

Preprofessional Programs

Preprofessional 3+4 Program

The Department of Biology sponsors a 3+4 Program for the UM-St. Louis School of Optometry. In this program students may be admitted to the School of Optometry after completing three years (90 semester hours) of study in the Department of Biology. The undergraduate degree is granted when students satisfactorily complete the first year of optometry school. One or more of the following conditions must be met in order to qualify for the undergraduate degree.

- 1) All general education requirements and all requirements for the major, except electives, must be completed.
- 2) Any deficiency in required courses must be remedied with courses taken at UM-St. Louis within three years after entering the School of Optometry.
- 3) Up to six hours from the School of Optometry may be substituted for undergraduate degree requirements, with approval of the Department of Biology.

Prepharmacy

Admission to a school of pharmacy usually requires one to two years of college work in specified areas. Most colleges of pharmacy recommend the 1+4 plan which includes one year of college work followed by four years of professional courses in the college of pharmacy. In some cases the old 2+3 program is used. Since entrance requirements vary, students should consult the catalog of the college to which they intend to apply.

One-Year Prepharmacy Course Sequence. A typical one-year sequence for prepharmacy students which meets the admission requirements of the School of Pharmacy at the University of Missouri-Kansas City and also those of the St. Louis College of Pharmacy is as follows:

Freshman Year

First Semester (16 Hours)

Chemistry 11, Introductory Chemistry I

English 10, Freshman Composition

Mathematics 30, College Algebra, and **Mathematics 35**, Trigonometry (At UMKC mathematics through survey calculus, **Mathematics 101**, is preferred.)

Elective*: One three-hour course

* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

Second Semester (16 hours)

Biology 11, Introductory Biology I

(At UMKC a physics course, Physics 11, is preferred to the biology course.)

Chemistry 12, Introductory Chemistry II

Literature: Any three-hour course

Elective*: One three-hour course

* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

Sophomore Year (for 2+3 programs)

First Semester (15 hours)

Biology 12: Introductory Biology II

Chemistry 261, Structural Organic Chemistry

Literature: Any three-hour course

Physics 11, Basic Physics

Elective*: One three-hour course

* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

Second Semester (14 hours)

Biology: One biology elective

Chemistry 262, Organic Reactions

Chemistry 263, Techniques of Organic Chemistry

Physics 12, Basic Physics

Elective*: One three-hour course

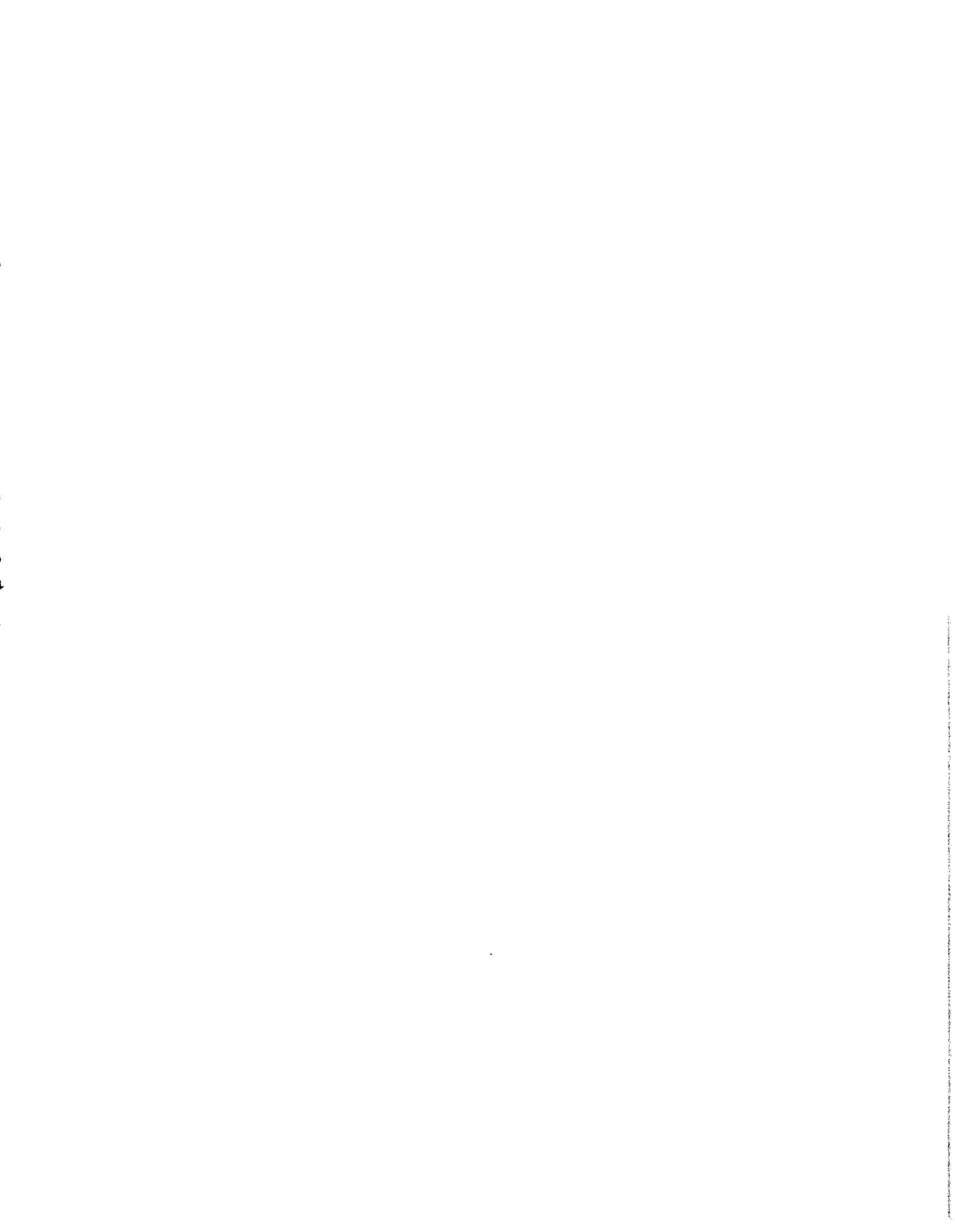
* Courses in statistics, psychology, communication, economics, and accounting are most often recommended or required.

For additional information and prepharmacy advising, contact the chemistry department, 324 Benton Hall, telephone 516-5311.

1995-96 Bulletin



School of Business Administration



Business Administration

Faculty

- Robert M. Nauss**, Dean; Professor*
Ph.D., University of California, Los Angeles
- John J. Anderson**, C.P.A., C.M.A., Associate Dean;
Professor*
Ph.D., University of Wisconsin-Madison
- David R. Ganz**, Associate Dean and Director of
Undergraduate Studies in Business; Assistant Professor
M.S. in C., St. Louis University
- Albert P. Ameiss**, Professor Emeritus
Ph.D., St. Louis University
- Howard B. Baltz**, Professor Emeritus
Ph.D., Oklahoma State University
- James A. Breaugh**, Coordinator in Management; Professor*
Ph.D., Ohio State University
- William P. Dommermuth**, Professor Emeritus
Ph.D., Northwestern University
- Sioma Kagan**, Professor Emeritus
Diplom-Ingenieur, Ph.D., Columbia University
- Edward C. Lawrence**, Coordinator in Finance; Professor*
Ph.D., Pennsylvania State University
- Joseph S. Martinich**, Professor*
Ph.D., Northwestern University
- David Ronen**, Coordinator in Management Science and
Information Systems; Professor*
Ph.D., Ohio State University
- L. Douglas Smith**, Director, Center for Business and
Industrial Studies; Professor*
Ph.D., University of Minnesota
- Robert S. Stich**, Professor Emeritus
Ph.D., New York University
- Fred J. Thumin**, Professor*
Ph.D., Washington University
- Michael J. Alderson**, Associate Professor* (On Leave)
Ph.D., University of Illinois
- Nasser Arshadi**, Associate Professor*
Ph.D., University of Nebraska
- James F. Campbell**, Associate Professor*
Ph.D., University of California, Berkeley
- Dennis L. Dossett**, Associate Professor*
Ph.D., University of Washington
- Donald H. Driemeier**, Deputy to the Chancellor; Associate
Professor*
D.B.A., Washington University
- Thomas H. Eyssell**, Associate Professor*
Ph.D., Texas A & M
- Timothy A. Farmer**, C.P.A., Associate Professor*
Ph.D., Ohio State University
- D'Anne G. Hancock**, Associate Professor*
Ph.D., University of New Orleans
- Michael M. Harris**, Associate Professor*
Ph.D., University of Illinois-Chicago
- Marius A. Janson**, Associate Professor*
Ph.D., University of Minnesota
- Kailash Joshi**, Associate Professor*
Ph.D., Indiana University
- Charles R. Kuehl**, Director of Continuing Education and
Outreach for the School of Business Administration;
Associate Professor*
Ph.D., University of Iowa
- Donald R. Kummer**, Associate Professor*
Ph.D., University of Oregon
- Silvia A. Madeo**, C.P.A., Coordinator in Accounting;
Associate Professor*
Ph.D., North Texas State University
- R. Frank Page**, C.P.A., Associate Professor*
Ph.D., University of Illinois
- Susan M. Sanchez**, Associate Professor*
Ph.D., Cornell University
- Vicki L. Sauter**, Associate Professor*
Ph.D., Northwestern University
- Robert A. Schuchardt**, Associate Professor Emeritus
D.B.A., Washington University
- James P. Tushaus**, Associate Professor Emeritus
Ph.D., University of Illinois
- Steven L. Wartick**, Director of Graduate Studies in Business;
Associate Professor*
Ph.D., University of Washington
- George C. Witteried**, Associate Professor Emeritus
M.B.A., J.D., Northwestern University
- Frank H. Alpert**, Assistant Professor* (On Leave)
Ph.D., University of Southern California
- William N. Dilla**, C.P.A., Assistant Professor*
Ph.D., University of Texas-Austin
- Michael T. Elliott**, Assistant Professor*
D.B.A., Mississippi State University
- Joseph P. Gilljum**, C.P.A., Assistant Professor*
L.L.M., New York University
- Geraldine E. Hynes**, Assistant Professor*
Ph.D., St. Louis University
- Julius H. Johnson, Jr.**, Assistant Professor*
Ph.D., George Washington University
- James M. Krueger**, C.P.A., Vice Chancellor for Managerial
and Technological Services; Assistant Professor*
D.B.A., Indiana University
- Mary Lacity**, Assistant Professor*
Ph.D., University of Houston
- Karen J. Maher**, Assistant Professor*
Ph.D., University of Akron
- Haim Mano**, Assistant Professor*
Ph.D., University of Chicago
- William K. Meade II**, Assistant Professor*
Ph.D., Michigan State University
- Mary Beth Mohrman**, Assistant Professor*
Ph.D., Washington University
- James P. Reburn**, C.P.A., Assistant Professor*
D.B.A., Louisiana Tech University
- Paul S. Speck**, Assistant Professor*
Ph.D., Texas Tech University
- Ashok Subramanian**, Assistant Professor*
Ph.D., University of Houston
- Martha L. Wartick**, C.P.A., Assistant Professor*
Ph.D., Pennsylvania State University
- Stacey M. Whitecotton**, C.P.A., Assistant Professor*
Ph.D., University of Oklahoma
- Sriraman Bhoovaraghavan**, Instructor
M.A., University of Madras, India
- Lindell P. Chew**, Instructor
M.B.A., University of Missouri-Columbia
- Mary B. Curtis**, C.P.A., Instructor
M.S., University of Arkansas
- Ottilia N. Voegtli**, Coordinator in Marketing; Instructor
M.B.A., University of Missouri-St. Louis
- Wayne W. Winter**, Assistant Coordinator in Legal
Environment; Instructor
L.L.M., Washington University
- Joy Dakich**, Lecturer
M.A., University of Missouri-St. Louis
- Robert W. Dempsey**, Lecturer
M.B.A., University of Missouri-St. Louis
- Donna Free**, C.P.A., Lecturer
M.B.A., University of Missouri-St. Louis
- Terry C. Killian**, C.P.A., Lecturer
M.B.A., University of Missouri-St. Louis
- Peggy A. Lambing**, Lecturer
M.B.A., University of Missouri-St. Louis
- William R. Link**, C.P.A., Lecturer
M.B.A., University of Missouri-Columbia

Business Administration

Laurence A. Madeo, Lecturer
Ph.D., University of Michigan

Donald C. Malm, Lecturer
M.B.A., University of Missouri-St. Louis

*members of Graduate Faculty

The University of Missouri-St. Louis School of Business Administration was established in 1967, and was accredited by the American Assembly of Collegiate Schools of Business (AACSB) three years later—the shortest time on record for any school to receive accreditation of its business program. The AACSB is the only nationally recognized accrediting agency for business and accounting programs. Of some 1,200 business schools nationally, only about 300 are accredited by the AACSB. In 1995, the School of Business Administration received reaccreditation of its business programs, both undergraduate and graduate.

The mission of the School reflects the traditional academic activities of teaching, research, and service. Within the resource and strategic constraints placed on the School by the campus and the system, the School seeks to:

provide students with a high quality business education that prepares them to become productive contributors and leaders in both private and public sector organizations;

conduct research, the results of which extend and expand existing levels of knowledge and understanding relating to the operation, administration, and social responsibilities of enterprises in both the private and public sectors;

serve the university, the citizens of Missouri, and the St. Louis business community through useful outreach programs and through effective interactions with the School's faculty and staff.

At the undergraduate level, the School of Business Administration offers the Bachelor of Science in Business Administration (BSBA) degree with emphases in accounting, finance, management and organizational behavior, management information systems, management science, and marketing; or an individual may earn the BSBA degree with no emphasis. At the graduate level, the School offers the Master of Business Administration (MBA), Master of Accounting (MAcc) and Master of Science in Management Information Systems (MS in MIS) degrees. Several specialized certificate programs are also available.

Our diverse faculty, including forty doctorally qualified, full-time members, have degrees from thirty different Ph.D. degree-granting institutions, assuring students exposure to various management theories and educational approaches.

In addition to the undergraduate and graduate degree programs mentioned above, the School supports three additional operations: a continuing education unit; an

applied research center; and a community service research center. More information about these operations is available from the School.

Undergraduate Studies

Admission to the School of Business Administration

The School offers a two-year, junior/senior-level program. Admission prerequisites are:

- 1) At least a 2.0 overall grade point average for all work attempted within the University of Missouri system.
- 2) A minimum of 60 total credit hours. Normally, the following introductory courses are included within the 60 hours:

Business Administration 103, Computers and Information Systems

Business Administration 131, Business Statistics

Business Administration 140, Fundamentals of Financial Accounting

Business Administration 145, Managerial Accounting

Business Administration 156, Legal Environment of Business

Economics 51, Principles of Microeconomics

Economics 52, Principles of Macroeconomics

Transfer Students

Transfer students must meet all admission requirements; students failing to do so may be accepted for admission to the University but not directly to the School of Business Administration. Students transferring to UM-St. Louis are expected to take most of their specific business work during their junior and senior years. Business courses which are offered at the freshman or sophomore level and which are transferred in lieu of those offered at UM-St. Louis at the 200 level or above must be validated. Validation is determined by the appropriate discipline and may include:

- 1) Passing an approved 200-level or above course in that area with a grade of C- or better **or**
- 2) Passing a proficiency examination.

Business students must complete 48-60 hours in business for the BSBA degree. At least half of the 48-60 business hours must be completed in residence at UM-St. Louis on a regular graded basis. Students must also complete no fewer than sixty (60) hours (business and non-business) at an accredited baccalaureate degree granting institution and must meet the School's residency requirement.

Degree Requirements

General Education Requirements

All undergraduate business administration majors must complete the general education requirements of both the University and the School of Business Administration. The School's general education requirements are in keeping with those of the University. Many of the courses needed to complete the School's degree

Business Administration

requirements, as outlined below, may be taken to fulfill the University's general education requirements.

General Degree Requirements

All undergraduate business administration majors must complete the specific non-business courses which are business degree requirements. To satisfy the BSBA general degree requirements, the following pre-business administration requirements must be met:

- 1) Demonstration of basic skills in written communication by a minimum grade of C- in English 10, English Composition. For more information refer to the University General Education Requirements.
 - 2) Students wishing to complete a degree at UM-St. Louis must complete a junior-level English requirement with a grade of C- or better.
 - 3) Three courses in the humanities, to be chosen from selected offerings in art, English, music, philosophy and communication (applied courses do not qualify). See the Office of Undergraduate Academic Advising for a detailed listing of courses which fulfill this requirement.
 - 4) Five courses in social science, to include: Economics 51, Principles of Microeconomics, and Economics 52, Principles of Macroeconomics; one course which meets the state requirement (see the University General Education Requirements); and two additional courses.
 - 5) Three courses in mathematics and science which must include: a minimum proficiency in Mathematics 101, Survey Calculus, and Mathematics 103, Matrix Algebra and Probability Theory, and at least one lecture course in either a biological or physical science.
- (Note: Mathematics 30, College Algebra, is a prerequisite to Mathematics 101; also students planning to pursue a more in-depth knowledge of calculus should take Mathematics 80 in lieu of Mathematics 101).

6) Global Awareness Requirement:
Mathematics Option Students - 9 hours;
Foreign Language Option Students - 6 hours

A. Cultural Diversity Requirement: to expose students to a culture radically different from their own and to enhance their sensitivity to and awareness of cross-cultural differences, the School of Business Administration requires that students complete a **three-hour course** which focuses upon aspects of a culture and not upon the interactions of that culture with Euro-American cultures. This requirement may be met by one of the courses listed in the College of Arts and Sciences general information.

B. International Studies: Graduates will work and live in an interdependent world; they will be part of a global economy and will work in an increasingly competitive global marketplace. Success in this changing environment requires knowledge and understanding of the

international system, the global economy and other global issues. Towards meeting that objective the School of Business Administration requires that:

- i. Mathematics option students complete two three-hour courses in international studies. These courses are upper division courses, and will ordinarily be completed in the junior or senior year; at least one of the courses must be taken in the College of Arts and Sciences. A list* of the courses that satisfy this requirement is available in the School of Business Administration Undergraduate Academic Advising Office.
- ii. Foreign language option students complete one three-hour course in international studies. This course will be an upper division course and will ordinarily be taken in the junior or senior year. A list* of the courses that satisfy this requirement is available in the School of Business Administration Undergraduate Academic Advising Office.

*This list will be updated periodically by the Undergraduate Studies Committee with the advice of the Director of the Center for International Studies. Check with your advisor for the most up-to-date list of courses that will satisfy these requirements.

Language and Mathematics Option

In addition to the above, degree candidates must complete one of the following options:

- 1) Thirteen hours in one foreign language. (These are counted as approved electives since they do not meet any specific general education requirements.)
- or
- 2) One quantitative course from the following:
Business Administration 308, Production and Operations Management
Business Administration 329, Business Forecasting
Business Administration 330, Quality Assurance in Business,
Business Administration 331, Multivariate Analysis
Business Administration 375, Operations Research
Economics 365, Introduction to Econometrics

School of Business Administration Core Degree Requirements

Candidates for the Bachelor of Science in Business Administration degree must complete the following business administration core courses:

- 103, Computers and Information Systems
- 131, Business Statistics
- 140, Fundamentals of Financial Accounting
- 145, Managerial Accounting
- 156, Legal Environment of Business
- *202, Introduction to Operations Management
- *204, Financial Management
- *206, Basic Marketing
- *210, Management and Organizational Behavior
- *390, Business Assessment Testing
- *391, Strategic Management (seminar)

Business Administration

Students must earn a minimum grade of "C-" in each course included in the thirty (30) hour business core except Business Administration 391, Strategic Management; and Business Administration 390, Business Assessment Testing. A grade of "satisfactory" is required in Business Assessment Testing.

School of Business Administration Degree Requirements

All students who pursue the Bachelor of Science in Business Administration (BSBA) degree are required to complete a minimum of 33 hours in business courses at the **junior/senior level** (UM-St. Louis courses numbered 200 and above). Fifteen (15) of these hours are business **core** courses (those with an asterisk, above) and eighteen (18) hours are business **electives**.

Transfer courses used to partially fulfill this requirement must be from four-year accredited schools and must be restricted to junior/senior level students at those schools. Business courses taken in the freshman/sophomore year at any accredited school may be granted transfer credit, but the credit will not be included within the thirty-three hours required at the junior/senior level. If the freshman/sophomore transfer course in business appears to be similar to a junior/senior level business course at UM-St. Louis, one may request to validate the transfer course. Successful validation will result in a waiver from the need to take the validated course at UM-St. Louis but the transfer credit will not be counted at UM-St. Louis as part of the minimum thirty-three (33) hours required at the junior/senior level.

Approved Electives

In addition to the above, students must complete a minimum of 24 hours of approved electives. A list of the approved electives is available in the Undergraduate Advising Office of the School of Business Administration. Courses that are not on this list (free electives) may not be used as approved electives, except with the approval of the School's Undergraduate Studies Committee. Free electives are placed on a student's transcript but do not count toward the 120 required hours for the BSBA degree. At least 12 of these hours must be taken outside the School of Business Administration; the remaining may be earned within the School. A minimum of 60 hours must be taken in non-business administration course work.

Graduation Requirements

The degree program requires a minimum of 48 hours in business administration courses, a minimum of 72 hours in business administration and approved electives combined, and a minimum of 120 hours for all course work. The student must earn a minimum grade point average of 2.0 overall and a minimum grade point average of 2.0 for all business courses attempted. All grades from within the University of Missouri system are computed in the GPA. Grade modification

cannot be used for calculating the business grade point average.

School of Business Administration Residency Requirement

Business administration students must take their last 30 hours at the University of Missouri-St. Louis. Exceptions to this residency requirement would have to be approved by the School's Undergraduate Studies Committee.

Time Limitations on Courses

Business Administration is a continually changing field, so courses taken many years before graduation may no longer reflect current needs, business practices, or regulations. In addition, students must be competent in prerequisite material to benefit fully from subsequent courses. Therefore, the School of Business Administration has adopted the following time limitation policies:

1. All business courses used to satisfy degree requirements must be completed no more than 10 years before graduation.
2. No course may be used to satisfy a prerequisite for a business course if it was completed more than 10 years earlier.

In many cases a student will have kept knowledge up-to-date by additional course work or by professional experience. In these cases, the Undergraduate Studies Committee will frequently waive this time limitation for some or for all courses.

Students are encouraged to consult an advisor in the School of Business Administration to initiate a review of courses exceeding these time limits.

Limitation on Discipline Concentration

While a certain level of concentration in one of the various business fields is desirable, students should not concentrate their course selection to the extent of limiting their career flexibility. Therefore, no more than 15 hours beyond required core courses are allowed in any discipline, with the exceptions of management information systems and accounting, in which 24 hours beyond the required core courses are allowed. The combined hours in business and economics courses may not exceed 78 within the 120-hour program.

Emphasis Area

An emphasis area is not required within the BSBA degree program. Students who choose an emphasis must fulfill the general and specific requirements set forth below. An emphasis area will be noted on the student's permanent record card (transcript)—not the diploma—upon completion of the emphasis area and the BSBA degree requirements. NOTE: An emphasis area may be added to the permanent record card for up to two years following graduation. Courses taken after graduation which are to be applied toward an emphasis area must be taken in residence at UM-St. Louis.

Business Administration

General Requirements

All BSBA degree requirements must be satisfied including completion of the ten business core courses required of all persons.

A minimum of eighteen (18) hours of business electives beyond the business core are also required for all BSBA degree seeking students. Business courses in fulfillment of a particular emphasis area would be counted among these 18 hours.

A student must earn a grade of C- or better in all business and non-business courses applied to the emphasis area. Additionally, a minimum of a 2.0 GPA is required in both the business and emphasis area coursework. (Non-business courses required for an emphasis area are not averaged into either the business or the emphasis area GPA.)

The satisfactory/unsatisfactory option (see section following emphasis areas) may not be used for courses included in an emphasis area.

Each emphasis area has a residency requirement—a minimum number of business hours beyond the business core which must be taken at UM-St. Louis:

Finance, Management and Organizational Behavior, Management Science and Marketing—six (6) hours; Accounting and Management Information Systems—nine (9) hours.

Hours transferred from four-year accredited institutions require UMSL area approval to satisfy emphasis area requirements. Transferred independent study courses will not fulfill emphasis area requirements.

The specific requirements for an emphasis area for a given individual will be those requirements in effect at the time of completion (with a passing grade) of the first course in the emphasis area beyond the business core courses.

No more than thirty (30) hours of business electives (sixty [60] business hours in total) may be applied toward the minimum of 120 hours required for the BSBA degree.

No more than fifteen (15) hours beyond the required business core courses may be taken in any area except in accounting and management information systems where up to 24 hours may be taken.

Various experimental courses and independent study courses may be offered under the BA 295, BA 296 and BA 395 numbers. The first such course taken in a given area will not count against the limit of courses in that area; any additional experimental and independent study courses will count against the limitations outlined in the previous paragraph.

Specific Requirements

Accounting

Accounting focuses on analyzing and measuring business activity, processing that data into reports, and communicating the information to decision makers. The successful accounting professional needs to acquire the education and skills necessary to fulfill these roles in whatever area of accounting he or she enters. Excellent skills in mathematics are necessary to analyze the quantitative, financial and operating data that decision makers use in marketing, finance, personnel administration, and other business activities. Because accounting is part of an information system, the ability to communicate financial results to managers, clients and others who need the information is a vitally important skill for professional accountants.

Mission: The Accounting Area of the University of Missouri-St. Louis endeavors to prepare high potential students of diverse backgrounds to succeed in accounting careers, either through a bachelors or masters degree program. We seek to provide these students with the means to deal with the challenges confronting the accounting profession and to contribute to their solutions. Our faculty strives to further the practice and understanding of accounting through its teaching, research, and service to the profession.

For an emphasis in Accounting a student must complete at least 7 business courses (21 hours) beyond required business core courses. These 7 courses include:

BA 340A Financial Accounting and Reporting I
BA340 B Financial Accounting and Reporting II
BA 345 Cost Accounting
BA 347 Income Taxes
BA 348 Auditing

In addition to the five above, either BA 215: Information Systems Analysis; or BA 344: Computer Applications in Accounting, must be completed;

A minimum of one business course must be selected from the following:

BA 341 Financial Accounting and Reporting III
BA 342 Financial Accounting and Reporting IV
BA 343 Accounting for Governmental and Nonprofit Entities
BA 349 Business Income Taxation
BA 295/395 Business Administration Problems/Seminars

BA 295/395 Business Administration Problems/Seminars—restricted to those offered and approved by the area faculty.

Finally two (2) additional courses (six [6] hours) must be successfully completed to earn the accounting emphasis:

Business Administration

One course selected from Comm 30: Interpersonal Communication; or Comm 40: Introduction to Public Speaking; or BA 205: Contemporary Business Communication.

One course selected from Phil 30: Approaches to Ethics; or Phil 154: Business Ethics.

Finance

Finance is a multidisciplinary field that combines various concepts from management, economics and accounting with financial techniques to make sound business decisions and solve problems. There are many business situations in both large and small companies that require knowledge of the latest financial theories and tools. Generally these applications involve investing (using funds) or financing (raising funds). As a result, the field is often considered to comprise three broad categories: investments; corporate financial management; and financial institutions.

