.

Grade Appeal

On each campus of the University of Missouri it is the Chancellor who is ultimately responsible to the President and the Board of Curators for all campus programs, policies, and activities. On the University of Missouri-St. Louis campus the Chancellor has delegated responsibility for overseeing the grade appeal process to the Vice Chancellor for Academic Affairs. The Vice Chancellor is therefore responsible for assuring that grade appeals are handled in a fair and timely manner. More specifically, that officer is responsible for seeing that the procedures outlined below are appropriately followed.

Informal Procedures

At any time after the awarding of a grade, for a course or an assignment in a course, a student may discuss the grade with her or his instructor and request that the instructor review the grade. If the instructor does review the grade he or she is, of course, free to change the grade or not as is appropriate.

Formal Procedures

The following procedures apply if the above informal procedure does not resolve a dispute concerning a grade to the student's satisfaction and if the process is initiated within thirty working days of the start of the first regular semester (fall or winter) following the semester for which the grade was given, or thirty days after the assignment of the grade (whichever is later).

1. If the student has not already done so, he or she discusses the contended grade fully with the course instructor. The student should prepare for this meeting by taking all relevant written work (test, reports, etc.) with him/her. If the issue is not resolved, and the student wishes to pursue the appeal, she or he should consult the administrative officer of the department or discipline housing the course in question. (This officer will normally be someone below the level of the Dean.) The administrative officer will discuss the appeal with the course instructor, and will inform the student of the result of this discussion. (That result may be the instructor's agreement to change the grade, her or his refusal to change the grade, or her or his agreement to discuss the case further with the student.) The administrative officer may require that the student put the appeal in written form before the administrative officer discusses it with the instructor.

2. If the matter remains unresolved, the student may, within 10 working days of being notified of the result of the discussion between the administrative officer and the instructor, or within 10 working days of her or his last discussion with the instructor, submit a detailed written statement of the complaint to the administrative officer. The administrative officer will refer it to a faculty committee composed of at least three faculty members in the department or unit offering the course or if such are not available, in closely allied fields. This committee will investigate the matter, meeting, as it may deem necessary, with the student, the instructor, and possibly others. Following its inquiries and deliberations, but prior to making its final recommendations, the faculty committee will submit a copy of its findings to the course instructor. If the course instructor elects to comment on the findings to the committee, this must be done in writing within 7 working days. After further consideration, but within 30 working days after receiving the student's statement, the faculty committee will submit its findings with its recommendations and reasons for those recommendations directly to the course instructor, with a copy to the administrative officer.

3. If the faculty committee recommends that the grade be changed, the administrative officer will ask the instructor to implement the recommendation. If the instructor declines, the administrative officer will change the grade, notifying the instructor and the student of this action. Only the administrative officer, upon the written recommendation of the faculty committee, will effect a change in grade over the objection of the instructor who assigned the original grade.¹

4. If the faculty committee recommends that the grade not be changed, the administrative officer will notify the student of this action. The student may then appeal to the dean of the school or college within which the course in question is housed, who will determine whether the above procedures have been properly observed. If the Dean determines that the procedures have not been appropriately followed, *and that their not being followed may have substantively affected the outcome*, the case will be

¹ Under current campus policy, transcript notation of >DL= automatically becomes an F after one regular semester. These changes, which the Registrar is mandated to make, are not considered grade changes and are consistent with this Grade Appeal Policy. Students may appeal these changes provided the appeal is initiated within 30 working days of the notification of the change.

returned to the faculty unit for review by the same, or, if the Dean so determines, by a different committee.

5. If the Dean denies the procedural appeal the student may ask the Vice Chancellor for Academic Affairs, acting as the Chancellor's designee, to conduct a procedural review. The Vice Chancellor is not obligated to conduct such a review and will normally do so only where there is compelling evidence of procedural irregularities. If the Vice Chancellor finds the procedures have not been appropriately followed, *and that their not being followed may have substantively affected the outcome*, the case will be returned to a lower level for rereview. As the Vice Chancellor is acting as the designee of the Chancellor, there is no appeal beyond this level.