To earn an emphasis in Finance, a student must complete a minimum of five (5) courses (fifteen [15] hours) beyond the business core selected from the following:

BA 333 Life Insurance and Employee Benefits
BA 334 Investments
BA 335 Financial Risk Management
BA 350 Financial Policies
BA 351 Computer Applications in Finance
BA 355 Financial Services Industry and Instruments
BA 356 Commercial Bank Management
BA 380 International Finance
BA 295/395 Business Administration Problems/Seminars
BA 296 Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

Management and Organizational Behavior

The study of management and organizational behavior focuses on the behavior of individuals and groups in an organizational setting. The business environment today demands graduates with skills who can effectively make decisions involving working with and leading people.

The management and organizational behavior emphasis stresses the qualitative approaches to business. The major areas of focus are: the theory and functions of management; the management of human resources; the development of strategic policies in an organization; organizational design and conflict resolution; entrepreneurship; and international management. In covering these topics, both classic and current perspectives are provided.

To earn the emphasis designation in Management and Organizational Behavior a student must complete four (4) courses (twelve [12] hours) to include BA 311, Advanced Management and Organizational Behavior, plus three (3) additional courses selected from:

BA 309 Human Resource Management
BA 312 Industrial and Labor Relations
BA 317 International Management
BA 318 Industrial and Organizational Psychology (This course is cross-listed as Psych 318)
BA 319 Employee Training and Development
BA 392 Entrepreneurship/Small Business Management
BA 295/395 Business Administration Problems/Seminars
BA 296 Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

Management Information Systems

Computer-based management information systems are of vital importance to modern organizations. Management Information Systems (MIS) professionals analyze, design, develop, implement and manage state-of-the-art telecommunications, multi-media and other computer-based information systems. In addition to maintaining traditional transaction processing systems, today's MIS professionals are involved in exciting developments in computing systems, such as decision support and expert systems, database development and enhancement, development and use of Graphical User Interfaces (GUI), and design and management of telecommunications systems. The MIS program provides students with a foundation in both the functional areas of business and in computing technologies that enables graduates to pursue both technical and managerial careers incorporating leading edge technologies in public and private organizations.

The MIS emphasis is currently being revised. Detailed information concerning requirements is available from the Office of Undergraduate Academic Advising.

Management Science

Management Science involves the application of scientific principles to assist the decision-maker in making a rational and intelligent decision. Some decisions are a single choice—Shall I buy something now or later? Shall I go here or there? Other decisions involve the allocation of scarce resources such as people, money, equipment, and facilities to competing entities and can affect the success of corporations or the policies of nations. The challenge to a good decision-maker is to be able to determine what alternatives are relevant, and carry out an analysis in order to make an objective assessment of the most suitable alternative. Management Science analysts must be proficient in the use of quantitative models and computers, and have good communication skills.

For an emphasis in Management Science a student must complete at least four (4) courses (twelve [12] hours) to include BA 375, Operations Research, and:

One (1) course from:

BA 104 Fortran Programming, or **CS 122** Computers and Programming (CS 122 is not a business elective)
BA 109 COBOL Programming

Business Administration

One course from:

- BA 329** Business Forecasting
- BA 330** Quality Assurance in Business
- BA 331** Multivariate Analysis

One course from:

- BA 308A,B,C, or D** Production and Operations Management
- BA 385** Operations Research II
- EC 365** Introduction to Econometrics
- EC 366** Applied Econometrics
(Neither EC 365 nor EC 366 is a business elective)
- BA 295/395** Business Administration Problems/Seminars
- BA 296** Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

Marketing

Marketing is an important part of any business or organization and can enhance growth, increase profits, and help achieve the organization's goals. Furthermore, marketing plays an important role in our society by enhancing our quality of life. Equally important, marketing offers varied and interesting career opportunities.

Marketing involves the activities needed to facilitate an exchange. This covers selling products, services or ideas to both consumers and business buyers. Many non-profit institutions are now enthusiastic users of marketing concepts; thus marketing majors find such untraditional areas as hospitals, churches, museums, universities and retirement homes often offer excellent entry level opportunities, in addition to such traditional firms as manufacturing and retailing concerns.

For an emphasis in Marketing, a student must complete at least four (4) courses (twelve [12] hours) selected from:

- BA 270** Management of Promotion
- BA 275** Marketing Research
- BA 301** Consumer Behavior
- BA 302** Quantitative Marketing Methods
- BA 303** Industrial Marketing
- BA 315** Marketing Management
- BA 316** International Marketing
- BA 295/395** Business Administration Problems/Seminars
- BA 296** Independent Study

BA 295, 296 & 395 are restricted to those courses offered and approved by the area faculty.

Satisfactory/Unsatisfactory Option

Business students in good standing may take up to 18 hours on a satisfactory/unsatisfactory basis. Exempt from this option are specific degree requirements, including such courses as Economics 51, Economics 52, mathematics courses, English 10, and junior-level English courses; courses fulfilling the mathematics-language option; and the required business administration core courses except Business Administration 390. Up to nine of the allowable 18 hours of work taken on a satisfactory/unsatisfactory basis may, however, be in business electives. Students should consult the School

of Business Administration's regulations on this option regarding particular emphasis area courses.

Restrictions

A student who has not been formally admitted to the School of Business Administration, or who is not currently admissible to the School of Business Administration may take no more than thirty (30) hours of business courses. Admissibility to the School of Business Administration requires that one complete at least sixty (60) credit hours and have a minimum 2.0 grade point average.

The School of Business Administration faculty is currently considering the implementation of a higher GPA requirement for admission and graduation. This will be no more than 2.5 and may be imposed in the future on all students entering the School.

Minor in Business Administration

The school also offers a minor in business administration for students pursuing other degree programs.

In order to obtain an academic minor in business administration, a student must satisfy the following requirements:

Pre-Business General Education Requirements

A student must complete the following economics courses: 51, Principles of Microeconomics; 52, Principles of Macroeconomics

Statistics Requirement

A student must take one of the following statistics courses:

Business 131, Business Statistics (Prerequisites: Mathematics 101 and Mathematics 103)

Economics 265, Economic Statistics (Prerequisites: Economics 51 and Economics 52 and Mathematics 30)

Mathematics 232, Applied Statistics II (Prerequisite: Statistics 31 or Statistics 132 or equivalent)

Psychology 201, Psychological Statistics (Prerequisites: Psychology 3 and Mathematics 30, or equivalents)

Business Course Requirements

A student must complete a minimum of 24 hours in business. The following six business administration courses must be taken:

103, Computers and Information Systems

140, Fundamentals of Financial Accounting (Prerequisites: 27 credit hours and Mathematics 30)

145, Managerial Accounting (Prerequisites: Business Administration 140 or equivalent and Mathematics 30)

204, Financial Management (Prerequisites: Business Administration 140, Economics 52, Statistics requirement and a 2.0 overall GPA)

206, Basic Marketing (Prerequisites: Economics 51 and junior standing and a 2.0 overall GPA)

210, Management and Organizational Behavior (Prerequisites: junior standing and a 2.0 overall GPA)

and any two additional business courses (core or elective) other than those listed under Statistics and

Business Administration

Business Course Requirements.

In addition to completing the above courses, the following requirements for a minor in business administration must also be met:

- 1) A student must not take more than 30 hours of business courses within the 120 required for the degree program.
- 2) A student must earn an average of 2.0 or better and earn a C- or better in all business courses taken.
- 3) No course taken on a satisfactory/unsatisfactory basis may be applied toward fulfilling the minor requirements.
- 4) At least 12 credits of the business course requirements must be taken in residence at UM-St. Louis.

Minor in Employee Training and Development

The School of Business Administration and the Evening College offer a minor in employee training and development. Information on this minor can be found in the Evening College section of this book.

Cooperative Education and Internship Programs

Cooperative Education and Internship Programs are available for students seeking career-related employment while enrolled in school. These programs afford business students an opportunity to gain practical experience and earn a substantial income. Co-ops and internships are administered through the Career Placement Services Office, 308 Woods Hall.

International Business Certificate

In cooperation with the School of Business Administration and the College of Arts and Sciences, the Center for International Studies offers the undergraduate International Business Certificate. For information on the certificate, see the Inter-School Studies Section of this *Bulletin*.

Graduate Studies

The School of Business Administration offers three graduate degrees: the Master of Business Administration (MBA), the Master of Science in Management Information Systems (MS in MIS), and the Master of Accounting (MAcc).

Admission Requirements

The admissions decision is based on a combination of factors. Consideration is given to a candidate's academic record, GMAT scores, work and leadership experience, a personal narrative on the application form, and recommendations.

Applicants are required to take the Graduate Management Admissions Test (GMAT). This test is given four times each year. This three and one-half hour aptitude test is designed to measure certain mental capabilities important in graduate business studies. The examination tests ability to read, understand, and reason

logically with both verbal and quantitative material. The test is not a measure of achievement or knowledge of business administration curriculum. Applications for the examination may be made directly to the Graduate Management Admissions Test, Educational Testing Service, CN6103, Princeton, New Jersey 08541. Information concerning the GMAT may also be obtained from the admission advisers or the Office of Graduate Studies in Business.

Master of Business Administration Program (MBA)

The MBA program is fully accredited by the American Assembly of Collegiate Schools of Business, the authorized professional accrediting body in collegiate business education, and is designed to prepare students for administrative positions. It also provides an appropriate foundation for students contemplating doctoral work and eventual careers in college teaching or in research. The program is designed for students who have bachelor's degrees from accredited institutions, including those with undergraduate backgrounds in the sciences, engineering, humanities, or arts. Students with undergraduate degrees in business administration or economics may pursue modified degree programs.

A 60-hour or two-year program, the MBA curriculum provides training in the fundamental areas of administration. The core program is designed to generate a working knowledge of the concepts and interrelationships of four broad categories fundamental to management training:

- The external environment confronting business organizations and management's response to interactive legal, economic, social, and political issues.
- The internal operation of various business organizations and management's role in channeling human behavior to satisfy both personal and organizational goals.
- Basic concepts, terminology, and interaction of the accounting, marketing, finance, and production disciplines.
- Quantitative management decision-making models put to use in the context of current management information systems.

The total degree program is integrated by a course in strategy formulation and implementation in the student's last semester. There is no thesis requirement; however, students interested in undertaking an individual research project may earn elective credit by enrolling in a supervised independent study course.

MBA Program Degree Requirements

Students must take at least 39 hours of graduate work within a six-year period, 30 hours of which must be taken while enrolled as MBA candidates at UM-St. Louis.

Business Administration

Candidates must take at least **one** course, required or elective, in each of the following areas: accounting, finance, management, management science and information systems, and marketing.

Students are **also required** to have completed the equivalent of Economics 351, Quantitative Methods for Economics and Business Analysis, with a grade of C- or better by the end of their first semester. Graduate credit is not given for this course.

Students who have not completed Economics 52, Principles of Macroeconomics, or its equivalent with a grade of B- or better, within five years preceding entry into the program, will be required to take Business Administration 411, Analysis of National Economic Environment. Graduate credit is awarded for this course and may be included as elective credit.

Required Basic Courses

The following courses or their equivalents are required of all degree candidates:

Business Administration 405, Managerial Communication
Business Administration 410, Managerial Economic Analysis
Business Administration 412, Public Policies Toward Business
Accounting 440, Financial Accounting: Theory and Practice
Finance 450, Financial Management
Management 460, Organizational Behavior and Administrative Processes
Marketing 470, Contemporary Marketing Concepts
Management Science and Information Systems 480, Management Information Systems
Management Science and Information Systems 481, Statistical Analysis for Management Decisions
Management Science and Information Systems 482, Operations Research Methods
Business Administration 490, Strategy Formulation and Implementation

Required Second-Level Courses

At least **three** of the following courses are also required:

Accounting 441, Concepts in Management Accounting
Finance 451, Advanced Financial Management
Management 461, Managing Human Resources
Marketing 471, Marketing Planning and Strategy
Management Science and Information Systems 483, Production and Operations Management

Electives

The 18 hours of electives allow students to tailor the degree program according to individual interests. Up to nine hours of electives may be selected from any one area. A maximum of six hours of electives may be taken at the 300 level. Nine elective hours may be taken outside the School of Business Administration if the student has approval in advance from a graduate adviser for the specific courses desired.

Previous Education

Students with previous education in business or economics may waive certain courses. Depending

upon the student's transcripts and the applicability of the course work, students with an undergraduate background in business may waive up to 21 hours of the 60-hour program. At least 39 hours must be taken to earn the degree regardless of the number of courses waived.

Master of Science in Management Information Systems (MS in MIS)

The MS in MIS program is designed to provide students with a foundation in functional business areas and in managerial and analytical skill areas required in modern organizations. A specialized program in computer-based management information systems is then built on this foundation. The objective of the program is to offer students sufficient technical and managerial knowledge and skills to operate successfully in the rapidly changing careers associated with the design, development, and management of computer-based information and telecommunications systems. The program is designed for students who have bachelor's degrees from accredited institutions, but it is not restricted to any single undergraduate major.

MS in MIS Program Degree Requirements

The curriculum involves a 60-hour or two-year program including a 30-hour core curriculum that is identical to that of the MBA program. Students with the appropriate academic background may waive some or all of this core curriculum. The second 30 hours involves a specialized curriculum oriented around computer-based management information and telecommunications systems—their design, development, and management.

Students also are required to have successfully completed the equivalent of Economics 351, Quantitative Methods for Economics and Business Analysis, by the end of their first year. While graduate credit is not given for this course, it will be included in grade point calculation.

Students who have not completed Economics 52, Principles of Macroeconomics, or its equivalent with a grade of B- or better, within five years preceding entry into the program, will be required to take Business Administration 411, Analysis of National Economic Environment. Graduate credit is awarded for this course.

Required Basic Courses

The following courses, or their equivalents, are required of all degree candidates:

Business Administration 405, Business Communication
Business Administration 410, Managerial Economic Analysis
Business Administration 412, Public Policies Toward Business
Accounting 440, Financial Accounting: Theory and Practice
Finance 450, Financial Management
Management 460, Organizational Behavior and Administrative Processes
Marketing 470, Contemporary Marketing Concepts
MS/IS 480, Management Information Systems

Business Administration

MS/IS 481, Statistical Analysis for Management Decisions
MS/IS 482, Operations Research Methods

Required Specialization Courses

The following courses are required:

MS/IS 484, Business Programming and File Systems
MS/IS 485, Theoretical Foundations of Management Information Systems
MS/IS 488, Information Systems Analysis
MS/IS 489, Database Management Systems
MS/IS 495, Information Systems Design
Business Administration 490, Strategy Formulation and Implementation

At least two of the following courses are also required:

MS/IS 491, Computer Systems: Architecture and Programming
MS/IS 492, Information Systems Management
MS/IS 493, Simulation for Managerial Decision Making
MS/IS 496, Telecommunications: Design and Management (or Business Administration 305)
MS/IS 497, Expert Systems (or Business Administration 306, Decision Support and Expert Systems)
MS/IS 498, Fourth Generation Languages and End-User Computing (or Business Administration 307)
MS/IS 424, Seminar in Current MIS Topics
MS/IS 425, Advanced MIS Applications

Electives

Each student must take six hours in a "related discipline" from an approved list available in the Graduate Studies in Business Office. Both courses must be taken in the same related discipline area. The six hours may also be met by the completion of a thesis.

Master of Accounting Program (MAcc)

The MAcc program is intended for students preparing to enter the accounting profession or furthering existing accounting careers. Designed to accommodate both students with undergraduate accounting majors and students with other undergraduate backgrounds, the program permits students to take a generalized course of study or specialize in income taxation. It may require as few as 30 credit hours for students with undergraduate accounting degrees. Because of the need to attain general business and professional accounting core competencies as a foundation for the MAcc requirements, students with no academic business or accounting background will be required to take additional credit hours as outlined below.

General Requirements

All students must meet course requirements in mathematics, general business, and accounting. Students must complete a minimum of 30 credit hours beyond the general business core and the professional accounting core. At least 15 credit hours in accounting must be completed, including at least 12 credit hours at the 400-level. At least 9 credit hours of the student's 30 credit hour program must be in 400-level non-accounting courses. Of the 30 credit

hours beyond the general business and professional accounting core, 21 credit hours must be earned in courses at the 400-level.

Mathematics Background Requirement

Students are required to have completed by the end of their first semester in the program the equivalent of **Economics 351**, Quantitative Methods for Economics and Business Analysis, with a grade of C or better. Graduate credit is not given for this course.

General Business Core

Students must have credit for the equivalent of one three-credit-hour course in each of the following subject areas: macroeconomics, microeconomics, financial accounting, managerial accounting, marketing, financial management, organizational behavior, and business strategy. These requirements may be met with graduate-level coursework or may be waived with appropriate courses taken as an undergraduate.

Professional Accounting Core

Students must have credit for the equivalent of each of the following three-credit-hour courses. Some of these courses may be taken concurrently with MAcc degree requirements (listed below) or may be waived with appropriate courses taken as an undergraduate.

Business Administration 340A, Financial Accounting and Reporting I
Business Administration 340B, Financial Accounting and Reporting II
Business Administration 344, Computer Applications in Accounting
Business Administration 345, Cost Accounting or **Accounting 441**, Concepts in Management Accounting
Business Administration 347, Income Taxes
Business Administration 348, Auditing

MAcc Degree Requirements (minimum: 30 credit hours)
Accounting Courses (minimum: 15 credit hours, 12 credits at 400-level)

Business Administration 341, Financial Accounting & Reporting III*
Business Administration 342, Financial Accounting & Reporting IV*

Research course—At least one of the following courses must be completed:

Accounting 421, Professional Accounting Research
Accounting 431, Tax Research

Seminar—At least one of the following courses must be completed:

Accounting 445, Seminar in Financial Accounting Theory
Accounting 439, Seminar in Taxation

Accounting Electives—to meet 15 credit-hour and 400-level requirements

Non-Accounting Courses (minimum: 9 credit hours at 400-level)

Business Administration 405, Managerial Communication
Business Administration 412, Public Policies Toward Business*
MSIS480, Management Information Systems*

Business Administration

MSIS481, Statistical Analysis for Management Decisions*
MSIS482, Operations Research Methods*

Electives may be necessary to meet 9 credit-hour 400-level non-accounting requirement or minimum 30 credit-hour requirement

(*=May be waived with appropriate undergraduate courses)

Taxation Emphasis

Students desiring an emphasis in taxation must complete **Accounting 431**, Tax Research, **Accounting 439**, Seminar in Taxation, and at least two courses from the following list of electives:
Accounting 432, Taxation of Estates, Gifts, and Trusts
Accounting 433, Taxation of Corporations and Shareholders
Accounting 434, Taxation of Partnerships and Partners
Accounting 435, Tax Practice and Procedure
Accounting 436, Advanced Topics in Taxation

Graduate Certificate Programs in Business Studies

The School of Business Administration offers a number of 18-hour Graduate Certificates. To be admitted to a graduate certificate program, students must meet the same requirements as those needed for a graduate degree program in business (see "Admission Requirements" in the Graduate Studies in Business Administration section of this *Bulletin*).

Certificate programs allow qualified graduate students to pursue a defined course of study in a specialized business topic. Without requiring completion of a 30 – 72-hour graduate business degree program, certificate programs provide students with the opportunity to obtain the advanced knowledge available through a graduate course of study.

In order to successfully complete a certificate program, students must have earned a 3.0 cumulative GPA in certificate classes. Unless otherwise specified, the certificate must be completed within six years. Students must also comply with all requirements related to matters such as prerequisites, academic probation, and other graduate business program policies.

Graduate Certificate in Human Resources Management

The Graduate Certificate in Human Resources Management is an 18-hour course of study designed to focus on the multidimensional aspects of personnel operations within business organizations. The course of study emphasizes both the formal and informal sides of human resources management.

Requirements

Students must complete the following six courses or appropriate substitutes if course waivers are appropriate:

Management 460, Organizational Behavior and Administrative Processes
Management 461, Managing Human Resources
Management 464, Compensation and Benefits

Management 465, Union-Management Relations and Collective Bargaining

Management 466, Personnel Administration: Theory and Practice

MS/IS 481, Statistical Analysis for Management Decisions

Management 460, Management 461, and MS/IS 481 may be waived with equivalent undergraduate courses. If a student is able to waive any or all of these three courses, substitute courses (approved by both the Area Coordinator of Management and the Director of Graduate Studies in Business) will be provided. Substitute courses may include Management 462, Advanced Organizational Behavior and Administrative Processes or a course from outside the School of Business Administration. In all cases, 18 hours are needed to complete the Graduate Certificate in Human Resources Management.

Graduate Certificate in Marketing Management

The Graduate Certificate in Marketing Management is an 18-hour program designed to provide a focused intensive study of the marketing management activity within organizations. This program is designed to serve a broad group of marketing managers, including those with interest in sales, brand management, promotion, and consumer behavior.

Requirements

Students must complete the following six courses or appropriate substitutes if course waivers are appropriate:

Marketing 470, Contemporary Marketing Concepts
Marketing 475, Consumer Motivation and Behavior
Marketing 478, Marketing and Business Research

Marketing Management:

Marketing 471, Marketing Planning and Strategy
Marketing 476, Marketing Communications
Marketing 477, Product Planning and Pricing

All course prerequisites and all course waivers are applicable. Substitute courses must be approved by the Area Coordinator of Marketing and the Director of Graduate Studies in Business. In all cases, 18 hours (including at least 12 hours in marketing) are needed to complete the Graduate Certificate in Marketing Management.

Graduate Certificate in Taxation

The Graduate Certificate in Taxation is an 18-hour course of study designed to focus on the theory and practice of taxation as a subfield of accounting. The course of study emphasizes both the legal, as well as the academic analysis of taxation.

Requirements

Besides the admission requirements needed by all graduate business students, students seeking a Graduate Certificate in Taxation must have the equivalent of an undergraduate degree in accounting from UM-St. Louis. An up-to-date tax course should be part of that degree although up-to-date tax knowledge may be evidenced through an "old" tax course combined with recent tax experience.

Business Administration

To earn the certificate, students must complete six courses as prescribed following:

Required Courses

Accounting 431, Tax Research
Accounting 433, Taxation of Corporations and shareholders
Accounting 435, Tax Practice and Procedure

Three Additional Courses From:

Accounting 432, Taxes of Estates, Gifts, and Trusts
Accounting 434, Taxation of Partnerships and Partners
Accounting 436, Advanced Topics in Taxation
Business Administration 405, Managerial Communications or **Business Administration 412**, Public Policies Affecting Business

Students must complete the Graduate Certificate in Taxation within three years from the time they first enroll in the program.

Special Interdisciplinary Degree

The School of Business Administration also cooperates with the Departments of Economics and Political Science in the College of Arts and Sciences in offering a master's degree in public policy administration (MPPA). For information on the MPPA degree program, see the Inter-School Studies section of this *Bulletin*.

General Statement of Policy Applicable to All Students Taking Business Courses

Academic Misconduct

The School of Business Administration views academic dishonesty as a serious offense. Unless instructed by their instructor to the contrary, students should assume that all class assignments are to be done independently. For independent assignments (e.g., a case analysis, take-home or in-class exams), giving or receiving aid, unless authorized by the instructor, is considered academic dishonesty. If the student is uncertain concerning the nature of an assignment, it is his/her responsibility to seek the instructor's guidance.

For more information on academic misconduct, refer to the appendix of this *Bulletin* and the *UM-St. Louis Student Handbook*.

Career Outlook

The current economic climate appears to favor students with business training. Business school graduates with the B.S.B.A. degree usually obtain entry-level positions in areas requiring accounting, finance, management, management information systems, marketing, and quantitative backgrounds. Recent graduates of the School of Business Administration hold positions with a variety of local and national firms as accountants; internal auditors; sales representatives; cost, budget, and systems analysts; executive trainees; merchandisers; systems programmers; and purchasing agents.

Many graduates of the University's graduate business programs are employed in staff-level positions in local and national businesses, and opportunities for managerial posts are promising for the graduate with a master's degree in business administration. Additionally, several graduates have chosen to pursue careers in college teaching.

Business Administration

Course Descriptions

Courses in this section are grouped as follows: all undergraduate courses are listed under Business Administration; 400-level graduate courses are listed under Business Administration, Accounting, Finance, Management, Management Science/Information Systems, and Marketing.

The School of Business Administration uses the University course numbering system (see p. 5) with the following clarifications:

100 to 199, sophomore, junior, or senior standing is required unless a specific exception is listed.

200 to 299, junior or senior standing is required.

300 to 399, junior, senior, or graduate standing is required unless a specific exception or restriction is listed.

A minimum grade of C- shall be required to meet the prerequisite requirement for any course.

Prerequisites may be waived only by consent of both the instructor and the area coordinator.

A minimum overall GPA of 2.0 is required for admittance to each 200- and 300-level Business Administration course.

Business Administration

95 Topics in Business Administration (1-3)

Study of selected special problems in business and administration. May be repeated for credit with different topics. Cannot be included in BSBA program.

103 Computers and Information Systems (3)

The basic concepts of data processing and the fundamental principles of computer-based information systems are studied. The characteristics of computer hardware and software used in implementing business applications are considered. Students will develop skills in utilizing both mainframe and microcomputers.

104 FORTRAN Programming (3)

Prerequisite: Business Administration 103. A study of the principles of programming digital computers using the FORTRAN language. Credit will not be granted for both Business Administration 104 and Computer Science 122.

109 COBOL Programming (3)

Prerequisite: Business Administration 103. Structured COBOL programming techniques for business applications are presented. Included are report generation, control breaks, output editing, debugging, tables, and sort concepts.

131 Business Statistics (3)

Prerequisites: Mathematics 101 and Mathematics 103. An introduction to statistical methods and concepts used to analyze business problems. The course covers sampling distributions, estimation and hypothesis testing, regression and correlation, analysis of variance, non-parametric statistics and their applications.

140 Fundamentals of Financial Accounting (3)

Prerequisites: Mathematics 30 and completion of 27 credit hours. This is a one-semester course in financial accounting theory and practices, with primary emphasis upon the accounting cycle and the preparation and interpretation of corporate financial statements.

145 Managerial Accounting (3)

Prerequisites: Mathematics 30 and Business Administration 140. This is an advanced course that goes beyond the scope of a second-semester course in fundamentals of accounting. The development, interpretation, and use of relevant cost behavior, control, and traceability concepts for management planning, controlling, and decision making are emphasized. Topics include: an introduction to product costing, the contribution concept, direct costing, performance standards and variance analysis, responsibility accounting, segment profitability, alternative choice decisions, and capital budgeting.

156 Legal Environment of Business (3)

Prerequisites: Economics 51 and Business Administration 140. An introduction to the nature and meaning of law, sources of law, legal process and institutions. The legal environment of business is defined as: the attitude of the government toward business, the historical development of this attitude; current trends of public control in taxation, regulation of commerce, and competition; freedom of contract, antitrust legislation and its relationship to marketing, mergers, and acquisitions; and labor management relations.

195 Topics in Business Administration (1-3)

Prerequisites: Vary with topic; contact the School of Business Administration. Study of selected special problems in business and administration. May be repeated for credit with different topics.

202 Introduction to Operations Management (3)

Prerequisites: Economics 51, Business Administration 131, Business Administration 145, and Business Administration 103 or a higher-level programming language course, and a 2.0 overall GPA. An examination of the concepts, processes, and institutions which are fundamental to an understanding of manufacturing and service operations within organizations. Emphasis is on the management and organization of operations and upon the application of quantitative methods to the solution of strategic, tactical and operational problems.

Business Administration

204 Financial Management (3)

Prerequisites: Economics 52, Business Administration 131, and Business Administration 140, and a 2.0 overall GPA. The study of a firm's need for funds; the institutions, instruments, and markets concerned with raising funds; and the techniques of analysis used to determine how effectively these funds, once raised, are invested within the firm.

205 Contemporary Business Communication (3)

Prerequisites: English 10 or equivalent and a minimum overall GPA of 2.0 (Communication 40 recommended, but not required.) A forum wherein business writing and speaking skills are addressed. Communication unique to business organizations is critiqued. Emphasis is placed on writing and verbal communication skills necessary to succeed in the business environment.

206 Basic Marketing (3)

Prerequisites: Economics 51, junior standing, and a 2.0 overall GPA. An examination of the character and importance of the marketing process, its essential functions, and the institutions performing them. Attention is focused on the major policies (such as distribution, product, price, and promotion) which underlie the multifarious activities of marketing institutions and the managerial, economic, and societal implications of such policies.

209 File Management (3)

Prerequisite: Business Administration 109 and a 2.0 overall GPA. The course covers job control language, utilities, partitioned data sets, updating of sequential files, indexed files, direct and/or relative files. The topics are implemented in a COBOL environment. A database management system is used to illustrate design and implementation of business applications.

210 Management and Organizational Behavior (3)

Prerequisites: Junior standing and a 2.0 overall GPA. This course involves the study of the behavior of individuals and groups in an organizational setting. Specific topics examined include: motivation, leadership, organizational design, and conflict resolution, as well as basic coverage of management principles. In covering these topics, both "classic" and current perspectives are provided.

212 Database Management Systems (3)

Prerequisites: Business Administration 209 and a 2.0 overall GPA. This course provides an introduction to the design and use of databases in meeting business information needs. Topics include database planning, conceptual design, and data administration. The concepts are studied with projects involving the use of a current database management system.

215 Information Systems Analysis (3)

Prerequisites: Business Administration 109, Business Administration 209, or Computer Science 313 and a minimum overall GPA of 2.0. Business Administration 209 may be taken concurrently. Techniques and philosophies of systems analysis are addressed.

Included are: traditional versus structured design methods, computer-based tools for systems analysis, workbenches, design and analysis of data base systems, maintenance of existing information systems, human/machine interfaces, and security and control.

224 Managerial Applications of Object-Oriented Programming (3)

Prerequisites: Business Administration 109 or Computer Science 125 and a minimum overall GPA of 2.0. The course provides a study of the UNIX operating system and the C++ programming language as they pertain to managerial applications. In addition, the course will introduce the use of object-oriented programming methodologies.

256 Business Law: Contracts, Sales, Secured Transactions, Bankruptcy (3)

Prerequisites: Business Administration 140, Economics 51, and a 2.0 overall GPA, or junior standing and a 2.0 overall GPA. Introduction to the laws of contracts, sales, secured transactions, bankruptcy, and other selected topics.

257 Business Law: Negotiable Instruments, Business Organizations, Property (3)

Prerequisites: Business Administration 140, Economics 51, and a 2.0 overall GPA, or junior standing and a 2.0 overall GPA. Introduction to the laws of negotiable instruments, the principal-agent relationship, partnerships, corporations, property, and other selected topics.

270 Management of Promotion (3)

Prerequisite: Business Administration 206 and a 2.0 overall GPA. A study of the design, organization, and implementation of the marketing "communications mix." Various methods, such as advertising, personal selling, and publicity are analyzed as alternatives for use alone, or in combination, to stimulate demand, reseller support, and buyer preference. Particular topics considered include: media selection, sales promotionals, packaging, and selling strategy, and their relationships in the promotion process.

275 Marketing Research (3)

Prerequisites: Business Administration 103, Business Administration 131, Business Administration 206, and a 2.0 overall GPA. An investigation of the acquisition, presentation, and application of marketing information for management. Particular problems considered are defining information requirements, evaluating research findings, and utilizing information. Statistical methods models, and/or cases are employed to illustrate approaches to marketing intelligence problems, such as sales forecasts, market delineation, buyer motives, store location, and performance of marketing functions.

289 Career Planning (1)

Prerequisite: A minimum of junior standing and a 2.0 overall GPA. The emphasis of this course will be to assist business students to develop an understanding of themselves as related to employment, to develop ar

Business Administration

understanding of the world of work, and to integrate these so that effective career decisions can be made.

295 Business Administration Problems (1-10)

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. Study of selected special problems in business and administration. May be repeated for credit with different topics.

296 Independent Study (1-3)

Prerequisite: Permission of the professor, the dean, and a minimum overall GPA of 2.0. Occasional special individual study topics under the guidance of a specific professor.

301 Consumer Behavior (3)

Prerequisites: Business Administration 206 and a minimum overall GPA of 2.0. A study of such consumer functions as decision making, attitude formation and change, cognition, perception, and learning. The marketing concepts of product positioning, segmentation, brand loyalty, shopping preference and diffusion of innovations are considered in context with the environmental, ethical, multicultural and social influences on an increasingly diverse American consumer.

302 Quantitative Marketing Methods (3)

Prerequisites: Business Administration 103, Business Administration 131, Business Administration 206, and a 2.0 overall GPA. Applications of stochastic, deterministic, and simulation techniques to decision areas, such as market potential, product diversification, physical distribution alternatives, retail location, media selection, and market exposure. Quantitative and computerized methods are used heavily to enhance decision making in marketing, especially the selection, allocation, budgeting, and forecasting of marketing resources.

303 Industrial Marketing (3)

Prerequisites: Senior standing, Business Administration 131, Business Administration 206, and a 2.0 overall GPA. A study of the nature of the industrial marketplace, concentrating on those aspects that differentiate it from consumer markets. The major focus of the course is strategy, starting with analysis of the market wants and segments, concepts of pricing, the distribution arrangements, and buyer/seller relations. In this last area, consideration will be given to service, sales technical development, sales promotion, and advertising, as found in the industrial marketplace. At all times emphasis is given to relating industrial marketing strategy to basic concepts in underlying business disciplines. Lectures and case discussions are used heavily in the course.

304 The Management of Information Systems (3)

Prerequisites: Business Administration 109 and Business Administration 215 and a 2.0 overall GPA. Aspects and methods for managing the computer and information resources of organizations. Topics include aligning IS plans with corporate plans, MIS organizational

structures, demonstrating the value of MIS to senior management, facility management, purchase decisions, software acquisition, software metrics, project management, security issues, and economic evaluation, as they relate to information resources.

305 Management of Telecommunications (3)

Prerequisite: Business Administration 103 and a 2.0 overall GPA. The technical and managerial aspects of telecommunications as they apply to the business environment are discussed. Issues include: communications components and services, local area network architecture, managerial implementations, organizational issues, and cost/benefit analyses.

306 Decision Support and Expert Systems (3)

Prerequisites: (Business Administration 104 or 109), and (Business Administration 202 or 204 or 329), and a minimum 2.0 overall GPA, or permission of instructor. Applications of decision support systems and expert systems in a business environment are studied. Relationships between decision support systems, expert systems, and data base management systems are explored.

307 Management of End-User Computing (3)

Prerequisite: Business Administration 109 and a 2.0 overall GPA. Issues in the management and practice of end-user computing are presented. The topics include information centers, Micro/Mainframe links, fourth generation languages, and end-user software packages.

308A Production and Operations Management (3)

Prerequisites: A minimum of 2.0 overall GPA and either (Business Administration 202 and Mathematics 101) or (Mathematics 250 and Statistics 132). Application of the tools and techniques of statistical decision theory and operations research to production and operating problems. Emphasis is on the use of mathematical modeling and simulation techniques to analyze complex and ill-structured problems in large scale systems.

308B Production and Operations Management-Logistics (3)

Prerequisites: A minimum of 2.0 overall GPA and either (Business Administration 202 and Mathematics 101) or (Mathematics 250 and Statistics 132). Detailed study of the logistical management of organizations. Topics include transportation, routing, facility location, fleet design, and capacity planning.

308C Production and Operations Management-Manufacturing (3)

Prerequisites: A minimum of 2.0 overall GPA and either (Business Administration 202 and Mathematics 101) or (Mathematics 250 and Statistics 132). Study of manufacturing processes, manufacturing management, and strategic aspects of manufacturing. Topics include facility design and location, production planning and scheduling, inventory control, quality control, and technological innovation.

Business Administration

308D Production and Operations Management-Service System (3)

Prerequisites: A minimum of 2.0 overall GPA and either (Business Administration 202 and Mathematics 101) or (Mathematics 250 and Statistics 132). The methods for managing the operations of service delivery systems, such as hospitals, banks, public safety, airlines, etc. Topics include facility design and location, queueing, and personnel scheduling.

309 Human Resource Management (3)

Prerequisites: Business Administration 131 and Business Administration 210, and a 2.0 overall GPA. In-depth examination of selected human resource management issues from a contemporary manager's viewpoint. Topics examined include: employee selection, performance appraisal, training and development, compensation, legal issues, and labor relations.

310 Information Systems Design (3)

Prerequisites: Business Administration 215 and either Business Administration 209 or Computer Science 313, and a 2.0 overall GPA. System design, implementation, and methods of systems installation and operation are presented. A system development project is required.

311 Advanced Management and Organizational Behavior (3)

Prerequisite: Business Administration 210 and a 2.0 overall GPA. Building upon Business Administration 210, this course provides a more detailed examination of motivation, leadership, group process, decision-making, job design, and organizational development. In addition to providing more detail in terms of content, this course provides the student with considerable practical experience through the use of class exercises, case studies, and small group discussions.

312 Industrial and Labor Relations (3)

Prerequisite: Business Administration 210 and a 2.0 overall GPA. Emphasis is on the dynamic relationship between management, employees, unions, and government as determinants in the efficient and effective use of human resources. Current issues and case materials are used to supplement text and lecture.

315 Marketing Management (3)

Prerequisites: Business Administration 131, Business Administration 206, one other three-hour marketing course, senior standing and a 2.0 overall GPA. An intensive analysis of major marketing decisions facing the firm, such as level, mix, allocation, and strategy of marketing efforts. Specific decision areas investigated include market determination, pricing physical distribution, product policy, promotion, channel management, and buyer behavior. Competitive, political, legal, and social factors that may affect such areas of decision are discussed. Cases, models, and problems are used heavily.

316 International Marketing (3)

Prerequisite: Business Administration 206 and a 2.0 overall GPA. Marketing management problems, techniques and strategies needed to apply the marketing concept to the world marketplace. Understanding a country's cultural and environmental impact on the marketing plan is emphasized, as well as competing in markets of various cultures. Worldwide consumerism, economic and social development, the spread of multinational corporations, business ethics, and current economic and marketing issues are examined.

317 International Management (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Economics 52 and Business Administration 210; or permission of the area coordinator and the instructor. A study of international business and international management practices. Topics covered include an introduction to international management and the multinational enterprise, the cultural environment of international management, planning in an international setting, organizing for international operations, directing international operations, international staffing, preparing employees for international assignments, and the control process in an international context.

318 Industrial and Organizational Psychology (3)

(Same as Psychology 318.) Prerequisites: Psychology 201 or Business Administration 131 and Business Administration 210. This course introduces the student to psychological research and theories pertaining to human behavior in the work setting. Topics covered include: selection, performance appraisal, training, leadership, motivation, job satisfaction, and organizational design.

319 Employee Training and Development (3)

Prerequisite: A minimum 2.0 overall GPA. In addition, Business Administration 210 or permission of instructor. An intensive study of training in organizations, including needs analysis, learning theory, management development, and development of training objectives and programs. Projects and exercises are used to supplement the readings.

329 Business Forecasting (3)

Prerequisites: A minimum of 2.0 overall GPA and either (Business Administration 202 and Mathematics 101) or (Mathematics 250 and Statistics 132). Further study of statistical tools for forecasting in a decision-making context. Topics include explanatory models (multiple regression), classical time series decomposition, and extrapolative techniques (exponential smoothing and Box-Jenkins procedures). In addition, methods for considering problems of intervention effects, seasonality, and collinearity will be discussed. Students will perform extensive analyses of time series data using computer packages.

Business Administration

330 Quality Assurance in Business (3)

Prerequisites: A minimum of 2.0 overall GPA and either (Business Administration 202 and Mathematics 101) or (Mathematics 250 and Statistics 132). A study of statistical quality control concepts and procedures applicable to management systems, administrative activities, service industries, and nonprofit organizations. Some successful quality assurance programs will be examined.

331 Multivariate Analysis (3)

Prerequisites: A minimum of 2.0 overall GPA and either (Business Administration 202 and Mathematics 101) or (Mathematics 250 and Statistics 132). A study of statistical techniques applicable to multivariable relationships.

333 Life Insurance and Employee Benefits (3)

Prerequisite: Business Administration 204 or equivalent. This course will examine life insurance and employee benefits from the perspective of both the consumer and provider. Coverage will include an examination of the various types of life insurance products, aspects of life insurance evaluation, uses of life insurance in financial planning, and the uses and evaluation of health insurance. The course will also include an analysis of both retirement programs and social insurance, along with their respective tax and legal requirements.

334 Investments (3)

Prerequisite: Business Administration 204 and a 2.0 overall GPA. Financial analysis of debt and equity instruments available on organized exchanges and in less tangible over-the-counter markets. Techniques of such analysis are presented in context with economic and management circumstances within the company, industry, and economy.

335 Financial Risk Management (3)

Prerequisites: Business Administration 204 and a 2.0 overall GPA. A study of derivative securities (forward contracts, futures, swaps and options) used in financial risk hedging. Emphasis will be placed on financial innovations and methods for tailoring a preferred risk/return trade-off. In addition, a project or a simulation will be utilized to emphasize the effects of risk management on portfolio development.

340A Financial Accounting and Reporting I (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30, Business Administration 140, and 57 credit hours. Accounting theory and practice related to the acquisition, use, and disposal of assets (excluding long-term investments in securities). The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

340B Financial Accounting and Reporting II (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30 and Business Administration 340A. Accounting theory and practice related to topics such as current and long-term liabilities, stockholders' equity, investments, statement of cash flows, and financial statement analysis. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

341 Financial Accounting and Reporting III (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30 and Business Administration 340B. Accounting theory and practice related to topics such as dilutive securities, earnings per share, accounting for income taxes, leases, pensions, and partnerships. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

342 Financial Accounting and Reporting IV (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30 and Business Administration 340B. Accounting theory and practice related to topics such as business combinations, consolidated financial statements, multinational operations, foreign exchange transactions, and governmental and nonprofit organizations. The course includes an emphasis on unstructured case problem solving skills, communication skills, and interpersonal skills.

343 Accounting for Governmental and Nonprofit Entities (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30, Business Administration 140, and 57 credit hours. Principles of fund accounting and financial reporting for governmental and nonprofit entities.

344 Computer Applications in Accounting (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30, Business Administration 103, Business Administration 145, and Business Administration 340A. Managerial and financial accounting applications of computers—budgeting, financial planning and analysis, and accounting information processing systems. Emphasis on development of systems for micro- and mainframe computers using high-level applications development software and on associated internal control and auditing problems.

345 Cost Accounting (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30, Business Administration 145, and 57 credit hours. The study of the basic principles of cost determination for, and control of, manufacturing and distribution activities. Topics include job-order costing, process costing, cost allocations, and the development and use of standard costs within a system of absorption costing.

Business Administration

347 Income Taxes (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Mathematics 30, Business Administration 145, and 57 credit hours. Fundamentals of federal income taxation. Topics include taxable entities, income, deductions, tax accounting methods, tax basis, and property transactions at both the conceptual and operational levels.

348 Auditing (3)

Prerequisites: A minimum 2.0 overall GPA. In addition, Business Administration 131 and Business Administration 340B. Fundamental auditing standards, audit reports, professional ethics, and procedures employed by the independent public accountant in the verification and analysis of financial statements.

349 Business Income Taxation (3)

Prerequisite: A minimum 2.0 overall GPA. In addition, Business Administration 347. A study of the federal income taxation of partnerships and shareholders and corporations, including subchapter S (small business) corporations with emphasis on problems encountered in their formation, operation, liquidation, and sale.

350 Financial Policies (3)

Prerequisites: Business Administration 204 and a 2.0 overall GPA. The intensification and application of the concepts developed in Business Administration 204. Special emphasis is given to the development of top management policies and their application toward complex problems of finance. Techniques for identifying and dealing with these problems before they become acute will be investigated. Cases will be integrated with appropriate outside reading.

351 Computer Applications in Finance (3)

Prerequisites: Business Administration 103, Business Administration 204, one 300-level finance course, and a 2.0 overall GPA. Financial problem solving and applications on the microcomputer. A project-oriented course with an emphasis on micro-based finance projects: present value/IRR analysis, duration, immunization, portfolio optimization, leasing, capital budgeting, financial forecasting, options, and futures.

355 Financial Services Industry and Instruments (3)

Prerequisites: Business Administration 204 and a 2.0 overall GPA. The theory of financial services, instruments, and markets is discussed. In this framework, the valuation consequences of money and capital markets, corporate control, complex contracting, and regulatory environment are developed. Topics also include hedging, interest rate risk, deposit insurance, and financial instruments.

356 Commercial Bank Management (3)

Prerequisites: Economics 52, Business Administration 204, and a 2.0 overall GPA. Corporate finance and microeconomics are applied to matters of importance to commercial bankers. Among the subjects treated are bank-asset portfolio construction, lending policies, liabilities management, bank capital structure, short-

run cash management, financial market rates and flows, and quantitative models for bank management. Commercial bank management is analyzed from an internal viewpoint in terms of what bank managers should look for in asset management and why; what market conditions they should be aware of; and what techniques they can use to meet changing economic and financial conditions.

375 Operations Research (3)

Prerequisites: Mathematics 101, Business Administration 202, and a 2.0 overall GPA, or Mathematics 250 and a 2.0 overall GPA. Applications of the theories and techniques of operations research to problems of business, government, and industry, with emphasis on the construction and utilization of quantitative decision models.

380 International Finance (3)

Prerequisites: Economics 51, Business Administration 204 and a 2.0 overall GPA. A study of the international financial markets, instruments, and portfolio strategies. Topics will include international risks, foreign diversification and hedging techniques for international exposure. The use of derivative instruments and special markets are evaluated in the international corporate/investment setting.

385 Operations Research II (3)

Prerequisites: A minimum of a 2.0 overall GPA, Business Administration 375 and either Business Administration 131 or Statistics 132. Topics of special interest including mathematical programming, stochastic decision making, digital simulation, game theory, and other selected techniques. (Formerly Mathematical Programming).

390 Business Assessment Testing (0)

Prerequisite: Concurrent enrollment in Business Administration 391. A one-time lab during which a major field exam in business is administered. Course graded on a Satisfactory/Unsatisfactory basis. **Satisfactory grade required for graduation.**

391 Strategic Management (3)

Prerequisites: Senior standing and Business Administration 204, Business Administration 206, Business Administration 210, a minimum overall GPA of 2.0; and concurrent enrollment in Business Administration 390. This is a capstone course drawing on the subject matter covered in prerequisite courses. Emphasis is on the formulation and implementation of corporate, business and functional strategies designed to achieve organizational objectives. Topics include the role of top management, globalization of business and ethical perspectives. Case studies and research reports may be used extensively. (It is preferred that this course be taken during the student's final semester.)

Business Administration

392 Entrepreneurship/Small Business Management (3)

Prerequisites: Business Administration 156, 204, 206, 210, and a 2.0 overall GPA. This integrative general management course is designed to communicate the academic principles of business management applicable to solving of problems of small- and medium-size businesses and assist in their development. This course will provide a background in the forms of business, the development of business plans and systems integration, venture capital, accounting, procurement, promotion, financing, distribution and negotiations for initial organization, and operation and expansion of the firm.

395 Business Administration Seminar (1-10)

Prerequisite: To be determined each time the course is offered and to include a minimum 2.0 overall GPA. May be repeated for credit.

396 Internship in International Business (3-6)

Prerequisites: Economics 51 and Economics 52, Business Administration 140 and Business Administration 145, an additional 12 hours in Business Administration, concurrent enrollment in a UM overseas program; also a 2.0 minimum overall GPA. The internship will be a supervised field experience in a business/international organization at a foreign site. Students will work for 10 weeks on projects directed by host organization supervisors in consultation with a UM-St. Louis faculty member. Prior to the field experience students will receive training that includes familiarization with the language and practices of the country's business, the background of the host firm, and international information sources. The student will complete a written report of his/her project. Course may not be repeated for more than 6 hours credit.

405 Managerial Communication (3)

An analysis of business writing and speaking, and the communication conventions common in organizations. Emphasis is placed on developing skills critical to career advancement and necessary for effective organizational functioning. A second goal is to prepare students for assignments in other business courses. This course must be taken within the first 12 credit hours of study, preferably in the student's first semester.

410 Managerial Economic Analysis (3)

Microeconomic analysis of consumers, firms, and government. The concepts and mathematical tools of economic analysis are applied to the production and distribution functions of organizations.

411 Analysis of National Economic Environment (3)

The character and functioning of the national economic system; analyzing and forecasting fluctuations in national income and product, employment, and prices; the influence of monetary and fiscal policies. Emphasis is on the acquisition of knowledge concerning forces affecting all business firms.

412 Public Policies Toward Business (3)

Analysis of public policies, as represented by laws, court decisions, and other governmental activities, as they affect efficiency in the public and private sectors, employment and price levels, and business decision making.

415 Societal, Environmental, and Management Decisions (3)

Prerequisites: Business Administration 410 and Business Administration 411. An examination of the external relationships of a business enterprise with the broad and diverse interests of society. These are government and social forces that sometimes operate counter to the potential dictates of theoretical internal economic policies for an individual organization. The primary objective is to examine the increasingly complex set of interrelationships among business, government, other economic groups, and "the public." A series of major current problems, chosen to raise some of the major issues involved in these interrelationships, and in particular to explore the development of public policy on such problems.

416 International Finance, Investment, and Commercial Relations (3)

Prerequisite: Business Administration 450. The objectives of this course are to: provide a knowledge of the various international markets and securities; gain insight into the complexities of international risks when investing; and, study the use of international hedging vehicles to manage foreign exchange risk.

417 International Business Operations (3)

Prerequisite: Business Administration 416. Functional management within multinational corporations; case studies of operations abroad; and focus on managerial decision making.

418 Governmental Budgeting and Financial Control (3)

(Same as Public Policy Administration 418.) Prerequisite: Accounting 440. A study of municipal and federal financial control and budgeting procedures with emphasis on public policy. The impact of financial control on top management decisions and the effect of budget strategies on the allocations of public funds.

420 Seminar in Business Administration (3)

An intensive study of a specific area of business administration of some specific business or economic phenomenon, or a specific problem or theory. Several different courses may be offered under this course number.

428 Current Topics in Business Administration (1)

Examination of a Business Administration topic of current interest. Instruction by regular graduate faculty, frequently supplemented by outside authorities (practicing managers, government officials, consultants, visiting faculty, etc.). Course may be taken three times for credit.

Business Administration

430 Individual Research (1-10)

Prerequisite: Consent of instructor and graduate director. Special individual research topics under the guidance of a specific professor.

490 Strategy Formulation and Implementation (3)

Prerequisites: Finance 450, Management 460, Marketing 470, and Management Science/Information Systems 482. Graduate program capstone course examining concepts and methods that integrate functional areas of business. The perspective is that of general management charged with directing the total enterprise. Interactions between the environment, organization, strategy, policies and the implementation of plans are explored. Special emphasis is given to globalization of business and ethical perspectives. This course should be taken during the semester prior to graduation. In no case may it be taken sooner than two semesters prior to graduation.

Accounting (400-level)

419 Management Accounting and Auditing in Governmental and Not-for-Profit Entities (3)

Prerequisites: Business Administration 418 and Accounting 441 or consent of instructor. A study of accounting for use in the public sector and in not-for-profit organizations. Cost behavior controllability, and traceability concepts for management planning and control will be investigated, as well as auditing in the public sector.

421 Professional Accounting Research (3)

Prerequisite: Business Administration 341. Discussion of the research tools and methods available to resolve questions concerning accounting standards and practices. Critical analysis of topics of current interest and importance in accounting practice.

422 Seminar in Governmental and Non-Profit Accounting (3)

Prerequisites: Business Administration 418. Consideration of the positions of authoritative groups concerning accounting theory and practice for governmental and nonprofit entities. Evaluation and critical analysis of these positions in view of current accounting literature and research finding.

431 Tax Research (3)

Prerequisite: Business Administration 347 or consent of instructor. A discussion of the research tools and methods available to resolve questions pertaining to the tax laws. Addresses techniques for locating, verifying, and evaluating authority. Students will be expected to complete a number of tax research and writing problems throughout the semester. A basic understanding of the federal income tax law is presumed.

432 Taxation of Estates, Gifts, and Trusts (3)

Prerequisites: Business Administration 347 and Accounting 431, or consent of instructor. Consideration of the transfer tax systems in general; the elements of the gross estate (includible versus nonincludible property), deductions (including the marital deduction) and credits; the gift tax and what it embraces; basic estate planning considerations; and income taxation of grantor and nongrantor trusts.

433 Taxation of Corporations and Shareholders (3)

Prerequisites: Business Administration 347 and Accounting 431, or consent of the instructor. Addresses tax aspects of the formation, operation, and liquidation of a corporation, as well as changes in the corporate structure through division or reorganization. Topics include establishment of the corporate structure, distributions to shareholders, and stock dividends and redemptions.

434 Taxation of Partnerships and Partners (3)

Prerequisites: Business Administration 347 and Accounting 431, or consent of instructor. Addresses tax aspects of the formation, operation, and termination of a partnership. Topics include special allocations and disposition of a partnership interest. Compares partnerships with Subchapter S corporations.

435 Tax Practice and Procedure (3)

Prerequisite: Business Administration 347 or consent of the instructor. Addresses the audit process; practice before the Internal Revenue Service; administrative appeals; the notice of deficiency; waivers and extensions; amended returns and claims for refund; statute of limitations on deficiencies and overpayments; and taxpayer and tax return preparer penalties.

436 Advanced Topics in Taxation (3)

Prerequisites: Business Administration 347 and Accounting 431, or consent of instructor. Addresses various topics selected by the instructor, such as property transactions, compensation plans, charitable contributions, the alternative minimum tax, and tax planning.

439 Seminar in Taxation (3)

Prerequisite: At least nine hours of 400-level tax courses including Accounting 431 or consent of the instructor. Addresses tax policy topics drawing on literature from accounting, economics, and public finance. Other topics of current interest will be selected by the instructor.