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 Life, 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 and ten 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(.75 FTE) 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 Student Life.

B. To maintain recognition or registration, an organization must update their recognition form or re-register 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 gender. Any organization may petition to the Vice Chancellor for Student Affairs for exemption from the requirement as it applies to gender. Academic and professional organizations which have discriminatory membership policy based on gender 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) Recognized and registered organizations are required to seek the advice of faculty and other members of the community.
- 6) 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.

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

The Board of Curators of the University of Missouri has adopted the appropriate equal opportunity policies and procedures in compliance with the above laws 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.

The following equal opportunity policies have been established by the University of Missouri Board of Curators to govern the academic and administrative functions of the University:

- 320.10 **EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**
- 330.60 **SEXUAL HARASSMENT**
- 240.40 **POLICY RELATED TO STUDENTS WITH DISABILITIES**
- 330.80 **MAINTAINING A POSITIVE WORK AND LEARNING ENVIRONMENT**
- 320.10 **Equal Employment Opportunity Program**

- 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 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 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.

Under representation 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 Equal Opportunity 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 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 Office of Equal Opportunity.

(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 Equal Opportunity 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.

330.60 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 decision; 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.
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 Procedure"; 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.

240.040 Policy Related to Students with Disabilities
Executive Order No. 21, 11-1-84; Amended 2-25-97.**EQUALITY OF ACCESS**

The University of Missouri (UM) strives to assure that no qualified person with a disability¹ shall, solely by reason of the disability, be denied access to, participation in, or the benefits of any program or activity operated by UM.

Each such qualified person shall receive reasonable accommodations to provide equally effective access to educational opportunities, programs, and activities in the most integrated setting appropriate unless provision of such reasonable

accommodation would constitute an undue hardship on the university or would substantially alter essential elements of the academic program or course of study or would otherwise compromise academic standards. This policy shall apply to all programs, services, and activities of the university, including but not limited to recruitment, admissions, registration, financial aid, academic programs, advising, counseling, student health, housing and employment.

B. FEDERAL AND STATE LAWS

This policy is intended to be consistent with Section 504 of the Rehabilitation Act of 1973, which states that no recipient of federal financial assistance may discriminate against qualified individuals with disabilities solely by reason of disability. This policy is also intended to be consistent with the Americans with Disabilities Act of 1990 and the Missouri Human Rights Act.

C. FACILITIES

Each program or activity, when viewed in its entirety, shall be accessible to otherwise qualified and eligible students with disabilities. Facilities, or parts of facilities, constructed or renovated for UM use will be designed and built so that they are accessible to and usable by persons with disabilities, in accordance with the ADA Accessibility Guidelines or other accessibility standards properly adopted by the campus. Accessible on-campus housing and food service will be provided at the same cost and with the same program options to qualified students with disabilities as are afforded to non-disabled students. When any UM classes, programs or activities are held in private facilities, thorough efforts shall be made to obtain facilities which are accessible.

D. COORDINATION OF PROGRAMS AND SERVICES FOR STUDENTS WITH DISABILITIES

1. Campus disability support service (DSS) offices or other designated campus units are responsible for coordination of programs, services, and classroom accommodations for qualified applicants for admission and qualified enrolled students with disabilities. Such coordination relates solely to disability issues. Determinations as to whether a student is otherwise qualified often will be based on the academic requirements developed by the faculty. Specific services available to qualified students with disabilities will be provided by the university in conformity with the requirements of federal and state law.

2. Determinations as to whether requested services and requested accommodations are required will be made initially by the Coordinator of DSS. Accommodation of the disability will be determined by the coordinator and faculty member, and if either disagrees with the prescribed accommodation, such disagreement shall be described in writing promptly and submitted to the Chancellor or his/her designee for resolution in a prompt manner.