440 Financial Accounting: Theory and Practice (3)

Business organization, operations, and terminology. A survey of the broad areas of accounting, including its mechanisms. Emphasis on the development of a logical framework of underlying concepts upon which practices and procedures are superimposed. Intensive study of balance sheet, income statement and other financial reports, together with the accounting principles underlying them. Statements designed for

Business Administration

stockholders and creditors. The interpretative and analytical point of view is stressed.

441 Concepts in Management Accounting (3)

Prerequisites: Mathematics 101 or Mathematics 102 or Economics 351 with a minimum grade of "C" and Accounting 440. The development, interpretation, and uses of accounting reports and supplementary information for management planning, control, and decision making. Emphasizes the application of relevant cost behavior, control, and traceability concepts in the preparation of internal accounting reports, with a secondary emphasis upon product costing techniques as appropriate to financial accounting needs. Topics include break-even analysis, operational budgeting, direct costing, absorption costing, standard costs and variance analysis, business segment analysis, responsibility accounting, distribution cost accounting, and gross profit analysis.

443 International Accounting (3)

Prerequisite: Business Administration 341. Accounting practices for multi-national businesses. Discussion of comparative financial accounting practices, the development of international accounting standards, and managerial accounting practices related to multinational operations.

445 Seminar in Financial Accounting Theory (3)

Prerequisite: Accounting 421. A study of theoretical issues, such as the foundations of accounting standards and the usefulness of accounting information. Analysis of how elements of accounting theory relate to current issues facing the profession.

446 Topics in Professional Accounting (3)

Prerequisites: Accounting 440 and Management Science/Information Systems 481. An investigation of the impact of past, current, and prospective developments upon the role of the professional accountant. Topics include professional ethics, generally accepted auditing standards, types of auditor's opinions, internal control, and internal auditing; the use of probability theory and statistical sampling methods in the conduct of an audit; management advisory theory and statistical sampling methods in the conduct of an audit; management advisory services; auditing in mechanized and electronic data-processing systems; the requirements imposed by the S.E.C. and other regulatory agencies; and the legal responsibilities.

447 Accounting Systems for Management Planning and Control (3)

Prerequisites: Accounting 441 and Management Science/Information Systems 481, or permission of instructor. A study of advanced managerial accounting techniques useful in facilitating the planning and control process in modern organizations. Emphasis on the implementation and administration of these techniques, their integration with management information systems, and the organizational role of the corporate accountant.

448 Seminar in Advanced Theory and Contemporary Issues in Accountancy (3)

Prerequisite: Accounting 445 and Management Science/Information Systems 481. Examines the theory underlying accounting practice. The course includes an in-depth analysis of contemporary developments in financial accounting with a succinct overview of accounting research paradigms.

449 Systems Auditing (3)

Prerequisites: Accounting 440, Management Science/Information Systems 480, or consent of instructor. Study of techniques involved in the control and audit of computer-based accounting information systems. Emphasis on the review of internal controls at operational and administrative levels and on computer-assisted audit techniques.

Finance (400-level)

450 Financial Management (3)

Prerequisites: Accounting 440, Management Science/Information Systems 481 (or Business Administration 131), Business Administration 410 (or Economics 51 equivalent), and Business Administration 411 (or Economics 52 equivalent). A consideration of the methods used to determine the firm's need for short- and long-term capital, the possible means of securing such capital once a need has been determined, and the techniques for judicious use of the capital in terms of asset investment and asset management decisions. Topics include the finance function, operating and financial methods of capital budgeting decisions, cost of capital, dividend policy, long-term financing, management of current assets, intermediate and short-term financing, and corporate valuation in mergers and consolidations.

451 Advanced Financial Management (3)

Prerequisites: Finance 450 and Management Science/Information Systems 481. Exposure to recent financial management theory through selected readings. Financial management problems are considered by the use of cases and simulation models. An original research project under the supervision of the instructor is required.

455 Security Analysis (3)

Prerequisites: Finance 450 and Management Science/Information Systems 481. An in-depth study of techniques used in evaluating various financial assets as investment opportunities. Financial assets studied include common stock, preferred stock, and fixed income securities. Other related topics such as sources of investment information and current market trends are discussed.

456 Capital Markets and Financial Institutions (3)

Prerequisite: Finance 450. The theory of financial intermediation is discussed in the context of banks, savings and loans, public and private insurance

Business Administration

companies, and investment banking. In this framework, the relationship with money and capital markets, markets for corporate control, complex financial contracting, and regulatory environment is developed.

457 Introduction to Derivatives (3)

Prerequisite: Finance 450. An in-depth study of advanced risk management techniques utilizing futures, forwards, options, swaps and synthetic securities. A broad study of speculative market characteristics will be reviewed in conjunction with a variety of financial innovations. Portfolio management theories combined with mathematical models will be utilized to demonstrate the effects of hedging techniques and portfolio insurance.

458 Commercial Bank Management (3)

Prerequisite: Finance 450. This course explores the various bank management techniques required to manage a modern commercial bank in a rapidly changing environment. Topics include asset and liability management, capital adequacy, bank holding companies, profitability, and bank market structure and regulation.

Management (400-level)

460 Organizational Behavior and Administrative Processes (3)

(Same as Public Policy Administration 460.) The theoretical and research contribution of the behavioral sciences to management and administration are examined and applied to selected organizational situations. Areas to be considered from the standpoint of both individual and organizational performance are communication, motivation, conflict, decision making, goal setting, leadership, organizational design, climate, development, and control. Utilizing a systems perspective, the course attempts to develop in each student an ability to analyze and solve organizational problems.

461 Managing Human Resources (3)

Prerequisite: Management 460. In-depth examination of selected human resource management issues from a contemporary manager's viewpoint. Topics examined include: personnel planning; employee selection; performance appraisal, training, and development; compensation; legal issues; discipline; and labor relations. The course examines these topics as they relate primarily to operational activities in organizations.

462 Advanced Organizational Behavior and Administrative Processes (3)

Prerequisite: Management 460. An in-depth examination of selected organizational and individual theories affecting behavior and operating performance. Organizational structure and design, formal and informal organization, decision making, communications, and motivation are analyzed for their organizational impact.

The course seeks to develop further the ability to analyze and evaluate organizational processes and individual behavior.

463 Organizational Training (3)

Prerequisite: Management 460 or Management 461 or permission of department. An intensive study of training and developmental methods/issues in organizations. Topics include needs analysis, learning theory, training techniques, evaluation, and management development. Other topics include memory, training objectives, and training facilities. Projects and exercises are used to supplement reading and lecture.

464 Compensation and Benefits (3)

Prerequisites: Management 461 and Management Science and Information Systems 481. An in-depth study of compensation and benefit programs in organizations. Topics include job evaluation, incentive systems, performance appraisal, and employee benefits. Discussion of relevant laws, such as the Equal Pay Act, is also provided.

465 Union-Management Relations and Collective Bargaining (3)

Prerequisites: Management 460 and Business Administration 412. Primary concern is with the setting and the dynamics of contract negotiation and administration. Emphasis is on the development of insight and understanding of the forces affecting the decisions of the parties to a labor contract within the context of the social, political, and economic environment of the organization. A dynamic approach is taken to examine difficulties that arise in attempting to administer a collectively established relationship between employee and employee.

466 Personnel Administration: Theory and Practice (3)

Prerequisites: Management 461 and Management Science/Information Systems 481. Examination of various methods and procedures (including statistical techniques) critical to the design and operation of a modern personnel management system. Personnel techniques to be studied include: job analysis, employee recruitment, selection, and placement; performance appraisal; measurement of employee attitudes, job satisfaction, and organizational climate. Consideration will be given to relevant legal issues, as well as to the theories or rationale which underlie the various personnel techniques and functions.

467 Dynamics of Interpersonal Relations (3)

Prerequisite: Management 460 or academic background in general psychology. The self-concept, personality dynamics, and mechanisms of adjustment. Catalysts and barriers to effective communication. Examination of the functional relationship between ego-needs, perceptual distortion, and stereotypical thinking. Roleplaying, the resolution of role-conflict, and objective self-evaluation. The development of cooperation and trust as a prerequisite to effective human relations.

Business Administration

468 International Business Strategies (3)

Prerequisite: Business Administration 411 and Accounting 440. This course focuses on those managerial issues which follow from the definition and implementation of corporate strategy for worldwide operations, as distinguished from purely domestic firms or those only marginally involved in international activities. It aims to develop an appreciation for the unique competitive, sociocultural and political environments in which international business takes place and the skills required to deal with these challenges.

Management Science/ Information Systems (400-level)

424 Seminar in Current Management Information System Topics (3)

Prerequisite: Management Science/Information Systems 488 or Management Science/Information Systems 491. Advanced topics of current interest in management information systems. Content to be determined each time the course is offered. May be repeated for credit.

425 Advanced MIS Applications (3-6)

Prerequisite: Management Science/Information Systems 488 or permission of instructor. The course requires a project through which the student applies MIS concepts to a real problem; a written, professional quality report will be required. The course material must build upon, not duplicate, material in the MIS curriculum. The course may be repeated for credit with the permission of the MS/IS area. Consent of the MS/IS area for the topic and number of hours is required.

480 Management Information Systems (3)

(Same as Public Policy Administration 480.) Prerequisite: Economics 351 or Mathematics 101 or Mathematics 102. An overview of management information systems is presented, including various information systems concepts and technologies. Students are introduced to a mainframe operating system, a micro-computer-based operating system, and a programming language. Students are also exposed to several common microcomputer-based software packages.

481 Statistical Analysis for Management Decisions (3)

Prerequisites: Management Science/Information Systems 480 (may be taken concurrently) and Economics 351 with a minimum grade of "C." The role of statistical evidence in the formation of inference and in the selection of strategies in solving business problems is developed. Probability and probability distributions are studied as a basis of statistical inference. An introduction to multivariate analysis is provided, which includes analysis of variance and regression methods.

482 Operations Research Methods (3)

Prerequisite: Management Science/Information Systems 481. Development of a working knowledge of operations research techniques, as applied to dynamic business problems. A study of analytical approaches to business programs, construction of mathematical models, and manipulation of model variables for managerial decision making. Topics include mathematical programming, inventory theory, game theory, queueing theory, sequencing models, and simulation models.

483 Production and Operations Management (3)

Prerequisite: Management Science/Information Systems 482. The economic concepts of production and technology are integrated with practical problems encountered in the production of goods and services. Topics include design, layout, and location of facilities, forecasting, manpower and production scheduling, inventory control, queueing, material planning, and quality control. Modeling, analytical techniques, and simulation are used in studying these problems. Applications to service industries (e.g., hospitals, government) are included.

484 Business Programming and File Systems (3)

Prerequisite: Management Science/Information Systems 480 (may be taken concurrently). The course provides a study of business-oriented programming. The programming language COBOL will be introduced and studied in detail. Emphasis will be on program definition and the use of file structures in business-oriented applications.

485 Theoretical Foundations of Management Information Systems (3)

Prerequisite: Management Science/Information Systems 480. Students are exposed to current Information Systems literature and major theoretical issues in Information Systems. Coverage stresses the fit between information systems and the organization. Topics include Management Information Systems development, end-user computing, systems architecture, decision support systems, and planning and control.

486 Advanced Statistical Methods for Management Decisions (3)

Prerequisite: Management Science/Information Systems 481. A study of statistical methods applicable to specialized areas of statistical analysis. Topics include Markov processes, distribution-free tests, sampling theory and methods, experimental design, time series analysis, and spectral analysis.

Business Administration

487 Advanced Operations Research Applications (3)

Prerequisite: Management Science/Information Systems 482. Application of operations research techniques to business problems. After a brief review of these techniques, followed by an examination of typical applications reported in the literature, the major portion of the term is spent in analyzing and solving an actual business operations research problem. A team approach is used, with groups of two or three students responsible for finding and solving an operations research problem in a local company. Primary emphasis is placed on the use of operations research techniques to solve management problems.

488 Information Systems Analysis (3)

Prerequisite: Management Science/Information Systems 484. The theory and practice of structured analysis are presented. Topics may include: traditional vs. structured analysis methods, requirements analysis, user/analyst interaction, investigation of existing systems, human/machine interfaces, CASE tools, and workbenches.

489 Database Management Systems (3)

Prerequisite: Management Science/Information Systems 484. The course introduces the concepts of Database Management Systems for business applications. Issues in database architecture, design, administration, and implementation are covered. Projects are assigned on a mainframe DBMS and a microcomputer-based DBMS to illustrate the concepts and applications.

491 Computer Systems: Architecture and Programming (3)

Prerequisite: Management Science/Information Systems 484. This is an introduction to concepts of comparative computer architecture and its relationship to the operating system software which augments the architecture. An assembly language is studied.

492 Information Systems Management (3)

Prerequisites: Accounting 440, Management 460, Marketing 470, and Management Science/Information Systems 485. The course covers the management of computer-based information. Issues relating the decisions of the chief information officer to the overall strategic planning of the organization are discussed. Further topics may include: cost and value of information, hardware/software evaluation and acquisition, systems implementation, performance measurement and evaluation, and organizational and behavioral issues.

493 Simulation for Managerial Decision Making (3)

Prerequisites: Management Science/Information Systems 481, 482, and 485. Introduction to simulation as a managerial decision-making aid. Application of simulation to a number of management science-oriented problems. The course introduces and requires use of a simulation language.

494 Advanced Operations Research Topics (3)

Prerequisite: Management Science/Information Systems 482. Advanced topics from such areas as mathematical programming, stochastic processes, decision theory, or game theory are studied in depth.

495 Information Systems Design (3)

Prerequisite: Management Science/Information Systems 488. This course builds upon the analysis techniques presented in Management Science/Information Systems 488. It requires the student, usually working in a group, to design and implement a system in a real-world environment. Advanced design concepts are presented to support the students in their project work.

496 Telecommunications: Design and Management (3)

Prerequisite: Management Science/Information Systems 480. The topic of telecommunications is addressed from both a technical and managerial viewpoint. In particular, the course will address issues such as communications components and services, local area network architecture, managerial implementations, organizational issues, and cost/benefit analyses.

497 Expert Systems (3)

Prerequisite: Management Science/Information Systems 485. The course introduces the application of expert systems in the business environment. Current applications in business and development tools are discussed. In addition, topics such as knowledge representation methods, inference engines, knowledge acquisition, neural networks and the handling of uncertainty are addressed. A (group) project is required.

498 Fourth Generation Languages and End User Computing (3)

Prerequisite: Management Science/Information Systems 480. The course presents fourth generation languages and covers managerial issues of end-user computing. A specific fourth generation language will be introduced and programming applications will be assigned. In addition, the course will explore the problems of providing and managing micro-to-mainframe links, end-user software packages, and security, confidentiality issues.

499 Management Information Systems Thesis Research (1-6)

Credit to be awarded only upon successful defense of thesis.

Business Administration

Marketing (400-level)

470 Contemporary Marketing Concepts (3)

Prerequisites: Accounting 440 and Business Administration 410. Designed for students with no prior course work in the field of marketing. A wide spectrum of marketing institutions and activities is covered. The impact of marketing on the total firm, the economy, and society in general is assessed. The course is intended to develop and organize the fundamental marketing concepts necessary to an analytical study of consumer behavior, the economic environment, and four managerial aspects of marketing. The acquisition and utilization of marketing research data for problem solving is stressed. Relation and integration of basic marketing knowledge to the successful development of sound marketing policy, planning, and strategy is developed.

471 Marketing Planning and Strategy (3)

Prerequisite: Marketing 470. Emphasizes the development of a total marketing program through an analytical study of the marketing-mix, the diagnosis of the business situation, along with the influence of exogenous variables and the development of an effective overall marketing strategy. Stresses importance of an integrated marketing plan and utilizes modern decision-making tools. Supplementary readings, journal articles, and current periodicals are used to place the theoretical framework of the course into the contemporary environment of the market place.

475 Consumer Motivation and Behavior (3)

Prerequisite: Marketing 470. An analysis of the socio-psychological foundations of consumer behavior including personality differences, needs and wants, status symbols, social change and mobility, and fads and fashions. Consumer spending and saving habits, product preferences, leisure-time patterns, shopping behavior, and motivation research also are examined for their impact on advertising, selling, and marketing management.

476 Marketing Communications (3)

Prerequisite: Marketing 470. Deals with managerial decision making by placing particular emphasis on assimilating and integrating all forms of marketing communication in the development of promotional policies, plans, and procedures. Course approach is analytical rather than descriptive in investigating the areas of advertising, public relations, sales management, packaging, and other forms of demand stimulation.

477 Product Planning and Pricing (3)

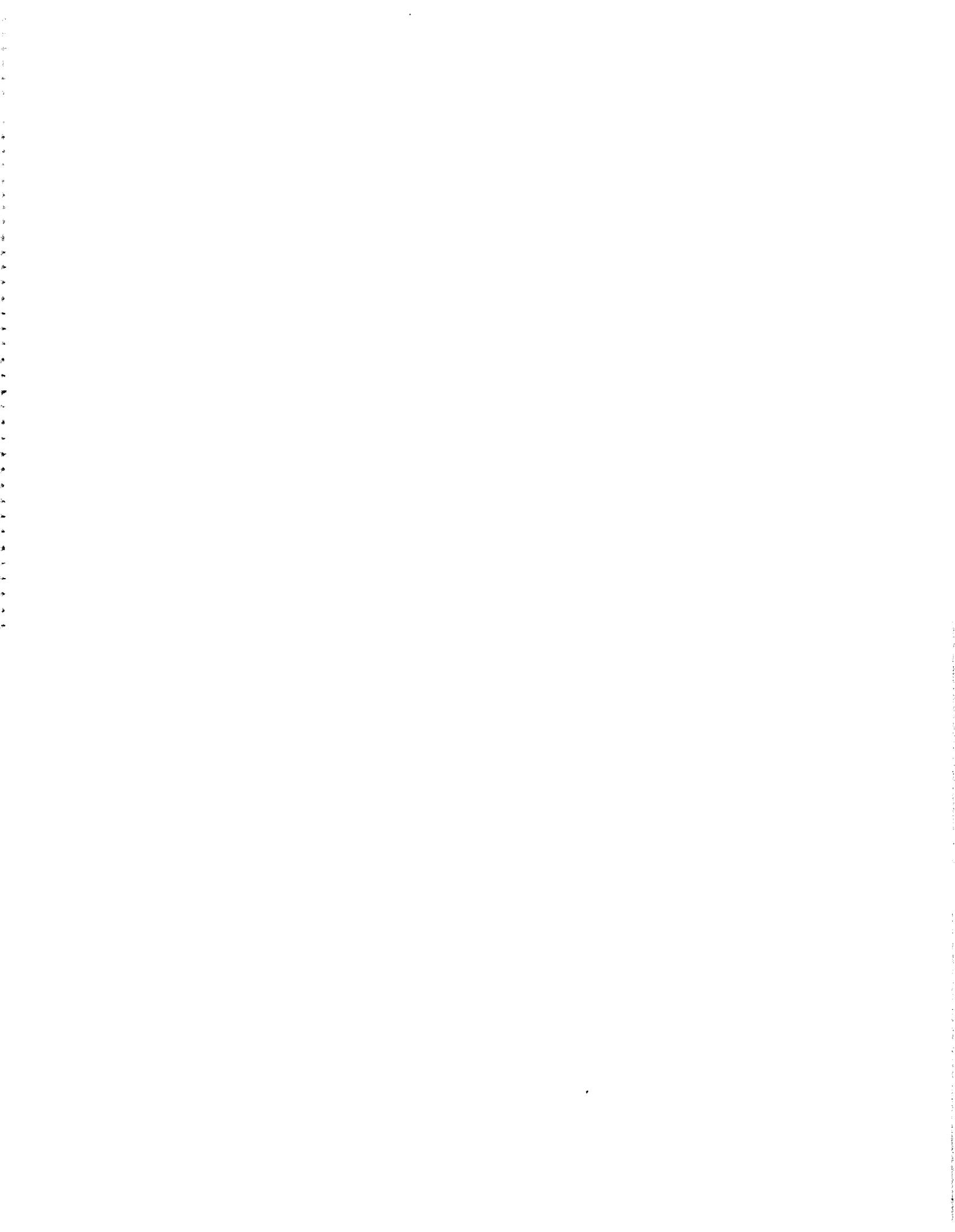
Prerequisite: Marketing 470. A study of product management focusing on new product development. The steps of the new product development process are covered in detail. Current issues in new product research are discussed. Projects are emphasized and involve the application of several of the key techniques to the student's own new product ideas. Selected pricing topics are also covered, such as measuring consumer price sensitivity.

478 Marketing and Business Research (3)

Prerequisites: Marketing 470 and Management Science/Information Systems 481. A broad approach to marketing research as a model for acquiring, retrieving, and analyzing decision-making information. Includes market measurement, evaluation of sales, and cost effectiveness, sales forecasting, and primary marketing research studies aimed at solving specific problems. Emphasis is placed also on building a theoretical and analytical framework to provide flexibility in the design of marketing experiments and in judging recent research innovations.

479 Marketing Channel Strategy (3)

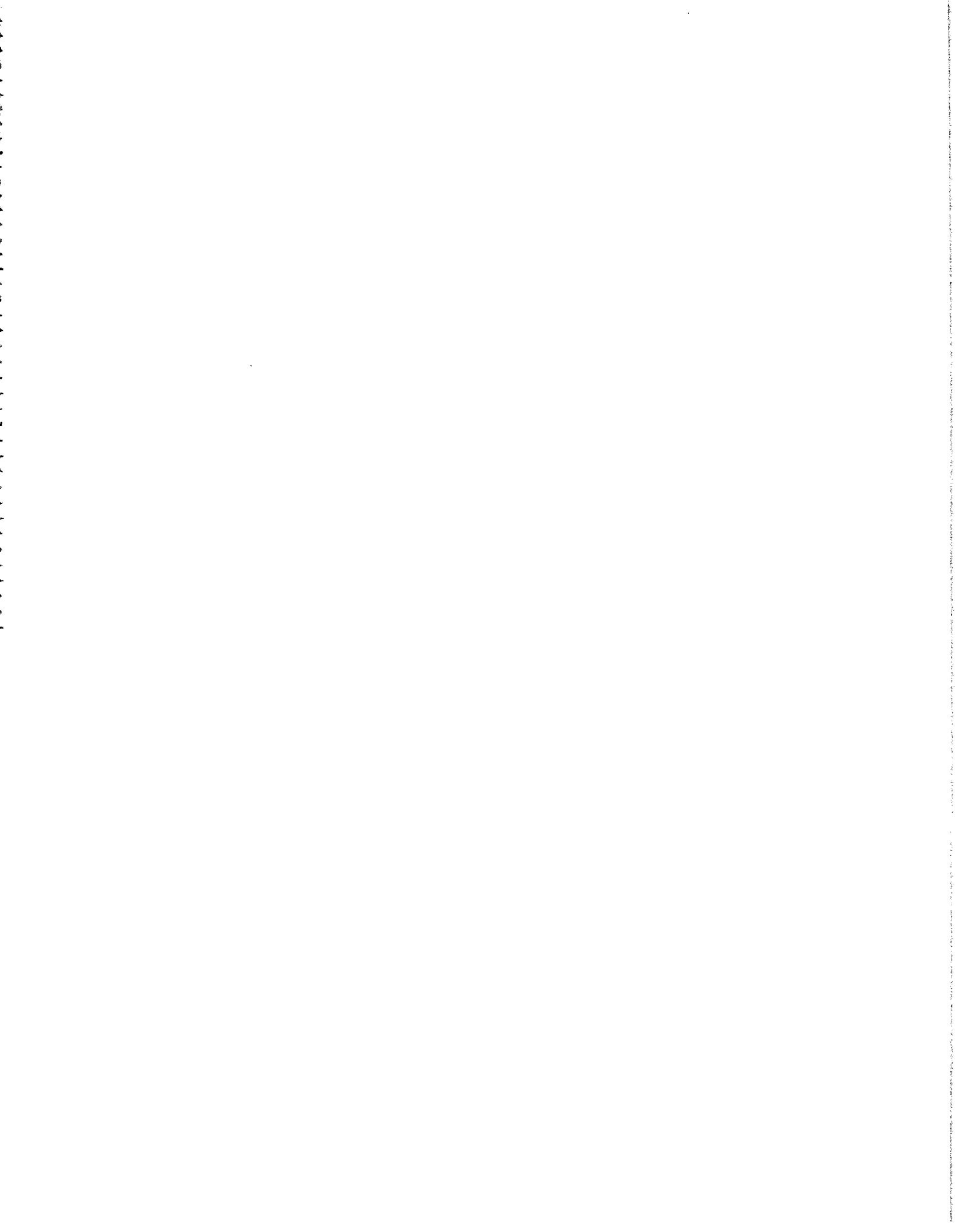
Prerequisites: Marketing 470 and Management Science/Information Systems 482. A study of the marketing institutions involved in the distribution of goods and services, industrial and consumer markets, as well as the establishment and integration of marketing channels. The planning and analysis of the macrodistribution and microdistribution systems which contribute to creation of optimal time and place utility. Some attention is paid to quantitative applications to marketing situations including simulation and logistics.



1995-96 Bulletin



School of Education



Undergraduate Studies in Education

Accreditation

The University of Missouri-St. Louis, through the School of Education, is accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary and secondary school teachers and school service personnel.

Undergraduate Studies

Degrees and Areas of Concentration

The School of Education offers work leading to the B.S. in Education with specialization in any of the following: early childhood education, elementary education, special education, and secondary education. Courses are also available for those seeking certification for middle school/junior high teaching. In cooperation with other Schools and Colleges of the University, the School provides a program for students pursuing other degrees but planning on a teaching career in secondary education. The School is divided into three departments: Behavioral Studies; Educational Studies; Elementary, Early Childhood Education, and Physical Education. Each offers course work toward one or more of the above areas.

Course Designations in the School of Education

The following abbreviations are used to indicate instructional areas in the course listings and descriptions in the School of Education.

Adult Education Courses (**ADU ED**)
 Counselor Education Courses (**CNS ED**)
 Early Childhood Education Courses (**ECH ED**)
 Educational Administration Courses (**ED ADM**)
 Educational Foundations Courses (**ED FND**)
 Educational Psychology Courses (**ED PSY**)
 Educational Research and Evaluation Methods
 Educational Technology Courses (**ED TEC**)
 Elementary Education Courses (**ELE ED**)
 Physical Education Courses (**PHY ED**)
 School-Wide Education Courses (**EDUC**)
 Secondary Education Courses (**SEC ED**)
 Special Education Courses (**SPC ED**)

General Education Requirements

Students in the School of Education must meet University and departmental general education requirements specified for their degrees.

Academic Residence

Students must be in residence for 30 of the last 30 semester hours of graded credit. Courses graded on a satisfactory/unsatisfactory basis are not accepted within these last 30 semester credit hours. This residency requirement applies to degree or certification.

Admission Policies

Types of Admission Students who wish to become teachers must be aware of two types of admission that pertain to them. One is admission to the School of Education, the other is admission to the Teacher Education Program. These serve completely different purposes and are separate procedures handled by different offices.