3. Initial determinations and any disagreements submitted to the Chancellor or his or her designee will take into consideration all relevant factors including, but not limited to, the following:

- current documentation of the specific disability and of the need for the requested services or accommodations;
- the essential elements of the academic program or course of study being pursued;
- the fact that the law does not require a university to substantially alter essential elements of its academic program or

course of study or to otherwise compromise its academic standards.

4. All students seeking disability-related services and/or accommodations must disclose the presence of a specific disability to DSS. Before receiving requested services and/or accommodations, the student will be required to provide the DSS office with current medical or other diagnostic documentation of a disability from a qualified physician or other qualified diagnostician, as well as current documentation of the need for accommodations. In cases where existing documentation is incomplete or outdated, students may be required to provide additional documentation at the student's expense.

5. It is the student's responsibility to self-identify, to provide current and adequate documentation of his/her disability, and to request classroom accommodations, through the DSS office. The appropriate documentation must be provided in a timely manner to ensure full resolution of accommodations prior to the student's entrance into the program or course of study. Documentation review and accommodations planning by DSS, including consultation with faculty and/or other campus entities that may be affected in providing accommodations, will be done on an individualized case-by-case basis.

6. Reasonable classroom accommodations will be provided to otherwise qualified and eligible students with disabilities who have self-identified and who have provided satisfactory documentation in support of their timely request for such accommodations, in compliance with federal and state mandates. These accommodations shall not affect the substance of the educational programs or compromise educational standards.

7. In addition to providing accommodations needed to ensure nondiscrimination in access to educational opportunities by otherwise qualified students with disabilities, the university is responsible for ensuring that no qualified disabled student is denied the benefits of or excluded from participation in a university program because of the absence of auxiliary aids, services, and/or other reasonable accommodations. Auxiliary aids, services, and/or other accommodations include but are not limited to interpreters (sign or oral), readers, scribes, adaptive equipment, and other appropriate services or equipment necessary for course or program accessibility.

8. While funding for accommodations to ensure equally effective access is provided by the university, funding for auxiliary aids, accommodations, and/or services in some instances may be shared with state vocational rehabilitation agencies. The law does not require and the university does not provide prescription devices or other devices/services of a personal nature (e.g. personal attendants) for students with disabilities.

E. ESTABLISHMENT OF CAMPUS POLICIES

Chancellors are directed to establish campus policies and/or procedures consistent with this order. These should cover, at a minimum, treatment of disability-related information and appropriate regard for confidentiality, responsibilities of students in applying for services through DSS, time lines to assure that students make accommodation requests in a timely manner, guidelines to assure that disability documentation is reasonably current, a description of the process of individualized assessment of each student's disability documentation and accommodation request(s), the role of faculty in determining the essential elements of the academic program or course of study and the academic standards involved in the accommodations planning

and review process within the context of academic program requirements, and processing of complaints and grievances including a procedure for appeal when faculty and/or academic administrators or administrators in other involved campus entities do not agree with the DSS on the requirements of this policy.

1. From the U.S. Justice Department's ADA Title II Technical Assistance Manual, Section II-2.8000: Qualified individual with a disability. In order to be an individual protected by Title II, the individual must be a "qualified" individual with a disability. To be qualified, the individual with a disability must meet the essential eligibility requirements for receipt of services or participation in a public entity's programs, activities, or services with or without: 1) Reasonable modifications to a public entity's rules, policies, or practices; 2) Removal of architectural, communication, or transportation barriers; or 3) Provision of auxiliary aids and services. The "essential eligibility requirements" for participation in many activities of public entities may be minimal. For example, most public entities provide information about their programs, activities, and services upon request. In such situations, the only "eligibility requirement" for receipt of such information would be the request for it. However, under other circumstances, the "essential eligibility requirements" imposed by a public entity may be quite stringent.

ILLUSTRATION: The medical school at a public university may require those admitted to its program to have successfully completed specified undergraduate science courses.