Admission to the School of Education After completing two years of college work at an accredited institution, students intending to teach in elementary, early childhood, middle school/junior high, secondary, special education, business education, or physical education settings must apply for admission to the School of Education. However, Evening College students do not need to apply to the School of Education, but should declare their major as education in the Evening College office when they have accumulated 40 credit hours. Students intending to teach in secondary-school classrooms other than specified above may elect to pursue the B.S. in Education or to receive degrees from other University Colleges and Schools and also meet teacher certification requirements. Students admitted to the School must also be admitted to the Teacher Education Program.

Application to the School of Education

Application to the School is processed through the Admissions Office. Eligibility is based upon the following criteria:

- 1) Satisfactory completion of two years of college work, with a minimum of 60 semester hours with a grade point average of 2.0 or above.
- 2) Having no more than nine hours of deficiencies in general education.
- 3) Completion of the specific prerequisites and/or other special requirements of the curriculum areas for which students are applying.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Admission to the Teacher Education Program

All students (pre- and post-degree) who wish to become teachers must be admitted to the Teacher Education Program regardless of the College or School in which they are enrolled. The admission program requires student action at the following two levels.

Level I Application to the Teacher Education Program

Applications to the Teacher Education Program are processed through the Office of Undergraduate Studies in Education. Eligibility is based upon fulfillment of the following requirements:

Undergraduate Studies in Education

Effective September 1, 1988

Students not previously admitted to the Teacher Education Program (acceptance of 60-hour form) must submit qualifying scores on the College Basic Academic Subjects Evaluation (C-BASE) in the areas of English, Writing, Mathematics, Science, and Social Studies as mandated by the Missouri Excellence in Education Act of 1985. Consult the Office of Undergraduate Studies in Education, School of Education, for test descriptions, cost, required scores, dates of administration, retest policies, etc. Acceptable C-BASE scores are required in addition to acceptable ACT or SAT scores. (C-BASE not applicable to students with a bachelor's degree.)

- 1) Scored either 20 on the ACT Composite (18, when taken prior to 11-1-89) or 800 on the SAT (verbal plus math)*.
- 2) Completed 60 hours of college or university courses (at UM-St. Louis or another accredited school).
- 3) Accumulated a grade point average of 2.5.
- 4) Completed EDUC 101, Introduction to Classroom Teaching, or the equivalent, with a grade of C or better. (Not applicable for secondary education or early childhood education majors).
- 5) Completed ED FND 111, The School in Contemporary Society, or the equivalent, with a grade of C or better.
- 6) Received screening test in hearing (at nominal cost at the UM-St. Louis Health Center or off campus at personal expense).
- 7) Received screening test in vision (at no cost at UM-St. Louis Optometry Clinic or off campus at personal expense).
- 8) Agreed to adhere to ethical codes which have particular pertinence during clinical experiences. (These codes are available in the Office of Undergraduate Studies in Education, School of Education.)
- 9) Agreed to subscribe to a standard of preprofessional behavior which will enhance greater self-awareness if social or emotional difficulties arise which may affect future teacher effectiveness. (This standard is available in the Office of Undergraduate Studies in Education.)
- 10) Submitted an Affidavit of Moral Character, notarized by a Notary Public.

*Policy for Students Scoring Below ACT and SAT Qualifying Requirements

Students who do not achieve satisfactory scores of 20 on the ACT or 800 on the SAT may re-take the test(s) until the requirement is met. Students who initially score below the required ACT score of 20 or SAT score of 800 may petition the Dean of Education to attest that basic educational competencies are met if their grade point average from 60 hours of college or university courses is at least 2.50 and they have performed satisfactorily on a norm-referenced achievement test other than ACT or SAT. Students must produce evidence that the ACT or SAT was initially completed and a score recorded.

Students with a documented disabling condition, preventing valid test administration of the ACT or SAT, may be evaluated for basic educational competencies through appropriate testing instruments and/or procedures designated and approved by the Dean of the School of Education.

Students who do not meet the initial ACT or SAT qualifying scores may seek assistance in upgrading basic competencies through contact with one or more of the following University of Missouri services:

Center for Academic Development
 Women's Center
 Counseling Service
 Veteran Affairs Office
 Video Instructional Program
 Horizons (Peer Counseling Center)

In addition, assistance may be available through correspondence courses, University of Missouri-Columbia. Copies of this policy are available in the Office of Undergraduate Studies in Education.

Level II Application to the Student Teaching Program

Students must make formal application to student teaching at least **one full semester** (excluding summer session) prior to the semester in which they plan to do their student teaching. Students must attend one of three repeated meetings at the beginning of the semester. Dates and times will be posted on the bulletin board in the lobby of Marillac Hall. Applications must be filed during the first four weeks of the semester in the Office of Undergraduate Studies in Education, 155 Marillac Hall.

Upon receipt, formal applications for both pre- and post-degree students are checked to ensure they have met the following requirements:

- 1) Full admission to the teacher education program for both pre- and post-degree students.
- 2) Completion of 90 hours of approved course work at the time of application.
- 3) A cumulative grade point average of 2.5 or above by the semester prior to the one in which students plan to do their student teaching. The 2.5 cumulative grade point average must be maintained in order to graduate with a B.S. in education degree and/or be certified to teach in the state of Missouri.
- 4) Completion of English 210, Advanced Expository Writing, with a grade of C- or better.
- 5) Completion of Communication 40, Introduction to Public Speaking, with a grade of C- or better.
- 6) Completion of general education requirements and near completion of course requirements in the teaching major.
- 7) A grade of C or better in all professional education courses so designated. Lists of these courses are available in the Office of Undergraduate Studies in Education and from advisers.
- 8) Satisfactory recommendations by students' teaching area representatives in the teacher education program.

Undergraduate Studies in Education

- 9) Completion at UM-St. Louis of no fewer than 12 hours of approved course work.
- 10) Grade point average of 2.5 in the teaching field (secondary education students only).
- 11) Completion of prerequisite courses in professional education and psychology.

Student Teaching

The student teaching experience in the Early Childhood, Elementary Education, Middle School, Physical Education, and Special Education certification programs has been strengthened by providing assignments in two different school settings and appropriately increasing the amount of time devoted to it. Students will be expected to do student teaching on a full day basis for an entire semester.

Student teaching, which must be done in residence, is not offered during the summer except for people who hold a Missouri teaching certificate and want to add another Special Education area for certification. Secondary student teaching in science education, mathematics education, and foreign language education is offered only during the Winter Semester. Secondary education majors student teach for an entire semester, full days.

While enrolled in student teaching, students may not carry more than 15 credit hours. When students are admitted to student teaching, the Office of Undergraduate Studies in Education arranges assignments with appropriate school district officials. **Students should not contact school officials or teachers about possible student teaching assignments.** Failure to observe this request is a basis for removal from student teaching.

Upon special request student teachers may be placed in outlying areas provided there are three students located in approximately the same geographic area. Individual requests cannot be honored.

Students who withdraw from student teaching at any time after being admitted for a given semester must formally reapply during the designated application period for the subsequent semester in which they plan to do their student teaching. This must be done in person in the Office of Undergraduate Studies in Education. Students who withdraw in this way three times must wait a minimum of one calendar year after the third such withdrawal before they may re-apply for student teaching. At the time of re-application they must present evidence that the circumstances which prevented them from continuing in student teaching during their last admission no longer pertain. In all instances of re-application, students must meet the requirements in effect for the semester during which they plan to do their student teaching.

Student teachers who fail the course or are allowed to withdraw because they are failing to meet minimum requirements must wait at least one full semester and fulfill the remedial requirements established at the time of the failure or withdrawal before they may re-apply

for admission to student teaching. The remedial requirements will be determined by the Office of Undergraduate Studies in Education after consultation with the cooperating teachers, University supervisors, and student teachers involved. The students must provide appropriate evidence that the remedial requirements have been met at the time they re-apply for admission to student teaching. It is understood that meeting the remedial requirements does not guarantee success in the subsequent student teaching experience.

For further information regarding certification, contact the Office of Undergraduate Studies in Education, 155 Marillac Hall.

Application for Degree and/or Certificate

Bachelor of Science in Education Candidates for the B.S.Ed. degree must complete degree and certificate application forms in the Office of Undergraduate Studies in Education when they apply for admission to student teaching or during the semester before the one in which they expect to finish degree requirements.

Evening College students should complete degree application forms in the Evening College office and certification application forms in the Office of Undergraduate Studies.

Bachelor of Arts Students seeking the B.A. degree with teacher certification must complete a state certification form with the Office of Undergraduate Studies in Education during the last month of the semester in which their requirements will be completed.

Certification

In cooperation with the Missouri State Department of Elementary and Secondary Education, the School of Education is responsible for issuing teaching certificates to students completing B.S. in education degree requirements, recommending for certification students completing degrees in other UM-St. Louis Colleges and Schools, as well as all certification requirements, advising, and recommending for certification those postdegree students who meet requirements.

Beginning September 1, 1990, all individuals must pass the appropriate National Teacher's Examination in order to meet graduation and/or certification requirements.

Graduate Studies in Education

By completion of specified undergraduate courses at the University of Missouri-St. Louis, certification may be obtained in the following fields: elementary education; early childhood education; middle school/junior high; music education; physical education; special education: behavioral disorders (BD), educable mentally handicapped (EMH), learning disabilities (LD); as well as the secondary education areas of biology, business, chemistry, English, foreign languages (French, German, Spanish), mathematics, physics, social studies, and speech/theatre. Graduate programs leading to certification in counseling; reading; psychological examiner; school administration (elementary and secondary principal, school superintendent); and special education: behavioral disorders (BD), learning disabilities (LD), educable mentally handicapped (EMH), and early childhood special education ECSE) are also available; see Graduate Studies sections for each department of the School of Education.

Graduate Studies

Degrees and Areas of Emphasis

M.Ed. programs are offered in counseling, educational administration, elementary education, secondary education, and special education. Within the counseling program are the emphasis areas of elementary, secondary, and general counseling. Within the Educational Administration program are the emphasis areas of community education, elementary administration, and secondary administration. Within the Elementary Education program is the emphasis area of reading. Within the Secondary Education program are the emphasis areas of adult education, curriculum and instruction, and reading. Within the Special Education program are the emphasis areas of behavioral disorders, learning disabilities, mental retardation, and early childhood/special education. Courses are available for areas of specialization in early childhood education, physical education, and severe handicaps.

Advanced certification studies (60-hour concentrations) are offered in elementary and secondary educational administration.

Programs leading to the Ed.D. degree are offered in two broad interdisciplinary emphasis areas: learning-instructional processes and behavioral-developmental processes.

Master of Education Degree

Admission and General Requirements The School of Education follows Graduate School policies relating to admissions, academic standards, residency, transfer credit, time limitations, and thesis options (see Graduate Study in this *Bulletin*). In addition to meeting the general requirements of the Graduate School, applicants for school or general counseling must complete a separate application (see graduate studies in the Behavioral Studies Department in this *Bulletin*). The minimum number of hours required for the M.Ed. degree is 32 except the elementary, secondary, and general counseling emphases require 48 hours. The school has adopted a flexible policy on exit requirements which are determined departmentally.

Advisement and Program Planning After acceptance, each student completes an adviser form, sent by the School of Education's Office of Graduate Studies, 201 ED LIB. An adviser is then appointed who counsels the student in registration and program planning. A program for master's degree form must be submitted for approval during the first two-thirds of the student's program. This form includes all course work in the program and the exit requirement. Once approved, the degree program may be changed only by petition.

Students working toward teacher and/or school service personnel certification as graduate students should complete state certification forms in the Office of Undergraduate Studies in Education, 155 Marillac Hall, one year before those requirements will be completed.

Doctor of Education Degree

The Ed.D. degree is designed primarily for the field practitioner, and is, therefore, a comparatively broad-based interdisciplinary degree. The two emphasis areas, learning instructional processes and behavioral-developmental processes, embrace two general categories of professional activities.

Learning-instructional processes place primary emphasis on the teaching-learning relationship, as well as on general planning and development of organizational programs to carry on this relationship successfully. Traditional programs that tend to fall under this heading are school administration, elementary and secondary teaching, supervision/curriculum, and reading instruction.

Behavioral-developmental processes place primary emphasis on the nature of individuals. Doctoral studies focus on such elements as learners' behavioral and developmental characteristics, typical and atypical development within varied environments, motivation, strategies of behavioral change, and counseling processes. Traditional programs that tend to fall under this heading are counseling, special education, educational psychology, and measurement.

Graduate Studies in Education

Students seeking the Ed.D. degree are expected to meet the doctoral degree requirements and procedures adopted by the Graduate School. (See Doctoral Degree Requirements for details.)

Admission and General Requirements

In addition to meeting the application and admissions requirements of the Graduate School, students must submit three letters of recommendation, preferably from individuals with earned doctorates (two letters must be from individuals with an earned doctorate), along with a professional resume. Because enrollment is competitive, admission standards are comparatively high. Successful candidates must exhibit significantly above-average academic records and GRE scores. In exceptional cases, other criteria may outweigh these customary indicators of probable academic success.

At least two years of teaching or other school service experiences are required for admission. Exceptions may be made by substituting a supervised internship during the first year of the program.

Admission Application In order to ensure time for review and decision, complete applications and accompanying materials must reach the Office of Admissions by September 15 for the Winter Semester and January 15 for the Summer or Fall Semester. In addition, applicants are urged to request transcripts and letters of recommendation two weeks before submitting their papers. Consideration of applications cannot be undertaken until all materials are available.

Degree Requirements

1) Core Studies

General Foundations, 12 hours from:

Philosophical, historical, psychological, sociological, anthropological, and comparative foundations of education, as well as curriculum, instruction, and supervision.

Research Methods:

6 hours from:

Educational research methods
Multiple linear regression
Nonparametric statistics

6 hours from:

Qualitative research methodology

Common doctoral seminars, 6 hours

2) Role Specialization, 48 hours from:

Emphasis area doctoral seminars (6-12)
Emphasis area electives (15-17)
Related area (12-18)
Internship (3-9)

3) Dissertation, 12 hours

Support Services

The School of Education maintains a number of offices and centers to directly assist students, faculty, and people in the metropolitan area and to support its instructional, research, and service activities.

Office of Undergraduate Studies in Education—155 MH

This Office supplies advisement services for undergraduate teacher education and certification students. It coordinates the clinical experiences of the School of Education and directs the student teaching program.

Office of Graduate Studies in Education—201 ED LIB

Information about admission to, and requirements of, graduate programs in education may be obtained in this Office. The Office also assists students with advisement, registration, and related topics, and maintains student records.

Teacher Education Resource Center—G01

The Center is designed as an instructional media laboratory. The Instructional Technology Center located in Lucas Hall also has an office in the Center.

Human Services Unit—B23A ED LIB

The Human Services Unit is a training facility for graduate students supervised by faculty in the Department of Behavioral Studies. Career counseling and assistance with vocational, adult, or adolescent developmental concerns are available to individuals in the community.

Reading Clinic—B9 ED LIB

The Reading Clinic provides a laboratory setting for graduate level elementary and secondary teachers who are seeking certification as reading specialists. The Clinic has been providing services to the surrounding community in diagnosing and treating severe reading problems in children and adults since 1966. The Clinic also serves as a demonstration and materials center for pre-service and in-service teacher education, as well as a clinical research facility for the faculty.

University Child Development Center—130 SCB

The Center provides University students with observation, participation, research, and similar educational and clinical opportunities; it also offers quality child care programs for children of student, faculty, staff, and community families.

School-Wide Courses

Course Descriptions

Course Area Key

The following abbreviations are used to indicate instructional areas in the School of Education:

ADU ED	Adult Education
CNS ED	Counselor Education
ECH ED	Early Childhood Education
ED ADM	Educational Administration
ED FND	Educational Foundations
ED PSY	Educational Psychology
ED REM	Educational Research and Evaluation Methods
ED TEC	Educational Technology
EDUC	School-Wide Education
ELE ED	Elementary Education
PHY ED	Physical Education
SEC ED	Secondary Education
SPC ED	Special Education

School-Wide Courses Education (EDUC)

Prerequisites may be waived by consent of the department.

65 The University (3)

A School of Education interdisciplinary course on the principles, development, and organized structure of the university. Special emphasis will be placed on the role of the university in modern society and upon forces affecting the direction of the university and its potential for change. Methods include outside speakers, discussion groups, and laboratory research on UM-St. Louis.

101 Introduction to Classroom Teaching (3)

An introduction to the study of teachers' behaviors and learners' responses in classroom settings. Students will be assigned to school sites for specified observations/analyses and limited participation. Students will have the opportunity to evaluate the teaching profession as an appropriate career choice. The course will consist of approximately one-third lecture/seminar and two-thirds clinical/field experiences.

204 Special Topics in Education (1-3)

Prerequisites: Completion of 75 hours and consent of instructor. Examination of a special area or topic within the field of education. Topics to be considered will be announced prior to registration and may vary. For elective credit only. This course may be repeated for different topics. Not to exceed a total of six hours credit.

297 Independent Study (1-3)

Prerequisites: Completion of 75 hours and consent of instructor. Independent study through readings, research, reports, and conferences designed to provide depth in areas of study previously introduced in education courses. For elective credit only. May be repeated. Not to exceed a total of three hours credit.

301 Introduction to Microcomputers in Education (3)

A course designed to introduce individuals to the microcomputer as an instructional medium. The course will emphasize (1) the history, role, and use of microcomputers in education; (2) learning the elements of programming for the microcomputer; and (3) beginning program construction and debugging operations.

306 Graduate Workshop (1-10)

Prerequisite: Consent of instructor.

308 Graduate Institute (1-10)

Prerequisite: Consent of instructor.

375 Microcomputer Applications in Music Education (2)

(Same as Music 375.) Prerequisites: Music 257 or Mus c 267 and EDUC 301 or consent of the instructor. An examination of the potential of microcomputers in the music education field. Experiences with available hardware and software suitable for applications that include inventory, budget, music library cataloging, digital music synthesis, and computer-assisted instruction at all levels.

376 Microcomputer-Assisted Instruction Curriculum Development in Music (2)

(Same as Music 376.) Prerequisites: EDUC 375 or Music 375, and a working knowledge of BASIC or PILOT or consent of instructor. Design and development of Computer-Assisted Instruction (CAI) lessons in music. Commercial courseware and various CAI models will serve as the basis for creating original programs that can be used effectively to implement objectives of the music curriculum for a specific school or school district. The design, refinement, and production of a major CAI program for use in an elementary, secondary, or postsecondary setting is required.

School-Wide Courses

377 Advanced Microcomputer Application in Music (2)

(Same as Music 377.) Prerequisite: Music Education 375 or consent of the instructor. The study of complex microcomputer applications including music synthesis, MIDI, music-oriented graphics, voice and pitch recognition, administrative applications, and computer-assisted instruction.

393 Practicum in Individualized Instruction (3-6)

Prerequisites: Completion of the course(s) to which assigned for instruction and consent of instructor. Supervised instruction in individualized programs. Seminar accompanies instructional experience. May be repeated.

408 Graduate Institute (1-10)

Prerequisite: Consent of instructor.

414 Common Doctoral Seminar(s) (3)

Prerequisite: Admission to the doctoral program. Two EDUC 414 seminars are required for all doctoral students, for a total of six hours of EDUC 414 seminar credit. One: "Elements of Educational Leadership" is to be taken early in the program. The other: "Research: Implementing Change in Educational Systems" is to be taken following completion of the research courses identified in the student's approved program.

415 Emphasis Area Seminar(s) (3)

Prerequisite: Admission to the doctoral program. All doctoral students are required to take at least two emphasis area seminars consistent with their programs. Students may take additional emphasis area seminars. Obtain a list of emphasis area seminars from the Office of Graduate Studies in Education.

491 Staff Development and Professional Growth (1-10)

Designed in conjunction with an individual school district or educational agency and related to problems of education confronting that specific district or agency.

497 Thesis Research (1-10)

Prerequisite: Consent of instructor.

499 Dissertation Research (1-12)

Prerequisite: Admission to the doctoral program. Credit awarded only upon successful defense of the dissertation.

Behavioral Studies

Faculty

Arthur E. Smith, Professor*
Ph.D., St. Louis University
George J. Yard, Associate Professor*, Chairperson
Ph.D., St. Louis University
William L. Franzen, Professor*; Dean Emeritus
Ph.D., University of Wisconsin
Rick L. George, Professor*, Professor Emeritus
Ph.D., Northwestern University
R. Rocco Cottone, Professor*
Ph.D., St. Louis University
Patricia A. Jakubowski, Professor*
Ed.D., University of Illinois
Thomas E. Jordan, Curators Professor* of Child
Development
Ed.D., Indiana University
George E. Mowrer, Professor Emeritus
Ed.D., University of Missouri-Columbia
W. Ray Rhine, Professor*
Ph.D., University of Texas
Harold W. Richey, Professor Emeritus
Ph.D., University of Kansas City
Margaret W. Cohen, Associate Professor*
Ph.D., Washington University
Theresa A. Cristiani, Associate Professor*
Ed.D., Indiana University
Donald R. Greer, Associate Professor*
Ph.D., University of Missouri-Columbia
Lowe S. (Sandy) MacLean, Adjunct Associate Professor*;
Vice Chancellor for Student Affairs
Ed.D., Indiana University-Bloomington
Steven D. Spaner, Associate Professor*
Ph.D., Southern Illinois University-Carbondale
W. Glenn White, Associate Professor*
Ph.D., University of Missouri-Columbia
Howard P. Brown, Jr., Assistant Professor*
Ph.D., Mississippi State University
Z. Maxine Christian, Visiting Assistant Professor
Ed.D., University of Missouri-St. Louis
Scott Danforth, Assistant Professor
Ph.D., University of South Florida-Tampa
Delores M. John, Assistant Professor*
Ph.D., University of Missouri-Columbia
Karen Keller, Visiting Assistant Professor
Ed.D., University of Missouri-St. Louis
S. Simon Kim, Assistant Professor
Ph.D., University of Southern California
MaryAnn Lingg, Assistant Professor*
Ph.D., University of North Texas
Vivian J.C. McCollum, Assistant Professor*
Ph.D., St. Louis University
Marshalita S. Peterson, Assistant Professor
Ph.D., St. Louis University
Thomas M. Shea, Visiting Professor
Ed.D., Boston University

*members of Graduate Faculty

General Information

The Department of Behavioral Studies is housed on the fourth floor of Marillac Hall. Information about offerings and related matters may be obtained in the departmental office, 469 Marillac Hall.

At the undergraduate level the department coordinates work in educational psychology, counseling, measurement, special education, and related areas. Offerings leading to the B.S. in Education degree are available in special education.

The Special Education program prepares students to teach educable mentally retarded, early childhood special education, emotionally disturbed, or learning disabled children. Students also receive certification as regular elementary school teachers upon completion of the curriculum. New Missouri certification standards require a student teaching experience in each area of special education. It is possible for students to become certified as secondary special education teachers with appropriate advising, and additional course work.

At the graduate level the Department of Behavioral Studies offers work leading to the M.Ed. and requisite course work for state certification in Elementary and Secondary Guidance and Counseling, Special Education, School Psychological Examiner, and School Psychologist. Non-certification degree work is available in General Counseling and is designed to prepare students to take the state examination for Licensed Professional Counselor after they have completed the necessary hours of supervised counseling.

Areas of emphasis in the Counseling degree program are Elementary School, Secondary School, or General Counseling. Areas of emphasis in the Special Education program are Behavioral Disorders, Learning Disabilities, Educable Mentally Handicapped, and Early Childhood-Special Education. Courses concentrating in the areas of the Severe Developmentally Disabled and Gifted Education are also offered.

Students wishing to receive Missouri certification in Elementary School Counseling or Secondary School Counseling, School Psychological Examiner, and School Psychologist must complete all required courses in addition to holding teaching certificates valid in Missouri. Non-degree certification meeting the requirements for School Psychologist has been approved by the Missouri Department of Elementary and Secondary Education. Consult your adviser. The General Counseling area, for which there are no certification requirements, is only appropriate for the practice of counseling in non-school settings.

All degree students should consult with their advisers about the requirement of a scholarly paper.

Behavioral Studies

Undergraduate Studies

Bachelor of Science in Education: Special Education

General Education Requirements (46 hours required):

English and Communication (6 hours)

English 10, Composition

Communication, 3 hours

English 210, 3 hours

Mathematics (3 hours)

Mathematics 50, Structure of Mathematical Systems I

No credit toward graduation is granted for

Mathematics 15, Mathematics: Ideas and Structures, unless **Mathematics 50** is completed.

Science (8 hours)

Biology (3)

Physical Science (Laboratory) (4)

Biology 130, Global Ecology (includes laboratory)

Humanities (8 hours)

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

Social Science (21 hours)

History 3, American Civilization, or

History 4, American Civilization

Political Science 11, Introduction to American Politics

Political Science 85, Global Ecology

Psychology 3, General Psychology

Psychology 270, Child Psychology

Economics 306, Microeconomics for the School Curriculum, or

Economics 40, Introduction to the American Economy

Sociology 10, Introduction to Sociology, or any Anthropology course

Related Area Requirements (12 hours)

PHY ED 130, Elements of Health Education

PHY ED 261, Physical Activity of the Exceptional Learner

Program Requirements (24 hours)

EDUC 101, Introduction to Classroom Teaching

ED FND 111, The School in Contemporary Society

ED PSY 312, Psychology of Teaching and Learning

and these **Elementary Education (ELE ED)** courses:

246, Teaching Mathematics in the Elementary School

330, Children's Literature and Reading

336, Teaching Language Arts and Reading, N-9

342, Teaching Remedial Mathematics

385, Teaching Reading in the Elementary School

Special Education Requirements (33 hours)

The following courses are required:

SPC ED 290 Student Teaching in Special Education I

SPC ED 291 Student Teaching in Special Education II

Note **SPC ED 290** and **SPC ED 291** must be taken during the same semester.

ED REM 310, Interpretation of Educational Tests and Measurements

SPC ED 313, The Psychology and Education of Exceptional Individuals

SPC ED 315, Speech and Language Problems of Exceptional Children

SPC ED 320, Behavior Management

CNS ED 331, Counseling Individuals with Special Needs

ELE ED 389, The Analysis and Correction of Reading Problems in the Classroom

and at least **two** of the following Special Education (SPC ED) courses. (It is important that an adviser be consulted.)

330, Introduction to Mental Retardation and Severe Handicaps

332, Education of the Mentally Retarded

345, Introduction to Emotional Disturbance and Learning Disabilities

347, Teaching in the Learning Disabilities Classroom

350, Instructional Techniques for the Emotionally Disturbed Student

371, Methods and Curricula for the Severely Handicapped

372, Screening and Diagnosis of the Developmentally Delayed

Electives may be taken from among the following (strongly recommended): **9 hours**

SPC ED 322, Teaching Mainstreamed Students

ELE ED 241, Teaching of Science in the Elementary School

ELE ED 253, Teaching of Social Studies in the Elementary School

Attention Special Education Majors: New requirements will come into effect September 1996. Consult with your advisor for more specific information.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Studies in Education, 155 Marillac Hall.

Total: 120 hours

Graduate Studies

Admission

In addition to meeting the general admission requirements of the Graduate School, applicants to the Master's of Education with an emphasis in General or School Counseling must complete the Supplemental Application in addition to the Application to Graduate School, have three completed references on file, must have an undergraduate GPA of 3.0, and must take CNS ED 410 Personal and Professional Development in Counseling in their first semester. Admissions will be conducted twice a year. The datelines for admission are July 1 for the Fall semester and December 1 for the Winter semester. Applicants will be accepted on a

Behavioral Studies

provisional basis pending their completion of application materials, CNS ED 410, and review by the Counseling Faculty Review Board.

1. Since it is the objective of the Counselor Education faculty to identify students with low effectiveness potential as early as possible and to initiate the necessary procedures for dealing with such students, the faculty of the Counselor Education Program reserves the right to review students at any stage of their course work. Any grade less than a B in any core counseling course (CNS ED 410, Personal and Professional Development in Counseling; CNS ED 411, Theories of Counseling; CNS ED 493, Counseling Practicum I; CNS ED 494, Guidance Practicum II; and CNS ED 490, Internship) will automatically trigger a review process which may result in the termination of the student's degree program.

2. Students admitted to the Master's Degree Program in Counseling on restricted status must attain a 3.0 GPA for the first twelve hours of graduate course work at UM-St. Louis with no grades less than a B. Restricted students must include the following courses in the first twelve hours of course work: CNS ED 410, Personal and Professional Development in Counseling; CNS ED 411, Theories of Counseling, and CNS ED 493, Counseling Practicum I. A student earning any grade less than a B in any of these three courses, but still maintaining a 3.0 GPA, will be allowed to repeat the course one time and must earn a grade of B or better to be admitted.

Master of Education: Emphasis in Elementary School Counseling

The courses listed below meet the course work requirements for the M.Ed. degree, state certification, and licensing as a professional counselor:

Counselor Education (CNS ED)

CNS ED 410, Personal and Professional Development in Counseling
CNS ED 411, Theories of Counseling
CNS ED 413, Ethical and Professional Issues in Counseling
CNS ED 414, Individual Inventory
CNS ED 420, Group Procedures in Counseling
CNS ED 431, Foundations of School Guidance
CNS ED 443, Career Development
CNS ED 490, Internship (1-10)
CNS ED 493, Counseling Practicum I
CNS ED 495, Foundations for Multicultural Counseling

Psychological Foundations and Human Development

ED PSY 411, Psychology of Education
ED PSY 413, Personality Development and Adjustment
ED PSY 417, Psychology of the Elementary School Child

Educational Research and Evaluation Methods

ED REM 421, Educational and Psychological Measurement
ED REM 422, Individual Assessment of Cognitive Abilities
ED REM 431, Educational Research Methods I

Master of Education: Emphasis in General Counseling

The General Counseling emphasis allows flexibility for developing programs appropriate to particular nonschool settings. Students must have their adviser's approval before taking other than required courses.

Core Curriculum

The courses listed below meet the course work requirements for the M.Ed. degree and license to practice as a professional counselor:

410, Personal and Professional Development in Counseling
411, Theories of Counseling
413, Ethical and Professional Issues Counseling
414, Individual Inventory
420, Group Procedures in Counseling
443, Career Development
490, Internship (1-10)
493, Counseling Practicum I
494, Guidance Practicum II
495, Foundations for Multicultural Counseling

Psychological Foundations and Human Development (ED PSY)

The following course is required:

413, Personality Development and Adjustment

Educational Research and Evaluation Methods

The following courses are required:

ED REM 421, Educational and Psychological Measurement
ED REM 431, Educational Research Methods I

Area of Specialization (9 hours)

Course work in the area of specialization is to be selected in consultation with the adviser.

Master of Education: Emphasis in Secondary School Counseling

The courses listed below meet the course work requirements for the M.Ed. degree, state certification, and licensing as a professional counselor:

Counselor Education (CNS ED)

CNS ED 410, Personal and Professional Development in Counseling
CNS ED 411, Theories of Counseling
CNS ED 413, Ethical and Professional Issues in Counseling
CNS ED 414, Individual Inventory
CNS ED 420, Group Procedures in Counseling
CNS ED 431, Foundations of School Guidance
CNS 443, Career Development or **CNS ED 442**, Career Information
CNS ED 490, Internship (1-10)
CNS ED 493, Counseling Practicum I
CNS ED 495, Foundations for Multicultural Counseling

Psychological Foundations and Human Development (ED PSY)

ED PSY 411, Psychology of Education
ED PSY 413, Personality Development and Adjustment
ED PSY 418, The Psychology of Adolescence

Behavioral Studies

Educational Research and Evaluation Methods (ED REM)

ED REM 421, Educational and Psychological Measurement
ED REM 422, Individual Assessment of Cognitive Abilities
ED REM 431, Educational Research Methods I

Master of Education: Program in Special Education

Graduate students should understand that completion of the M.Ed. program in Special Education does not assure teaching certification. Students seeking the degree and certification should consult with their advisers.

Following is the recommended curriculum for students enrolled in the Learning Disabilities, Mental Retardation, Behavioral Disorders, or Early Childhood-Special Education options.

Area of Specialization Students are required to complete 9-18 hours from the following areas:

Knowledge Base (3-6 hours)

SPC ED 497, Problems
SPC ED 431, Problems in Mental Retardation
SPC ED 443, Learning Disabilities
SPC ED 450, Introduction to Behavioral Disorders
SPC ED 462, Introduction to Early Childhood-Special Education

Curriculum (3-6 hours)

SEC ED 415, The Secondary School Curriculum
SEC ED 416, Curriculum Construction for Secondary Schools
ELE ED 410, Current Research in the Elementary School Curriculum
SPC ED 413, Organizational Foundations for Special Education
SPC ED 421, Prescriptive Teaching of Exceptional Children
SPC ED 430, Education of the Mentally Retarded
SPC ED 444, Education of Children with Learning Disabilities
SPC ED 452, Education of Behaviorally Disordered Children
SPC ED 463, Curriculum, Methods and Materials for Early Childhood-Special Education

Practicum (3-6 hours)

At least three hours must be taken in SPC ED 492, Practicum in Special Education.

Psychological Foundations and Human Development (3-6 hours)

ED PSY 411, Psychology of Education
ED PSY 417, Psychology of the Elementary School Child
ED PSY 418, The Psychology of Adolescence
SPC ED 412, Psychology of Exceptional Children
SPC ED 416, Current Research in Psychology of Exceptional Children

Educational Research and Evaluation Methods (3-6 hours)

ED REM 330, Educational Statistics
ED REM 420, Classroom Measurement and Evaluation
ED REM 421, Educational and Psychological Measurement
ED REM 422, Individual Assessment of Cognitive Abilities

Electives may be chosen from the courses listed here and from other courses with approval of the adviser and department chairperson.

Career Outlook

Elementary and Secondary School Counselors

Future growth in the employment of school counselors may depend on the amount of funds that the federal government provides to the states. The most recent survey in Missouri shows that the supply and demand for counselors is about average for educational personnel. Many teachers who do not intend to leave the classroom pursue this program in order to be better able to meet the needs of their students. Some graduates of the program have left the field of education and have obtained positions such as those cited under General Counseling. With little additional work the school counselor may qualify for certification as a school psychological examiner.

General Counselors

Graduates have been employed in a wide variety of settings: as counselors in community colleges, universities, employment agencies, vocational rehabilitation agencies, probation and parole work, juvenile detention, alcoholism and drug abuse clinics, career planning and placement centers, community mental health agencies, family and children services, and various federally-funded public service projects. Additionally, graduates are employed in career development, business and industry positions, especially in training and personnel areas. Others have moved into roles calling for research and evaluation skills.

Note It should be noted that in Missouri, persons who engage in "professional counseling" in many of these settings are required by law to be licensed as professional counselors.

Special Education

The employment outlook for special education teachers continues to be favorable, especially in certain positions. In addition to special classroom teaching, graduates of the area have been employed as resource-room teachers, clinical diagnostic personnel, itinerant teachers, educational-resource teachers, consultants, educational therapists, sheltered workshop evaluators, and in various supervisory and administrative positions in agencies and schools.

In combination with counseling, educational psychology, physical education, or other areas, careers can be planned in such occupations as vocational evaluator, counselor for special-needs individuals, and special physical educators.

Behavioral Studies

Course Descriptions

Courses in this section are grouped as follows: Counselor Education (CNS ED), Educational Psychology (ED PSY), Educational Research and Evaluation Methods (ED REM), Special Education (SPC ED).

Prerequisites may be waived by consent of the department.

For information about certification and licensure, an adviser should be consulted.

Counselor Education (CNS ED)

310 Introduction to the Counseling Profession (3)

Prerequisite: Junior or senior level standing. This survey course will provide undergraduates and noncounselors with a broad overview of the counseling profession. Topics include a history of the profession, foundations of counseling, ethical, and legal considerations and the role of the counselor in various settings.

314 Human Relations Skills (3)

Prerequisite: Consent of the instructor. A course emphasizing the development of specific skills in human relationships to help facilitate effective interaction among individuals and groups in the helping professions. Readings, discussion, and skill-building exercises will be used to develop various human relations skills.

317 Advisory Programs in the Middle Level School (3)

Prerequisite: ED PSY 312 or graduate status. The role of the middle level educator in the adviser-advisee program is examined. Implications of varying developmental levels on early adolescent decision making is explored. Skills for effective student/teacher communication are highlighted.

318 Counseling Gifted Students (3)

Prerequisites: SPC ED 313, ED PSY 312, or equivalent. This course emphasizes the social and emotional development of gifted and talented individuals. Subject areas will include current research, factors affecting the development of the gifted, and resources and strategies utilized in counseling these students and their parents.

329 Counseling the Chemical Dependent (3)

This course is an introduction to the problems resulting from the abuse of alcohol and other chemicals, with an emphasis on the impact of chemical dependence on the individual, the family, the employer, and the community. The special problems resulting from chemical dependence as it affects various populations, e.g., women, individuals with disabilities, and the elderly, will be analyzed and linked to appropriate counseling strategies.

330 Principles and Procedures for Student Personnel Work (3)

Student personnel work in educational institutions, objectives of student personnel work, and certain pertinent techniques.

331 Counseling Individuals with Special Needs (3)

Prerequisite: SPC ED 313 or equivalent. A course emphasizing counseling skills for individuals who plan to work with the handicapped. Emphasis is placed on using counseling strategies with school-age handicapped children.

332 Youth and Chemical Dependence (3)

Prerequisite: Junior standing. This course provides information about adolescent and preadolescent chemical dependency and its relationship to numerous other developmental and societal factors that place the adolescent "at risk" for the development of substance abuse problems. Skills in the identification, intervention, and referral of chemically-dependent adolescents are emphasized, along with preventive measures and family and school issues.

342 Occupational and Educational Information (3)

Nature and use of occupational and educational information. Characteristics, requirements of occupations, and training opportunities.

404 Seminar (3-10)

410 Personal and Professional Development in Counseling (3)

Prerequisite: Graduate standing. This course provides an in-depth view of the professional counseling field. Attention is focused on the development of the helping relationship, including a review of research on factors which influence helping processes and rapport building, a development of skills used in the counseling process, and increased awareness of how students' values, beliefs, and behaviors are related to counselor effectiveness.

411 Theories of Counseling (3)

Prerequisite: CNS ED 410. This course will explore the philosophical foundations of counseling theory. The major constructs of contemporary counseling approaches will be discussed, and the practical applications of these theories will be analyzed.

412 Theories and Techniques of Counseling Children and Adolescents (3)

Prerequisite: CNS ED 411 (ED PSY 417 or ED PSY 418 or permission of the instructor). This course focuses on counseling theories and their applicability to the developmental special concerns of children and adolescents including abuse, suicide, divorce, and death and dying. Individual, group, and family intervention techniques and consultation skills will be emphasized, as well as legal and ethical considerations for counselors. Strategies presented can be utilized in a variety of settings. Multicultural considerations are also addressed.

Behavioral Studies

413 Ethical and Professional Issues in Individual and Relationship Counseling (3)

Prerequisite: CNS ED 410. Ethical, legal, and professional issues related to counseling are addressed. Ethical dilemmas in the provision of counseling services to individuals, couples, families, and groups are defined. Specific ethical codes of professional organizations are examined.

414 Individual Inventory (3)

Prerequisites: ED REM 421. Uses of educational and psychological appraisal techniques in counseling. Develops counselors' abilities in assisting clients toward self-awareness through the use of test and nontest data. Ethical practices in the use of tests and the maintenance of personnel records are stressed.

420 Group Procedures in Counseling (3)

Prerequisites: CNS ED 411 and CNS ED 493. This course examines the process dynamics of groups including group development, leadership, norms and therapeutic factors. Group counseling theories and approaches used for other group work including skills, personal growth, support, vocational, and developmental guidance groups are included. Knowledge and skills of how to facilitate therapeutic groups are included. Students will be required to be participant-observers or facilitators of a group outside of class time.

423 Introduction to Systems Theory for Marriage and Family Counseling (3)

Prerequisite: CNS ED 411. This course is an introduction to general systems theory and application to marriage and family counseling. Students learn the theoretical basis for intervention and counseling strategies in the context of an ecology of human development. Developmental issues at individual, sibling, marital, family, and community levels and the ways in which various social systems interact with and mutually influence one another are presented.

424 Marriage Counseling and Enrichment (3)

Prerequisite: CNS ED 423 or consent of instructor. This course focuses on the theory and technique of marital or couples counseling and enrichment. Models and methods for prevention and treatment of relationship dysfunction are explored. Relationship developmental issues are addressed. Students are challenged to develop the critical skills necessary to be effective marriage counselors and marital life educators.

425 Family Counseling (3)

Prerequisites: CNS ED 423 and CNS ED 493, or consent of instructor. This course offers an in-depth analysis of strategic, structural, experiential, communications, behavioral, and psychodynamic approaches to systems change and family counseling. The range of techniques and applied practices evolving from each orientation are explored as are normal and dysfunctional family processes. Various counseling modalities, such as individual, concurrent, collaborative, conjoint, group, intergenerational, and networking are also considered.

428 Counseling the Co-Dependent (3)

Prerequisites: CNS ED 411 and CNS ED 329. This course offers an in-depth analysis of the nature and counseling of co-dependency. Materials will include an examination of etiological factors, as well as specific counseling concepts and strategies.

429 Advanced Strategies in Chemical Dependence Counseling (3)

Prerequisite: CNS ED 329 or consent of instructor. This course introduces the student to advanced counseling skills and approaches that can be utilized to match substance abuse interventions to individual client need. Versatility and flexibility are emphasized as well as the use of research supported relapse prevention strategies.

430 Counseling the Dual Diagnosed Substance Abuser (3)

Prerequisites: CNS ED 411 and CNS ED 329. This course introduces the student to the special needs, concerns, and problems encountered when counseling clients who are both mentally ill and chemically dependent. Subject areas include an overview of counseling methodologies, diagnosis, and psychopharmacology.

431 Foundations of School Guidance (3)

The purpose of this course is to give students a foundation for understanding the history, philosophy, and development of school guidance programs. The role functions of the school counselor within a developmental, comprehensive program are examined, along with communication skills necessary for consultation with students, parents, school support staff, and resource people in the community.

436 Student Personnel Work in Higher Education (3)

A survey course in student personnel administration with an emphasis on understanding the college student and on learning ways to meet both his/her academic and nonacademic needs.

442 Career Information (3)

Emphasis is on the nature of the changing labor market and the impact on personal, social, economic, career and educational aspects of individuals and society. Use of occupational and educational information systems and resources to assist with career decisions are examined. The needs of culturally diverse populations are discussed. Use of career and labor market information and programs such as computer technology to access up-to-date career and labor market information is explored. Various theories of career development and career choice will be examined.

443 Career Development (3)

Emphasis is on current theories of vocational/career development, career choice, and techniques and methods of career counseling. Issues concerning education and training, work, leisure, the family, life roles, and culturally diverse populations are studied. The role of career theory in planning, development,

Behavioral Studies

and delivery of a career development program is explored. Various printed resources and computer-assisted career information delivery systems will be discussed.

451 Counseling Parents of Exceptional Children (3)

The development of counseling skills to enable human service professionals to interact productively with families who have handicapped children.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

493 Counseling Practicum I (3)

Prerequisite: CE 410 and CE 411 and consent of the instructor. The purpose of this course is to provide supervised practice in counseling, and the opportunity for students to learn to facilitate personal change and problem solutions using some systematic framework, theoretical orientation, or research base.

494 Guidance Practicum II (3)

Prerequisite: Grade of "B" or better in CNS ED 493 and/or consent of instructor. Supervised practice in counseling.

495 Foundations for Multicultural Counseling (3)

Prerequisite: CNS ED 493. This course will focus on: (1) reviewing knowledge and research in the area of multicultural counseling, (2) developing and/or enhancing skills useful in counseling with individuals from minority populations, and (3) developing levels of personal awareness about stereotypes, and learning how feelings and attitudes about these may impact counseling with individuals from minority populations.

497 Problems (1-10)

Educational Psychology (ED PSY)

211 Growth and Development (3)

Comprehensive study of chronological age norms and the process of growth and development throughout the entire life span. There will be special emphasis on childhood, adolescence, and senescence.

312 The Psychology of Teaching and Learning (3)

Prerequisites: ED FND 111, Psychology 270 or Psychology 271, and admission to the School of Education. Application of the principles of psychology to an understanding of the dynamics of teaching behavior and learning behavior. Involves both theoretical and practical approaches to analysis of the learning environment of the school. Required of all who are preparing to teach.

325 Education and the Psychology of Human Sexuality (3)

The course is designed to provide educators and other human services personnel with knowledge and understanding of various personal and social dimensions of human sexuality.

404 Seminar (1-10)

411 Psychology of Education (3)

Current psychological theories and research that guide inquiry and decision making in education. Topics surveyed include behavior, development, learning, instruction.

412 Psychology of Learning Processes (3)

Prerequisite: ED PSY 411. Advanced study of learning and instructional theories. The historical and theoretical bases of instructional practice are examined.

413 Personality Development and Adjustment (3)

A course in personality development, personality structure, and the dynamics of adjustment. Course materials are oriented to the applied problems of counselors, teachers, administrators, and others in the helping professions.

416 Psychology of Early Childhood Development (3)

A survey of current research on the development of children, ages birth to six, including research in the laboratory, in the home, and in day care and in early intervention projects.

417 Psychology of the Elementary School Child (3)

The application of educational psychology to problems of teaching in the elementary school.

418 The Psychology of Adolescence (3)

A critical psychological analysis of studies and investigation of the various aspects of adolescence.

420 Behavioral Analysis of Human Learning (3)

Prerequisite: Graduate standing. A course in the principles of human learning and the technology of behavior modification, from the perspective of the teaching and counseling professions. Emphasis is placed on its application to school learning and behavior problems and to social behavioral patterns in a variety of appropriate counseling settings.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

497 Problems (1-10)

Behavioral Studies

Educational Research and Evaluation Methods (ED REM)

310 Interpretation of Educational Tests and Measurements (3)

A study of the principles of psychometrics with emphasis upon the classroom interpretation of group tests of cognitive abilities and achievement. Required of all majors in special education.

320 Classroom Testing and Measurement (3)

Basic measurement principles for the classroom teacher: test planning; construction and use of selection, supply, and performance type test items; item analysis for test improvement; methods of summarizing test scores; derived scores for interpretation of performance; development and use of norms in evaluation.

330 Educational Statistics (3)

Statistical methods for preservice educators and beginning graduate students: frequency distributions, measures of central tendency, variability, sampling, and correlation.

404 Seminar (1-10)

Prerequisite: Consent of instructor. Educational research and evaluation methods seminar addressing special issues and topics not normally included in the regular statistics, research methods, evaluation, and measurement courses.

412 Evaluation and Applications of Computers in Education (3)

Prerequisite: ED S&R 427 or consent of instructor. Review of a computer language and evaluation of the various uses and capabilities of computers in the teaching, administration, and counseling areas of education. Familiarization with computing facilities and package programs.

420 Classroom Measurement and Evaluation (3)

An introductory graduate course to classroom testing and evaluation: comparison of criterion and norm referenced theory and technique; classical test theory, reliability, validity and associated descriptive statistics; derived and transformed scores; preparation of instructional objectives for use in developing the classroom test; evaluation of student achievement and instructional effectiveness through testing.

421 Educational and Psychological Measurement (3)

An introductory graduate course in testing and measurement theory in the affective behavior domain: reliability, validity, and associated descriptive statistics; correlation and simple regression; derived and transformed scores; interpretation of test scores based upon theory of psychological tests; measurement of aptitude, vocational interests, and personal- social adjustment.

422 Individual Assessment of Cognitive Abilities (3)

Prerequisite: ED REM 310, or 320, or 420, or 421, or consent of instructor. A course to develop administrative and interpretive skills in the use of individually administered tests such as the Wechsler scales, the Stanford-Binet, and similar instruments.

429 Advanced Test Theory in Education (3)

Prerequisite: ED REM 420, or ED REM 421, or consent of instructor. An advanced course in measurement theory and practice: issues of reliability, validity, and item analysis for both criterion and norm referenced tests; introduction to factor analysis theory and technique in the development and analysis of test structure and validity; introduction to item response theory and techniques for the improvement of educational testing and research.

431 Educational Research Methods I (3)

Prerequisites: At least one of the following: ED REM 310, 320, 330, 420, or 421, or consent of instructor. An introductory course in educational research methodology. Descriptive statistical concepts learned in the prerequisite course are extended to: inferential statistics and hypothesis testing; research design issues such as internal/external threats to validity; basic designs to minimize these threats; special issues associated with positivistic and nonpositivistic research paradigms; and the structure and content of the research proposal.

432 Educational Research Methods II (3)

Prerequisite: ED REM 431 or consent of instructor. A survey of advanced educational research methods: hypothesis testing using classical factorial analysis of variance; analysis of covariance; the general linear model; multiple and partial correlation; multiple linear regression; and advanced research designs for educational problems. Quantitative statistical methods associated with qualitative research situations are introduced.

433 Educational Research Methods III (3)

Prerequisite: ED REM 431 or consent of instructor. An advanced educational research methods course focusing on issues and techniques of multivariate analysis: multivariate analysis of variance (MANOVA); canonical correlation, discriminant function, factor, and cluster analysis; advanced topics in multiple linear regression analysis; and research designs and measurement techniques typically associated with these statistical methods.

435 Multiple Linear Regression in Education (3)

Prerequisite: ED REM 432 or ED REM 433. An advanced educational research methods course using MLR models and techniques to evaluate educational problems. Focus is on the theory, special issues, and techniques in the application of MLR to qualitative and quantitative educational research studies.

Behavioral Studies

436 Nonparametric Statistics in Education (3)

Prerequisite: ED REM 431 or consent of instructor. An advanced educational research methods course in alternative analysis procedures to classical parametric statistics. Nonparametric methods are surveyed and their data requirements compared to their parametric counterparts. Educational research problems appropriate to or adaptable to these methods are studied.

437 Field Based Research Methods (3)

Prerequisite: ED REM 431 or consent of instructor. An advanced educational research methods course in the major paradigms of positivism and postpositivism. The principal traditions of qualitative research methods are reviewed. Alternative sampling strategies, observational measurement, individual and group interview techniques, and questionnaire construction are studied. Qualitative data analysis is addressed from two perspectives: nonquantitative and statistical. Quality control to establish the trustworthiness and authenticity of field studies is reviewed.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

497 Problems (1-10)

Prerequisites: At least one previous ED REM course AND consent of course supervisor. Individual study on topics pertaining to educational measurement, evaluation, statistics, and research design.

Special Education (SPC ED)

192 Field Experience in Special Education (3)

Intensive early field experience involving on-site observation and limited participation with exceptional individuals in schools and/or other educational agencies. This course is open to all students.

242 Characteristics of Learning Disabilities (3)

A study of the divergent characteristics of children with perceptual impairments. This course consists of fifteen half-hour tapes, designed to offer instruction at an undergraduate level on the nature of children with learning disabilities, and the roles of educators, parents, and auxiliary personnel in diagnosis and remediation. Historical perspectives and future trends will be explored. The tapes are followed by student contact with the instructor, for discussion, work evaluation, and testing.

290 Student Teaching in Special Education I (5)

Prerequisites: SPC ED 313, SPC ED 320, SPC ED 332 and admission to student teaching. Must be taken with SPC ED 291 and must immediately precede SPC ED 291 in the semester. Clinical teaching experience in special

education classrooms in schools under University and school supervision. Required of all majors in special education.

291 Student Teaching in Special Education II (5)

Prerequisite: SPC ED 290. Must be taken with SPC ED 290, and must immediately follow SPC ED 290 in the semester. Clinical teaching in special education classrooms in schools under University and school supervision. Assignments will be in different school districts, buildings, serving families of different socioeconomic and cultural backgrounds, and at different grade levels from those of the SPC ED 290 assignments. Required of all majors in special education.

311 Sex Education for Exceptional Individuals (3)

Prerequisite: Consent of instructor. Course is designed to give teachers a thorough knowledge and understanding of the issues, problems, teaching techniques, and the current curricular resources of teaching sex education to handicapped individuals.

313 The Psychology and Education of Exceptional Individuals (3)

Prerequisite: Psychology 270 or Psychology 271 or equivalent. The psychology and education of individuals with special problems and/or abilities. Survey of theories and strategies for the learning-teaching process and of sources of assistance to educators and parents. Required in certification programs.

315 Speech and Language Problems of Exceptional Children (3)

Prerequisites: ED FND 111, SPC ED 313, and admission to the School of Education. Study of the problems associated with speech and language development and the techniques employed by classroom teachers to lessen these problems for children. Required for all majors in special education.

320 Behavior Management (3)

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

322 Teaching Mainstreamed Students (3)

Prerequisite: SPC ED 313 or SPC ED 412, or equivalent. The course is designed to assist regular classroom teachers to better understand the nature and needs of handicapped students who are likely to receive much of their daily instruction in the regular classroom. Regular teachers' roles and responsibilities, teaching strategies, and adjustment options in integrating handicapped students will be considered.

Behavioral Studies

330 Introduction to Mental Retardation and Severe Handicapped (3)

Prerequisite: SPC ED 313. An introductory course describing characteristics, classification, and causes of mental retardation and severe handicapped.

332 Education of the Mentally Retarded (3)

Prerequisites: ED FND 111, SPC ED 313, and SPC ED 330. Methods and techniques of use in the education of mentally retarded children. Required of all who are preparing for certification in special education for the mentally retarded.

342 Career Education for the Special Needs Individual (3)

Prerequisite: Consent of instructor. This course is intended to provide information to teachers and other personnel charged with the responsibility of delivering career development services to special needs clientele. Topics including designing a K-12 career education curricula, techniques of improving job readiness for the unemployed and underemployed, and ways to utilize community employment resources for the handicapped.

345 Introduction to Emotional Disturbances and Learning Disabilities (3)

Prerequisite: SPC ED 313. A comparative approach to these two areas of specialization regarding their history, etiologies, definition, prevalence, and service delivery systems.

347 Teaching in the Learning Disabilities Classroom (3)

Prerequisites: SPC ED 313 and SPC ED 320. An application of the instructional techniques to be utilized with learning disabled students. Instructional techniques, appraisal for instruction, interdisciplinary team work, parental involvement, individualized education plans, and classroom techniques will be presented in this class.