PROVISIONS FOR SERVICES TO STUDENTS WITH DISABILITIES AND REASONABLE ACCOMMODATIONS

POLICY AND PROCEDURES

POLICY

The University of Missouri is committed to equal educational opportunities for qualified students without regard to disabling condition. The University, therefore, will take necessary action to ensure that no otherwise qualified student with a disability is denied access to any particular course or educational program. Such action includes an assessment of the student's abilities and an evaluation of the particular course or program.

IMPLEMENTATION PROCEDURES

It is the student's responsibility to self-identify, to provide current and adequate documentation of his/her disability and to request classroom accommodation, through the disability services office. A request for services will initiate an assessment of needs, including a documentation review and accommodations planning by DSS, involving consultation with faculty and/or other campus entities that may be affected in providing accommodations, and will be done on an individualized case-by-case basis. Initial determinations as to whether requested services and/or accommodations are required will be made by the coordinator of disability services based on results of the assessment of needs. If either the faculty member or the disability coordinator disagrees with the prescribed accommodation, such disagreement shall be described in writing promptly and submitted to the Chancellor or his or her designee for resolution in a prompt manner.

The University will make reasonable modifications to its academic requirements, if necessary, to comply with legal requirements ensuring that such academic requirements do not discriminate or have the effect of discriminating on the basis of a student's known and adequately documented disability; unless the requested modification would require alteration of essential elements of the program or essential elements of directly related licensing requirements or would result in undue financial or administrative burdens. The divisional dean's office, in cooperation with the disabilities service coordinator and the department through which the requirement is fulfilled, will determine the appropriate modification of substitution. Any qualified student with a disability who believes that accommodations and/or auxiliary aid(s) will be necessary for participation in any course, course activity, or degree program must indicate a need for services to the designated disability services office at least six weeks prior to the beginning of the semester or degree program.

The disability services coordinator will oversee an assessment of the student's request for services and/or accommodations. If an unfavorable determination is made, the student may appeal the decision through the UM Discrimination Grievance Procedure for Students.

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 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 who may be 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.

330.80 Maintaining a Positive Work and Learning Environment

1. The University of Missouri is committed to providing a positive work and learning environment where all individuals are treated fairly and with respect, regardless of their status. Intimidation and harassment have no place in a university community. To honor the dignity and inherent worth of every individual student, employee, or applicant for employment or admission is a goal to which every member of the university community should aspire and to which officials of the university should direct attention and resources.

2. With respect to students, it is the university's special responsibility to provide a positive climate in which students can learn. Chancellors are expected to provide educational programs and otherwise direct resources to creative and serious measures designed to improve interpersonal relationships, to help develop healthy attitudes toward different kinds of people, and to foster a climate in which students are treated as individuals rather than as members of a particular category of people.

3. With respect to employees, the strength we have as a university is directly related to maintaining a positive work environment throughout the institution. The university should provide a positive recruiting and work environment focused on the duties and skills of the work to be performed. It is the expectation of the university that all employees and potential employees will be treated on the basis of their contribution or potential contribution without regard to personal characteristics not related to competence, demonstrated ability, performance, or the advancement of the legitimate interests of the university. The General Officers are expected to provide training programs for supervisors to assist in achieving this objective.

4. With respect to violations of the policy, faculty, staff and students may utilize their respective grievance procedures approved by the Board of Curators. The approved grievance procedures are as follows: Grievance procedure in Section 370.010 for faculty; grievance procedure in Section 380.010 for staff; and grievance procedure in Section 390.010 for students, and each such procedure shall be deemed as amended to include grievances filed under this policy. This policy shall not be interpreted in such a manner as to violate the legal rights of religious organizations, or military organizations associated with the Armed Forces of the United States of America.

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, A "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 Officer 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 adviser 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 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-- 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 adviser 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;
 - 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.B 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 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 adviser. 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 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 adviser 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 adviser 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.

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