350 Instructional Techniques for the Emotionally Disturbed Student (3)

Prerequisites: SPC ED 313, SPC ED 320, and SPC ED 345. A course designed to instruct students in the management and instructional strategies necessary to educate children with emotional disturbances.

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

Prerequisite: SPC ED 330 or equivalent or consent of instructor. An examination of basic sensory-motor development and associated disorders to enable teachers to work more effectively with occupational and physical therapists. Basic techniques used by therapists are presented together with an exploration of the teacher's role regarding sensory-motor programming. Required for certification for teaching individuals with severe handicaps.

371 Methods and Curricula for Severely Handicapped (3)

Prerequisite: SPC ED 370 or consent of instructor. This course begins with the application of the clinical teaching model to the severely handicapped population regarding objectives, training methods, and program process monitoring. It also includes critical analysis of existing curricula and methods of classroom or living unit organization. Required for certification in Severe Handicapped.

372 Screening and Diagnosis of the Developmentally Delayed (3)

Prerequisites: ED REM 310 or equivalent and SPC ED 313. This course addresses the content, techniques, and special problems related to the assessment of handicapped individuals in the birth-to-five developmental range. Students gain experience in construction, administration, and interpretation of assessment tools used with low functioning handicapped individuals. Required for certification in Severe Handicapped and Early Childhood-Special Education.

382 An Introduction to Gifted Children (3)

Prerequisite: SPC ED 313. This course provides an introduction to gifted children. Their characteristics, cognitive abilities, special abilities, and creativity will be reviewed. Current problems, research, and issues concerning the gifted are covered.

384 The Education of Gifted Children (3)

Prerequisite: SPC ED 313. This course deals with methods, techniques, and curricular modifications necessary for the effective education of gifted children.

390 Student Teaching in Special Education III (5)

Prerequisites: SPC ED 291 or equivalent and admission to student teaching. Clinical teaching experience in special education classrooms in schools under University and school supervision with seminar included. For students who wish an additional student teaching experience.

412 Psychology of Exceptional Children (3)

An in-depth analysis of the unique psychological problems of exceptional children and youth. Current psychological theories and research emphasized.

413 Organizational Foundations for Special Education (3)

Prerequisite: SPC ED 313 or SPC ED 412. A study of organizational issues in special education and their implications for practices and procedures. Specific attention will be given to special education delivery systems, compliance standards, funding sources, and regulatory standards.

Behavioral Studies

416 Current Research in Psychology of Exceptional Children (3)

Prerequisite: Permission of instructor/adviser. A study of current issues, trends, and major research in special education. Areas of investigation shall center around major developments in exceptionalities, situations relative to programming projected needs, and considerations and utilization of investigation of the exceptional individual. Graduate students should have experience or an undergraduate background in exceptionalities prior to admission to this course.

421 Prescriptive Teaching of Exceptional Children (3)

Prerequisite: SPC ED 412. Course will instruct teachers on how to develop and implement prescriptive educational programs for exceptional children and adolescents based upon available information. Students will become familiar with prescriptive systems which will enable them to utilize sources of information for remedial and developmental needs.

430 Theories and Practice in Mental Retardation (3)

Prerequisite: Permission of instructor. An advanced study of the pedagogical and theoretical problems germane to the area of mental retardation with particular emphasis on the application of current research findings to the solution of these problems.

431 Education of Individuals with Mental Retardation (3)

Prerequisite: SPC ED 430. A systematic study of modern educational procedures for students with mental retardation. Methods and materials for educating students with mental retardation are stressed.

443 Learning Disabilities (3)

Prerequisite: SPC ED 412. An advanced study of the pedagogical and theoretical problems germane to the area of learning disabilities with particular emphasis on the application of current research findings to the solutions of these problems.

444 Education of Children with Learning Disabilities (3)

Prerequisite: SPC ED 443. A systematic study of modern educational procedures for children with learning disabilities. Methods and materials for educating children with learning disabilities are stressed.

450 Introduction to Behavioral Disorders (3)

Prerequisite: SPC ED 412. An advanced study of the pedagogical and sociological problems germane to behavioral disorders with particular emphasis on the application of current research findings to the solutions of these problems.

452 Education of Behaviorally Disordered Children (3)

Prerequisite: SPC ED 450. A systematic study of modern educational practices for behaviorally disordered children. Methods and materials for educating behaviorally disordered children are stressed.

462 Introduction to Early Childhood Special Education (3)

Prerequisite: SPC ED 412. A study of issues and concepts central to special education for the young handicapped child. Focus will be placed upon program models, screening and assessment procedures, and curriculum concepts. An ecological approach to special education will be emphasized.

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

Prerequisites: SPC ED 412 and SPC ED 462. In-depth study of integrated assessment-based curriculum development for preschool handicapped children. Emphasis will be on individualized educational planning and implementation.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

492 Practicum in Special Education (3-6)

Prerequisite: Two courses in area of concentration. A supervised internship in educating exceptional children in a school setting or other appropriate site.

497 Problems (1-10)

Prerequisite: SPC ED 412 or equivalent. Selected problems on student-learner exceptionalities for individuals at the postbaccalaureate level.

Educational Studies

Faculty

Edith M. Young, Chairperson; Associate Professor*
Ed.D., University of Missouri-Columbia

James E. Walter, Associate Professor*
Ph.D., University of Wisconsin-Madison

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

Arthur H. Shaffer, Professor*
Ph.D., University of California-Los Angeles

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

Paul D. Travers, Director, Undergraduate Teacher Education;; Professor*
Ed.D., George Peabody College

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

Henry R. Weinstock, Professor*
Ed.D., University of Georgia

Joy E. Whitener, Dean Emeritus; Professor Emeritus*
Ed.D., Washington University

Charles J. Fazzaro, Associate Professor*
Ed.D., West Virginia University

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

John A. Henschke, Associate Professor*; Continuing Education Specialist, University Extension-East Central Region
Ed.D., Boston University

Everette E. Nance, Associate Professor*; Dean, Evening College; Director, Midwest Community Education Development Center
Ed.D., Western Michigan University

Angelo H. Puricelli, Associate Professor*; Associate Dean for Continuing Education-Extension
Ph.D., St. Louis University

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

Jim Mansfield, Assistant Professor
Ph.D., University of Missouri-Columbia

Cathy Vatterott, Assistant Professor*
Ph.D., St. Louis University

Wendell L. Smith, Assistant Professor*; Associate Vice Chancellor for Academic Affairs; Dean of Continuing Education-Extension
Ph.D., Ohio State University

Fred E. Bradley, Assistant Professor*
Ph.D., Southern Illinois University-Carbondale

Beth Pike, Visiting Assistant Professor*
Ed.D., University of Missouri-St. Louis

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

Robert H. Clapp, Lecturer; Director, Instructional Technology Center
Ed.S., University of Connecticut

Mimi J. LaMarca, Lecturer; Director of Admissions and Registrar
M.Ed., University of Missouri-St. Louis

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

*members of Graduate Faculty

General Information

The faculty of the Department of Educational Studies are housed on the second floor of Marillac Hall. Answers to questions about the department and its offerings may be obtained from the department office, 269 Marillac Hall.

The department coordinates programs that prepare students for teaching these subjects in secondary schools (grades 7-12) and middle schools: biology, chemistry, English, French, German, history, mathematics, music, physics, psychology, social studies, speech, and Spanish. A special feature of these programs is the close interdisciplinary cooperation between the professional School and other University departments. The business education major is offered within the School of Education.

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

Note The General Assembly enacted a law during 1984 eliminating Life Teaching Certificates after September 1, 1988. The State Board of Education is authorized to develop new standards for one or more renewable professional certificates, based on specific requirements for training and experience. Details regarding these standards are available in the Office of Undergraduate Studies in Education.

At the graduate level the department provides a program leading to the M.Ed. in secondary education, secondary education with emphasis in adult education, certification studies with Adult Basic Education, secondary education with emphasis in reading, and secondary education and certification. It offers master's degree work and advanced certification studies in elementary and secondary school administration, special education administration, and the school superintendency.

Community education is an additional emphasis offered in the educational administration program. Work in educational technology is also available.

Undergraduate Studies

Degree Requirements

Interdisciplinary Program: Bachelor of Science in Education in Secondary Education or Bachelor's Degree in the College of Arts and Sciences

General Education Requirements Bachelor's degree candidates in secondary education must complete the University General Education Requirements and must meet the Missouri secondary teacher certification general education standards as follows.

Educational Studies

Humanities

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

Communication Skills

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

Social Studies

Courses in American history and American government, and **one** additional course selected from the following areas: geography, sociology, economics, anthropology, psychology.

Natural Science

One course in a physical or earth science; **one** course in a biological science. At least one of these courses must have a laboratory component.

Mathematics

One college-level mathematics course.

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

Program Requirements

28 hours required

The following education and psychology courses meet the state professional education standards:

- ED FND 111**, The School in Contemporary Society
- Psychology 271**, Adolescent Psychology
- ED PSY 312**, Psychology of Teaching and Learning
- SEC ED 213**, Techniques of Secondary School Teaching and Field Experience
- SEC ED 290**, Secondary School Student Teaching
- SPC ED 313**, The Psychology and Education of Exceptional Individuals
- SEC ED 386**, Teaching Reading and Study Strategies in Secondary School Content Area

and the appropriate course titled Curriculum and Methods of Teaching _____.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

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

Area of Concentration: Teaching Fields

Degree candidates must complete 30 to 40 hours of specific subject requirements in one of the following fields: English, foreign language (French, German, or Spanish), mathematics, music, science (biology, chemistry, physics), or social studies education.

Social studies students must complete a major in one of the following disciplines: anthropology, economics, geography, history, political science, psychology, or sociology; and meet these minimum social science requirements: American history, 12 hours; European or world history, 9 hours; United States and/or state government, 6 hours; economics, 3 hours; behavioral science (sociology, anthropology, or psychology), 6 hours; geography, 3 hours; and 2 hours of elective social studies credit.

Total: 120 hours

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

General Education Requirements Business education majors must complete the University General Education Requirements, Missouri certification requirements, and the following education and psychology courses:

Program Requirements

32 hours required

- ED FND 111**, The School in Contemporary Society
- Psychology 271**, Adolescent Psychology
- ED PSY 312**, Psychology of Teaching and Learning
- SEC ED 213**, Techniques of Secondary School Teaching and Field Experience
- SEC ED 290**, Secondary School Student Teaching
- SEC ED 204**, Seminar: Business Education Student Teaching
- SPC ED 313**, The Psychology and Education of Exceptional Individuals
- SEC ED 386**, Teaching Reading and Study Strategies in Secondary School Content Areas

Academic Major

36 hours required

These **Secondary Education (SEC ED)** courses:

- 162**, Computer Keyboarding and Formatting
- 261**, Methods of Teaching Keyboarding and Formatting
- 263**, Methods of Teaching Accounting
- 264**, Methods of Teaching Basic Business Subjects
- *265**, Secretarial Practice
- 267**, The Secondary Business Curriculum
- *362**, Shorthand/Alpha Systems: Theory and Application
- 361**, Information Processing: Applications and Techniques of Teaching

plus these **Business Administration** courses

- 103**, Computers and Information Systems
- 140**, Fundamentals of Financial Accounting
- 145**, Managerial Accounting
- 156**, Legal Environment of Business
- 256**, Business Law I
- 206**, Basic Marketing
- and
- Economics 51**, Principles of Microeconomics

Note Grades of C or better are required in all courses in the academic major. This long standing policy will be rigorously enforced.

Educational Studies

*Majors working toward shorthand certification must take these additional courses, and are **not** required to take Business Administration 206.

Electives

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

Total: 120 hours

Graduate Studies

Master of Education: Secondary Education

The M.Ed. program in secondary education is flexibly designed to allow for the special interests of teachers, department chairpersons, curriculum workers, instructional supervisors, reading specialists, and those working in adult education. Programs must be planned with advisers and meet the approval of the Department, School, and Graduate School.

Degree Requirements for All Secondary Education Majors

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

Core Requirements (9 hours)

ED FND 421, Philosophy of Education
SEC ED 415, The Secondary School Curriculum
SEC ED 420, The Improvement of Secondary School Teaching

Exit Requirement (3 hours)

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

ED FND 422, Analysis of Educational Issues
SEC ED 416, Curriculum Construction for Secondary Schools

In addition to the above courses, the following is a third exit course option, limited solely to those in the Adult Education Emphasis or Business Education teaching field:

ADU ED 490, Internship (in Adult Education)

Any of the above courses, when **not** used to meet the exit requirement, may be included as an elective in the program.

Master of Education: Secondary Education with Emphasis in Curriculum and Instruction

The M.Ed. with an emphasis in curriculum and instruction is designed to enable candidates to further their competencies as teachers or curriculum/instructional leaders.

Degree Requirements (32 hours)

1) Core Requirements (9 hours as specified above)

2) Curriculum/Instruction Core (8 hours)

Courses are to be selected in consultation with an adviser in the curriculum/instruction field from among the following:

EDUC 415, Seminar II, Curricular Issues and Problems
SEC ED 386, Problems of Teaching Reading in Secondary Schools
SEC ED 414, Teaching the Gifted and Talented in Secondary Schools
SEC ED 416, Curriculum Construction for Secondary Schools
SEC ED 418, The Junior High/Middle School
SEC ED 422, Individualizing Instruction in Secondary Schools
PHY ED 462, The Physical Education Curriculum

3) Teaching Field Core (8 hours)

Courses approved by the Graduate School for M.Ed. programs are to be selected in consultation with an adviser in secondary education.

4) Electives

Additional courses may be taken in the School of Education and/or curriculum and instruction areas to provide a consistent program upon the recommendation of the adviser.

Master of Education: Secondary Education with Emphasis in Adult Education

The M.Ed. with an emphasis in adult education is designed to enable candidates to further their competencies as teachers, administrators, and program planners in various adult education settings through the study of core courses in adult education, plus a minimum of eight hours of elective work appropriate to the candidates' particular needs. Adult Basic Education (ABE) practitioners can complete course requirements for certification within the scope of or independent from the master's degree program.

Degree Requirements (32 hours)

1) Core Requirements (9 hours as specified above)

2) Adult Education Core (8 hours)

Courses are to be selected in consultation with an adviser in the adult education teaching field from among the following courses:

***ADU ED 412**, Foundations of Adult Education
 ***ADU ED 413**, Improvement of Instruction in Adult Education
 ***ADU ED 414**, Curriculum Theory and Development in Adult Education
 ***ED ADM 480**, Administration of Adult and Community Education
ADU ED 490, Internship, or **ADU ED 497**, Problems in Adult Education

Educational Studies

3) Electives

Additional courses may be taken in the School of Education and/or teaching field to provide a consistent program upon the recommendation of the adviser.

Adult Basic Education Certification

- **ADU ED 311**, Teaching Basic Reading Skills to Adults
- **ELE ED 445**, Problems of Teaching Arithmetic in the Elementary School, or **ELE ED 346**, Advanced Methods in Elementary School Mathematics

*Eight semester hours from these six courses, and three hours of Adult Education electives, in addition to SPC ED 313, Psychology and Education of Exceptional Individuals, are required for five-year certification from the Missouri Department of Elementary and Secondary Education. New requirements will be implemented in 1994 and are currently required for all new ABE teachers.

Adult Basic Education (ABE) Certification

1) Requirements for two-year teacher's certificate in ABE:

- a. A holder of a bachelor's degree from a four-year college or university.
- b. Annual attendance at Department of Elementary and Secondary Education (DESE) approved Adult Basic Education teacher certification workshops. (The two-year ABE certificate may be renewed twice. Requirements for a five-year certificate must be completed by the end of the sixth year.)

2) Requirements for a five-year teacher's certificate in ABE:

- a. A holder of a bachelor's degree from a four-year college or university.
- b. Earn eight semester hours in DESE approved Adult Education classes, institutes, or workshops. (The five-year ABE certificate may be renewed an unlimited number of times by repeating the requirements during the previous five years.)

Note This would provide certification for (1) ABE teachers who are teaching less than half-time and/or without a contract and/or not in a public school or an accredited private school; and for (2) ABE teachers with bachelor's degrees and experience teaching adults who do not have regular teacher certification. Information is available for Professional Certificates for full-time ABE teachers.

Master of Education: Secondary Education with Emphasis in Reading

The M.Ed. with an emphasis in secondary reading is designed to enable candidates to further their competencies as teachers of reading and to prepare for positions as reading specialists, reading consultants, and/or further graduate study.

Degree requirements (32 hours)

1) **Core Requirements** (9 hours as specified above)

2) Reading Core

Required courses in reading should be taken in the following sequence:

- SEC ED 386**, Teaching Reading and Study Strategies in Secondary School Content Areas
- ELE ED 486**, Clinical Diagnosis and Treatment of Reading Disabilities
- ED REM 422**, Individual Assessment of Cognitive Abilities
- ELE ED 493**, Clinical Methods in Child Study I
- ELE ED 494**, Clinical Methods in Child Study II
- ELE ED 482**, Problems and Research in Teaching Elementary School Reading

To complete Missouri reading certification for grades K-12, the following must be taken or have been completed at the undergraduate level. Students should see an adviser.

- SPC ED 315**, Speech and Language Problems of Exceptional Children, or **ECH ED 331**, Language Acquisition and Development in Early Childhood
- SPC ED 320**, Behavior Management
- CNS ED 327**, Personal and Professional Development in Counseling
- ED PSY 417**, Psychology of the Elementary School Child
- ED PSY 418**, The Psychology of Adolescence

3) The same exit requirement exists as outlined above for all students in the Master of Education degree program in Secondary Education.

Master of Education: Secondary Education and Certification

The M.Ed. in secondary education requires a minimum of 32 hours of graduate credit. Depending upon the area of secondary school specialization, certification may require from 28 to 36 semester hours of undergraduate course work, making a total of over 60 semester hours of graduate and undergraduate work. Under the combined program up to 15 hours of graduate courses may be substituted for the same number of undergraduate courses. Students seeking such certification must obtain advisement from the office of Undergraduate Studies in Education, the Department of Educational Studies, and from the appropriate faculty joint appointee in the Department of Educational Studies and respective Arts and Sciences department.

Degree Requirements

Required and Recommended Courses

1) Professional Requirements

- SEC ED 2XX**, Curriculum and Methods of Teaching _____
- SEC ED 213**, Techniques of Secondary School Teaching and Field Experience
- SEC ED 290**, Secondary School Student Teaching
- SEC ED/A&S Dept., 2XX or 3XX** Teaching Intern Seminar (1-3)

Educational Studies

2) Certification and M.Ed. Requirements

ED PSY 312, The Psychology of Teaching and Learning
SEC ED 386, Problems of Teaching Reading in Secondary Schools

ED PSY 418, The Psychology of Adolescence
SPC ED 412, Psychology of Exceptional Children
ED FND 421, Philosophy of Education
SEC ED 415, The Secondary School Curriculum

Electives

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

Educational Administration Options

The options in educational administration include elementary and secondary school administration and certification for school district administration. They are part of a continuous two-phase, NCATE- and DESE-approved program. In the first phase, students earn the M.Ed. The second phase leads to the completion of a two-year course of study in educational administration and is designated the Advanced Certification Studies (ACS) program. Both phases are correlated with current Missouri requirements for certification as either a principal or director of elementary or secondary education or school superintendent in Missouri schools.

The options in educational administration are more than simply lists of courses. Each is an organized curricular offering.

Responsibility for developing appropriate individual programs rests primarily with students. They are, therefore, encouraged to take full advantage of the program planning assistance provided by advisers, especially during the early phase of the program(s).

Master of Education and Advanced Certification Studies (ACS): Educational Administration

The recommended curriculum for the M.Ed. in Educational Administration is 33 credit hours. The curriculum for Advanced Certification Studies is 60 credit hours.

Requirements

1) Educational Core (Required for M.Ed. and ACS)

ED FND 421, Philosophy of Education
ED FND 435, History of Western Education, or **ED FND 330**, History of American Education
ED ADM 411, Organizational Theory & Analysis in Education
ED ADM 416, Policymaking in Education

2) Research Core (Required for both M.Ed. and ACS)

***ED ADM 435**, Education Administration Policy Research
ED REM 330, Educational Statistics

3) Educational Administration Core (Required for both M.Ed. and ACS)

ED ADM 414, Foundations of Educational Administration
ED ADM 460, School Law
ED ADM 471, School Staff Development & Supervision

4) School Administration Specialization (Required for both M.Ed. and ACS)**

For Elementary School Administration

ED ADM 441, Elementary School Administration
ELE ED 411, Curricular Issues in the Elementary School, or
ELE ED 422, Curriculum Construction in Elementary Schools

For Secondary School Administration

ED ADM 451, Secondary School Administration
SEC ED 415, Secondary School Curriculum, or **SEC ED 416**, Curriculum Construction for Secondary Schools

5) Internship (Required for state certification, but not for M.Ed.)

ED ADM 490, Internship

6) Technical Aspects of Educational Administration

(Electives, 12 hours for ACS. This list is suggestive; other approved courses may be used to meet the 12-hour requirement.)

ED ADM 425, Organizational Change in Education
ED ADM 429, The Department Head
ED ADM 465, State and Federal Financing of Public Education
ED ADM 466, Principles of Public School Finance in Missouri
ED ADM 475, School Buildings and Sites
ED ADM 480, Administration of Adult and Community Education
ED ADM 481, Programming in Community Education and Adult Education
ED ADM 485, Financing of Community Education
ELE ED 410, Current Research in the Elementary School Curriculum
ELE ED 411, Curricular Issues in the Elementary School
ELE ED 422, Curriculum Construction in the Elementary School
ELE ED 423, Curricular Implementation in the Elementary School
SEC ED 415, The Secondary School Curriculum
SEC ED 416, Curriculum Construction for Secondary Schools
SEC ED 418, The Junior High/Middle School
SEC ED 420, The Improvement of Secondary School Teaching
SEC ED 422, Individualizing Instruction in Secondary Schools
ED TEC 433, Educational Technology Systems Management
ED REM 420, Classroom Measurement and Evaluation

7) Human Aspects of Educational Administration

(Electives, 12 hours for ACS. This list is suggestive; other approved courses may be used to meet 12-hour requirement.)

ED ADM 422, Leadership in Educational Administration
ED ADM 432, Problems in School Public Relations
ED ADM 456, Extracurricular Activities
ED ADM 470, School Personnel Administration
ED ADM 473, Collective Negotiations in Educational Organizations
ED FND 422, Analysis of Educational Issues
ELE ED 425, Elementary School Supervision
SEC ED 425, Secondary School Supervision
ED PSY 418, The Psychology of Adolescence
SPC ED 313, The Psychology and Education of the Exceptional Individual
CNS ED 431, Foundations of School Guidance

Educational Studies

*Exit Requirement for M.Ed. and ACS. This course must be taken within the last nine (9) semester hours of either M.Ed. or ACS.

**Students choose either the sequence for elementary school administration or the sequence for secondary school administration.

Master of Education: Educational Administration with Emphasis in Community Education

This is a 32-credit hour program for those students interested in community education.

Degree Requirements

1) Common Educational Foundations (9 hours required)

ED FND 421, Philosophy of Education

***SPEC ED 313**, The Psychology and Education of Exceptional Individuals

ED REM 420, Classroom Measurement and Evaluation or

ED REM 330, Educational Statistics

*Students who have already had an undergraduate course related to Psychology of Exceptional Children need not take **SPC ED 313**.

2) Administrative Foundations (12 hours required)

ED ADM 411, Organizational Theory and Analyses in Education

For elementary administration community education

ED ADM 441, Elementary School Administration

ELE ED 425, Elementary School Supervision

ELE ED 410, Current Research in the Elementary School Curriculum

For secondary administration community education

ED ADM 451, Secondary School Administration

SEC ED 425, Secondary School Supervision

SEC ED 415, The Secondary School Curriculum, or **SEC ED 416**, Curriculum Construction for Secondary Schools

3) Community Education Emphasis Area (9 hours required)

ED ADM 480, Administration of Community and Adult Education

ED ADM 481, Programming in Community and Adult Education

ED ADM 490, Internship

4) Recommended Electives

ED ADM 485, Financing of Community Education

ED ADM 432, Problems in School Public Relations

ED ADM 460, School Law

ED ADM 485, State and Federal Financing of Public Education

ED ADM 414, Foundations of School Administration

5) Minor Area of Concentration

(6 hours required for ACS)

Students are expected to demonstrate competence in at least one other field. Other fields may include sociology, political science, business administration (industrial-labor relations or other area), economics, educational research, and other approved fields. Competence may be shown by successful completion of at least six hours in one of these fields.

6) Internship or Field Study (Required ACS only)
ED ADM 490, Internship

Career Outlook

Secondary school teaching positions are more plentiful than in the recent past. Most certificated teachers can find jobs if they are willing to go where there are openings.

Teachers of mathematics and the sciences are in extremely high demand. The fields of humanities and social sciences have somewhat better immediate prospects than in the past. The preparation that teacher education graduates receive enables them to do well in service and sales positions. Job opportunities in the educational and training facets of these fields are good.

People with preparation in secondary education, educational technology, adult education, and educational administration find positions in education/training units in businesses, industries, health care organizations, governmental units, community agencies, and service institutions.

School administration opportunities are available to qualified individuals, particularly those who have completed advanced graduate programs. Community education is an expanding field and will need increasing numbers of people with preparation in that specialty.

Educational Studies

Course Descriptions

Courses in this section are grouped as follows: Adult Education (ADU ED) Educational Administration (ED ADM) Educational Foundations (ED FND) Educational Technology (ED TEC) and Secondary Education (SEC ED).

Prerequisites may be waived by consent of the department.

Adult Education (ADU ED)

310 Community and Adult Education (3)

Prerequisite: For upper-division students, practitioners, or by consent of instructor. This course presents an overview of the models, practices, programs, and processes of community and adult education.

311 Teaching Basic Reading Skills to Adults (3)

A study of the reading process and of the characteristics of adult learners with a focus on instructional techniques and materials useful in upgrading the performance of adults with deficient reading skills.

412 Foundations of Adult Education (3)

A comprehensive, systematic foundation for adult education. It will relate (a) the pragmatic philosophy and objectives of adult education in America to (b) the continuing education of the adult in a progressive social context.

413 Improvement of Instruction in Adult Education (3)

Prerequisite: ADU ED 412 or consent of instructor. A study of selected methods and instructional techniques appropriate for the teaching of adults. An examination of current research will be made as it relates to the problems of instructing adults.

414 Curriculum Theory and Development in Adult Education (3)

Prerequisites: ADU ED 412 and ADU ED 413 or consent of instructor. A study of curriculum theory and its application to adult education. Particular emphasis will be placed on the development of model curricula for various programs in adult education.

425 Principles of Business Education (3)

Prerequisites: Business education certification and consent of instructor. Designed for the business education teacher, this course examines in depth the principles, practices, and problems of business education programs. It emphasizes research into historical and philosophical implications, the influence of contemporary attitudes on business education, evaluation of current programs, and development of innovative approaches. It may be applied toward Missouri Vocational Business Education certification.

426 Coordination of Cooperative Vocational Programs (3)

This course deals with student selection procedures. Coordinating vocational instruction and planned employment experiences; research techniques for collecting and analyzing data for process and product evaluation; procedures for implementing new ideas and innovations in cooperative vocational education programs. The course is designed for vocational teachers and for teachers who wish to qualify as coordinators of cooperative vocational programs. This course may be applied toward Missouri Vocational Certification.

427 Improvement of Instruction in Teaching Business Subjects (3)

Prerequisites: Business education certification and consent of instructor. Designed for business education teachers, this course examines current trends in planning, organizing, developing, and evaluating instructional materials relevant to business education classes. Emphasis is placed on research techniques and strategies for selecting and utilizing appropriate curriculum materials, resources, and media to match learning needs. This course may be applied toward Missouri Vocational Certification.

432 Teaching in the Community College (3)

This course is designed for students considering a teaching career in the community college. The main emphasis of the course will be to expose students to the unique features of the community college with respect to the special goals of the institution, variety of degree and nondegree programs, and diversity of community college students. A second objective will be to offer a brief review of teaching techniques that will be useful in the community college classroom.

435 Problems in Teaching College Biology (3)

(Same as Biology 485.) Prerequisites: Teaching experience, 30 semester hours in biology, and consent of the instructor. Basic philosophies underlying undergraduate biology education at the college level will be presented and examined with concern for establishment of an individual philosophy in the prospective college teacher. Teaching techniques suitable for college-level instruction will be considered, practiced, and evaluated. Advantages and limitations of various methods of instruction will be considered with respect to current research findings.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

Educational Studies

497 Problems in Adult Education (1-10)

Prerequisite: ADU ED 412 or consent of instructor. Independent study on topics in adult education.

Educational Administration (ED ADM)

404 Seminar (1-10)

411 Organizational Theory and Analysis in Education (3)

Prerequisite: ED ADM 414 or equivalent. The purpose of this course is to examine organizational theory and its implications for the field of education. A comprehensive survey of the work of scholars in the field of organizational theory will provide students with appropriate conceptual tools necessary to analyze problems in educational organizations.

414 Foundations of School Administration (3)

Emphasis on processes common to all phases of educational administration. Conceptual framework for administration of education, decision making, and organizational theory.

416 Policymaking in Education (3)

Prerequisites: ED FND 421 and ED ADM 411 or equivalent. The purpose of this course is to provide the student with a comprehensive and systematic approach to understanding the nature and function of policy making in education.

422 Leadership in Educational Administration (3)

This course is designed to acquaint the administrator with the factors of groups and interpersonal relationships directly affecting job performance. The consequences of various types of group relationships upon the institution will be studied in detail. The administrator will study various rationales for and methods of improving interpersonal relationships within the institution.

425 Organizational Change in Education (3)

Prerequisite: ED ADM 411 or equivalent. This course deals with (1) developing strategies for assessing educational needs, (2) methods of assessing the school's "organizational health," (3) the designing of educational change strategies involving theory-based models, (4) using systems-analysis techniques to implement educational change, and (5) methods of involving students and staff in incorporating meaningful organizational change strategies in educational institutions.

430 School District Administration (3)

Prerequisite: ED ADM 414 or consent of instructor. Course focuses on current research about school district administration; also deals with major central office issues including: board/superintendent relations, central office organization, the function and authority of assistant superintendents and program directors, and

the administrative team approach to school district administration.

432 Problems in School Public Relations (3)

Principles of good school public relations, unique public functions of various school and community groups. Techniques for conducting school public relations.

435 Education Administration Policy Research (3)

Prerequisites: ED ADM 411, ED ADM 414, and ED ADM 416. A study of issues and trends in basic, applied, and action research in educational policy making.

441 Elementary School Administration (3)

Prerequisite: ED ADM 411 or equivalent. This course is a comprehensive, systematic study of the elementary school principalship. Emphasis is placed on relating theories of learning, teaching, and organization to effective administration of elementary schools.

451 Secondary School Administration (3)

Prerequisite: ED ADM 411 or equivalent. This course is a comprehensive, systematic study of the secondary school principalship. Emphasis is placed on relating theories of learning, teaching, and organization to effective administration of secondary schools.

456 Extracurricular Activities (3)

Activities related to the extracurricular program of secondary schools will be studied in depth. Analysis of appropriate activities will include the nature and purposes of these activities.

460 School Law (3)

Principles of law as derived from court decisions; statutory and constitutional provisions affecting education. Legal status (power and responsibilities) of school board members, superintendents, principals, teachers, and pupils.

465 State and Federal Financing of Public Education (3)

Economic implications of public education. Determination of policy and practice in financing of public schools by local, state, and federal agencies. Developing principles of adequate tax programs and designing systems of state support of public education.

466 Principles of Public School Finance in Missouri (3)

Course is designed to analyze and study critical areas of public school finance at the local and state levels, highlighting the role of such factors as legislative procedures, principles of local and state support, budgeting and accounting procedures, assessment of property, etc.

470 School Personnel Administration (3)

Prerequisite: ED ADM 411 or equivalent. This course is a comprehensive, systematic study of problems in planning, recruitment selection, induction, and retention relative to school personnel.

Educational Studies

471 School Staff Development and Supervision (3)

Prerequisite: ED ADM 411 or equivalent. This course provides a systematic examination of the conceptual bases and practical applications of the administration of staff development and supervision programs in a broad spectrum of educational settings. The course explores organizations of several relevant theories and conceptual models including Social Systems Theory and Organizational Development (OD). Students will be introduced to a variety of administrative techniques used to assess needs; plan, deliver, and evaluate staff development; and supervision programs in education.

473 Collective Negotiations in Educational Organizations (3)

This course focuses on the concepts, issues, and processes involved with collective negotiations (bargaining) in American educational organizations. The major issues addressed in the course include recognition procedures, bargaining unit determination, the scope of negotiations, the proposal and counterproposal, compromise, impasse procedures, and master contract management.

475 School Buildings and Sites (3)

Course is designed to acquaint the administrator with methods and procedures for projecting the future building and facility needs of a public school district and for supervising actual planning of facility construction. Maximizing utilization of current facilities will be studied in detail.

480 Administration of Adult and Community Education (3)

A course designed to familiarize the student with the structure, purpose, and processes of community education with particular emphasis being placed on the administrative theories and functions of adult education.

481 Programming in Community and Adult Education (3)

Prerequisite: ED ADM 480. Study and analysis of basic situations in which community and adult educational programming take place. Within this framework, application will be made of a fundamental series of steps essential to sound educational programming.

485 Financing of Community Education (3)

The student will develop the necessary skills needed to construct an operational budget for the administration of community education programs. Emphasis will be placed on developing a support base from federal, state, and local funding resources. The student will be exposed to proposal writing and funding procedures.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The intern-

ship will include planning, research, evaluation, and related professional activities.

497 Problems (1-10)

Educational Foundations (ED FND)

111 The School in Contemporary Society (3)

The introductory course in teacher education. An examination of the organization and purpose of the school in its social setting. Selected representative educational themes and issues will be studied. Required of students admitted to the School of Education. Prerequisite to other professional courses.

251 Black Americans in Education (3)

An examination and analysis of conditions affecting the education of black Americans and their schools, with emphasis on relationships between schools and the black community, and needed changes in education.

330 History of American Education (3)

Prerequisite: A course in American history or consent of instructor. An overview of the evolutionary development of American educational theory and practice from the early colonial period to the present. Attention is also given to selected issues in professional education.

332 Progressivism and Modern American Education (3)

Relationship between American progressive school theory and contemporary classroom practices, including the open classroom, the community school, the alternate school, open admissions, and learning by individual contract. Trends will be interpreted in the light of various roles of the classroom teacher in the modern school.

340 Comparative Education (3)

A study of selected Western and non-Western educational themes and issues viewed in the context of their respective cultures.

410 Development and Organization of Urban School Systems (3)

An examination and analysis of the development and existing conditions affecting urban education, with emphasis on current efforts to bring about quality education in urban areas. A review of current projects and research, as well as the effect of these projects upon the school systems, would be included.

421 Philosophy of Education (3)

A study of the fundamentals of education in the light of modern science and philosophy.

422 Analysis of Educational Issues (3)

Prerequisite: A course in philosophy of education or a course in history of education, or consent of instructor. A critical examination of issues about the elementary

Educational Studies

and secondary schools. This is done through the analysis of the procedures, resources, and goals that guide school policies and practices.

435 History of Western Education (3)

A course designed to survey the educational development of Western civilization from approximately the eighth century B.C. until the present. Salient educational theory and practice will be considered in their appropriate social context.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

497 Problems (1-10)

Educational Technology (ED TEC)

245 Audiovisual Equipment Operation for Classroom Teachers (1)

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

246 Preparation of Inexpensive Materials for the Classroom (1)

An entry-level course for teacher education students. May be taken concurrently with ED TEC 245. A lecture-demonstration laboratory course in material preparation for classroom use.

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

Prerequisites: ED TEC 246, and for secondary education students, SEC ED 213. Course concentrates on the integration of media and materials in lesson planning. Through lecture, demonstration, and individualized instruction, the student designs an instructional unit and prepares appropriate material for that unit. ED TEC 246 must be taken prior to, or concurrently with, this course.

248 Utilization of Computer-Based Materials in Instruction (1)

Utilizing a series of computer-based education modules, the instructional uses of the computer are explained and demonstrated. Students develop practical experience in using and evaluating computer materials for classroom use.

340 Selection and Utilization of Educational Media (3)

Introduction to the selection, use, and evaluation of audiovisual materials and equipment including films, slides, transparencies, projectors, globes, charts, maps, bulletin boards, plus programmed materials, information retrieval systems, and instructional television.

345 Preparation of Graphic Materials for Audiovisual Education (3)

Prerequisite: ED TEC 340 or consent of instructor. Not open to lower division students. A lecture-demonstration-laboratory course that emphasizes the graphic arts component of audiovisual material production. Theories of learning and communication are used in the design and production of materials used for classroom settings.

346 Instructional Television (3)

Prerequisite: ED TEC 340 or consent of instructor. Not open to lower division students. A lecture-demonstration-laboratory course designed to concentrate on the use of instructional television in formal and informal learning situations. Basic script writing, management of ITV systems, and design and production of low-budget programs will be emphasized.

353 Principles of Photographic Production for Education (3)

Prerequisite: ED TEC 340 or consent of instructor. A lecture-demonstration-laboratory course which stresses the application of theories of learning, perception, and retention to the visual medium of still photography. Emphasis on designing and producing photographic material that enhances the teaching/learning process.

354 Principles of Motion Picture Production for Education (3)

Prerequisite: ED TEC 340 or consent of instructor. A lecture-demonstration laboratory course. Emphasis on application of theories of learning, perception, and retention as they relate to motion picture production. Special attention will be given to the design and production of motion picture material that enhances the learning process.

404 Seminar in Educational Technology Research (3)

Prerequisites: ED TEC 340 and twelve hours of graduate work in educational technology. A review of research in educational technology with individual in-depth study. The student selects a research problem in conjunction with the instructor and completes a review project. Open to graduate students who have completed twelve hours of work in educational technology.

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

Prerequisite: Education 301 or permission of the instructor. A lecture-demonstration-laboratory course that emphasizes the theoretical and practical design of graphic and textual material through the use of computer-based graphics programs. Emphasis will be placed on the utilization of commercial software to produce graphic designs and desktop publishing.

Educational Studies

projects such as newsletters, workbooks, and other textual materials.

412 Applications of Computers in Education (3)

Prerequisite: EDUC 301 or permission of instructor. Uses and capabilities of computers in the teaching, administration, and counseling areas of education. Familiarization with computing facilities and package programs.

415 Computer-Based Education: Authoring Software I (3)

Prerequisite: Education 301 or permission of the instructor. A lecture-demonstration-laboratory course that emphasizes the theoretical and practical design of computer-based educational materials. Students will develop practical experience in utilizing programming shells and authoring languages in the development of curricular-based CBE programs.

432 Educational Technology Systems Design (3)

Prerequisite: ED TEC 340. A lecture-demonstration course in the application of learning theory to the design of audiovisual materials. Emphasis on educational technology systems design, objectives, constraints, limitations, and evaluation. Methods of analyzing target populations and instructional demands along with decision-making models will be reviewed.

433 Educational Technology Systems Management (3)

Prerequisite: ED TEC 340. Basic principles of management in design and operation of media programs and systems in various educational settings. Emphasis on strategies and alternative structures for achieving and evaluating functions of media centers.

435 Diffusion and Adoption of Innovations in Educational Technology (3)

Prerequisite: ED TEC 340. A lecture course designed to provide an overview of the diffusion and adoption of technical innovations in the educational system. This course will include the technological, sociological, psychological, and political aspects of the process of diffusion and adoption. Various models, techniques, and applications of the diffusion and adoption process are emphasized.

446 Advanced Instructional Television Production (3)

Prerequisite: ED TEC 340 and ED TEC 346. Advanced management, script writing, and production of ITV programs. Laboratory activities in production of systematically designed instruction. Each student will produce ITV programs involving writing, production of graphics, directing, editing, and validating the programs.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised 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 intern-

ship will include planning, research, evaluation, and related professional activities.

493 Practicum in Educational Technology (3)

Prerequisite: ED TEC 340 or consent of instructor. Focus is on the application of principles of instructional development to teaching problems in educational technology. Selecting, developing, adapting, and using instructional technology appropriate to the specific teaching problems is an integral part of this course.

497 Problems (1-10)

Prerequisite: ED TEC 340 or consent of instructor. Individual study on topics pertaining to educational technology.

Secondary Education (SEC ED)

162 Computer Keyboarding and Formatting (3)

Prerequisite: Intermediate typewriting or equivalent. Review of keyboarding techniques and skills; development of speed and accuracy; instruction in the preparation of business and professional papers and forms with emphasis on formatting and information processing skills.

204 Seminar: Business Education Student Teaching (1)

Prerequisites: Completion of all required courses in major and/or certification emphasis area. To be taken concurrently with student teaching. Application of theory, methods, and techniques to the teaching of business subjects in grades 7-12.

208 Mathematics Teaching Intern Seminar (1)

Prerequisite: Concurrent enrollment in SEC ED 290. A seminar in the integration of mathematics curricula, educational philosophy, teaching strategies, and instructional technology in the classroom setting. To be taken concurrently with Secondary Student Teaching, SEC ED 290.

213 Techniques of Secondary School Teaching and Field Experience (4)

Prerequisites: ED FND 111 and admission to the Teacher Education Program. Activities and interaction of teachers and students in secondary schools. Included also is an analysis of teaching, learning, and field observations in secondary classrooms. Recommended that SEC ED 213 be taken during the first semester of the junior year prior to special methods courses.

232 The Curriculum and Methods of Teaching English (3)

(Same as English 262.) Prerequisites: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of the English courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Includes field experiences. The course prepares students for reflective teaching by relating

Educational Studies

course readings to field experiences and theory to practice. To be taken prior to student teaching.

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

(Same as Chemistry 280 and Physics 280.) Prerequisite: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of the physical science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of science. To be taken prior to student teaching.

246 The Curriculum and Methods of Teaching Mathematics (3)

Prerequisites: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of the mathematics courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of mathematics. To be taken prior to student teaching.

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

(Same as History 255.) Prerequisite: At least junior standing. A study of the scope and sequence of the history and social studies courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is directed also toward learning the techniques and research tools of the scholar in the fields of history and social studies. May not count toward history hours required for history major. Must be completed prior to student teaching.

256 Social Studies Teaching Intern Seminar (1)

(Same as History 256.) Prerequisite: Must be enrolled concurrently in student teaching. Addresses the application of educational philosophy, social studies curriculum, teaching strategies, and instructional technology in the classroom setting. Offered concurrently with Secondary School Student Teaching, SEC ED 290.

261 Methods of Teaching Keyboarding and Formatting (3)

Prerequisite: Intermediate Typewriting or equivalent. Instruction in the methods and techniques used to teach keyboarding and document formatting.

263 Methods of Teaching Accounting (3)

Prerequisites: Business Administration 140, Business Administration 145, or equivalent. Methods and techniques of teaching data processing and accounting in the secondary schools.

264 Methods of Teaching Basic Business Subjects (3)

Prerequisites: Economics 51 or equivalent, Business Administration 206 and/or Business Administration 256. Methods and techniques of teaching basic business, business law, economics, consumer economics, and business principles and management in the secondary school curriculum.

265 Secretarial Practice (3)

Prerequisites: SEC ED 162 and consent of instructor. Study of secretarial office procedures; office-style dictation for transcription; word processing; office machines; records management.

267 The Secondary Business Curriculum (3)

Prerequisite: ED FND 111 or equivalent or consent of instructor. Study of the scope and sequence of business education courses in the high school curriculum. Attention is directed toward the history of business education, curricular change, standards, evaluation, and research in the field of business education.

270 English Teaching Intern Seminar (1)

(Same as English 270.) Prerequisite: Concurrent enrollment in SEC ED 290. A seminar in the integration of English curricula, educational philosophy, teaching strategies, and instructional technology in the classroom setting. To be taken concurrently with Secondary School Student Teaching, SEC ED 290.

273 The Curriculum and Methods of Teaching Art (3)

Prerequisites: SEC ED 213 and a near major in the subject matter. A study of the scope and sequence of art courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of art. To be taken concurrently with student teaching.

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

(Same as French 264, German 264, and Spanish 264.) Prerequisites: SEC ED 213 and a near major in the subject matter and passing the departmental language skill test. A study of the scope and sequence of the foreign language courses in the school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Attention is also directed toward learning the techniques and research tools of the scholar in the field of foreign language. To be taken prior to student teaching.

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

(Same as Music 267.) Prerequisites: Music 131, Music 257/ELE ED 277, and ED FND 111; concurrent registration in Music 261, Music 268/SEC ED 276 or Music 269/SEC ED 277 and Music 270/SEC ED 278 or Music 271/SEC ED 279. For music education majors. A study of the secondary school music program: curricular objectives, philosophy, and general administrative procedures common to all secondary music classes.

Educational Studies

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

(Same as Music 268.) Prerequisites: Music 131, 145, 151, 161, ED FND 111, two of the following: Music 25, 26, 27, 28. Concurrent registration in Music 257/ELE ED 277. A study of the teaching techniques, materials, curriculum, and organization of the instrumental music education program. Topics include student recruitment, the elementary band/orchestra, small group instruction, jazz ensemble, and marching band.

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

(Same as Music 269.) Prerequisites: Music 131, Music 257/ELE ED 277, and ED FND 111; concurrent registration in Music 261, Music 267/SEC ED 275 and Music 271/SEC ED 279. For the music education major. A study of the middle school/junior high school general music program emphasizing a conceptually based curriculum, objectives, methodologies, materials, innovations, classroom organization, and management.

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

(Same as Music 270.) Prerequisites: Music 131, 152a, 162, Music 257/ELE ED 277, Music 268/SEC ED 276, ED FND 111, three of the following: Music 25, 26, 27, 28. Concurrent registration in Music 267/SEC ED 275. A continuation of Music 268/SEC ED 276. Topics include large group rehearsal techniques, program development, administrative procedures, and evaluation.

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

(Same as Music 271.) Prerequisites: Music 131, Music 257/ELE ED 277, and ED FND 111; concurrent registration in Music 261, Music 267/SEC ED 275, Music 269/SEC ED 277. For the music education major. Study of secondary school choral music program; curriculum, methods, teaching techniques, organization, and administrative procedures for choral performance classes.

285 Curriculum and Methods of Teaching Life Sciences (4)

(Same as Biology 285.) Prerequisites: SEC ED 213 and a near major in biology. A study of the scope and sequence of the life science courses in the school curriculum, with emphasis on the selection and organization of materials and methods of instruction and evaluation. The analysis of teaching/learning and field experience observations in secondary school classrooms will be integrated into classroom activities and discussions.

286 Laboratory in Teaching Life Sciences (2)

(Same as Biology 286.) Prerequisite: SEC ED 213. Discussion, development, utilization, and evaluation of equipment, materials, and techniques applicable to instruction in the life sciences. Must be taken concurrently with Biology 285/SEC ED 285.

290 Secondary School Student Teaching (12)

Prerequisites: SEC ED 213 and admission to student teaching. Clinical teaching experience in secondary school classrooms under University and school supervision. To be taken after appropriate curriculum and methods course.

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

Prerequisites: ELE ED 210, SEC ED 213, Music 257/ELE ED 277, Music 267/SEC ED 275, Music 118, Music 268/SEC ED 276, Music 270/SEC ED 278 (instrumental emphasis majors); Music 120, Music 269/SEC ED 277, Music 271/SEC ED 279 (Choral/vocal emphasis majors); and admission to student teaching. Must be taken "in block" with SEC ED 294 and must immediately precede it in the semester. Clinical teaching experience in music education settings in the schools under University and school supervision with seminar included. Required of all majors in music education.

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

Prerequisite: SEC ED 293. Must be taken "in block" with SEC ED 293 and must immediately follow it in the semester. Clinical teaching experience in music education settings in the schools under University and school supervision with seminar included. Assignments will be in different settings from those of SEC ED 293. Required of all majors in music education.

305 Writing for Teachers (3)

(Same as English 305.) Prerequisite: English 210 or a comparable course in advanced composition. Designed for prospective as well as in-service teachers, the course includes: (1) writing—short papers to be shared in workshop groups; (2) reading—current theory and research on writing and the implications for teachers; (3) teaching—classroom activities that foster growth in writing.

312 Secondary School Curriculum (3)

Prerequisite: SEC ED 213. Sources, scope, and organization of the curriculum, modern trends, and methods of investigation.

315 The Middle Level School (3)

Prerequisites: ED FND 111 or equivalent and admission to Teacher Education Program. An in-depth study of the philosophical and historical bases of the goals and organization of middle level schools, including a review of research as the bases for current trends and practices.

360 Administration and Supervision of Office Personnel (3)

Prerequisite: Consent of instructor. An advanced course in office administration and supervision designed to meet the needs of business personnel involved in administrative office management work; emphasis on updating leadership and human relations skills, organizing, planning, controlling office services, and business data processing systems

Educational Studies

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

Prerequisite: SEC ED 162, SEC ED 261, or equivalent, or consent of instructor. The course will focus on the needs of preservice and in-service teachers who instruct courses in information processing. Special emphasis placed on organizing and managing an information processing lab, software applications, integration of information processing concepts into existing courses, teaching strategies, and current information processing research.

362 Teaching Alpha Writing Systems: Theory and Application (3)

Prerequisite: Consent of instructor. A study of alphabetic shorthand writing systems. Instruction in the theory and application of alpha writing systems. Emphasis on teaching techniques, learning activities, evaluation, testing, and current research.

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

Prerequisite: SEC ED 162; SEC ED 261 or consent of instructor. This course will focus on the integration of text and graphics using graphic design and electronic page assembly with a microcomputer-based system. Special emphasis placed on Desktop Publishing concepts, methods, and techniques. Attention is directed toward teaching techniques, learning activities, evaluation and current research.

374 Foreign Language Teaching Seminar (2)

(Same as French 364, German 364, Spanish 364.) Prerequisite: Concurrent enrollment in SEC ED 290 or consent of instructor. A practicum course in the teaching of foreign languages. Review and explanation of drills, dialogues, and a variety of classroom techniques, oral and written. A continuation of SEC ED 274, Curriculum and Methods, with emphasis on specific practical skills. To be taken concurrently with SEC ED 290, Student Teaching.

386 Teaching Reading in Secondary School Content Areas (3)

Prerequisite: ED FND 111 or equivalent. Methods and materials for improving reading and study strategies in content area classes in upper grades.

391 Field Study in Secondary Education (1-10)

Identification of specific problems in the area of secondary education. Course is conducted as a field study in the public schools. A maximum of eight credit hours may be applied toward an advanced degree contingent upon adviser approval.

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

Prerequisite: SEC ED 294 or equivalent and admission to student teaching. Clinical teaching experience in music education settings in the schools under University and school supervision with seminar included. For students who wish an additional student teaching experience.

399 Science Teaching Intern Seminar (3)

(Same as Biology 399.) Prerequisites: SEC ED 285 and SEC ED 286. Addresses the application of educational philosophy, science curriculum, teaching strategies, and instructional technology in the classroom setting. Offered concurrently with Secondary School Student Teaching, SEC ED 290.

404 Seminar (1-10)

413 Secondary Teaching with Microcomputers (3)

Prerequisite: EDUC 301 or consent of instructor. A course designed for teachers, department heads, and school administrators. Research and theory on microcomputer-assisted instruction as a teaching method in the secondary schools will be presented. Both hardware and software suitable for microcomputers will be used and analyzed.

414 Teaching the Gifted/Talented Student in Secondary School (3)

A survey of research and theory on teaching the gifted/talented student in secondary school. Ways to identify the gifted/talented with emphasis on teaching the gifted/talented in both heterogenous and homogenous secondary classrooms. Models of gifted/talented programs in a school setting.

415 The Secondary School Curriculum (3)

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

416 Curriculum Construction for Secondary Schools (3)

Prerequisite: SEC ED 415 or consent of instructor. Designed for those engaged in curriculum revision work and construction of new secondary school courses.

418 The Junior High/Middle School (3)

Survey of the progress of the junior high school, including the study of more important problems of organization and administration.

420 The Improvement of Secondary School Teaching (3)

For secondary school teachers, principals, and superintendents with considerable training in education and experience in teaching. Recent developments in secondary school teaching.

422 Individualizing Instruction in Secondary Schools (3)

This course surveys a variety of theoretical models and research findings related to individualized instruction in the secondary school and is designed for teaching and administrative personnel.

Educational Studies

425 Secondary School Supervision (3)

Methods of improving instruction in junior and senior high schools.

427 Supervision of Clinical Experiences in Teacher Education (3)

Prerequisites: Teaching experience and consent of instructor. A consideration of the clinical phase of the teacher education program, with special emphasis on student teaching. Examination of role responsibilities and supervisory practices. Study of professional literature for research findings, theoretical formulations, and recent developments in the field.

429 The Department Head (3)

This course emphasizes the role of the department chairperson as an educational leader. Theoretical concepts are related to sound practice. The potential for the job is discussed, as well as the roadblocks to successful execution. Appropriate for practicing department chairpersons, school administrators, or classroom teachers interested in acquainting themselves with this position.

430 Problems of Teaching English in the Secondary School (3)

A review of recent developments in the teaching of secondary English. Special attention is given to research involving instructional problems in urban and suburban schools. The course is designed for teachers, department heads, and supervisors in secondary English programs.

436 Gateway Writing Project (1-6)

(Same as English 490.) An intensive course in the writing process and the writing curriculum, designed for experienced teachers. Readings of current theory and research will be related to participants' experience as writers and as teachers. Topics may vary. May be repeated for credit. No more than six hours may be applied toward the M.Ed. Counts toward the Certificate in Writing.

452 Problems of Teaching Social Studies in the Secondary Schools (3)

A review of recent developments in the teaching of secondary school social studies. Special attention is given to research and scholarship involving instructional and curricular problems, especially in the metropolitan St. Louis area. Emphasis is placed upon development of effective materials, techniques, and resources. The course is designed primarily for teachers and supervisors in secondary school social studies programs.

486 Techniques in Teaching Biology for Graduate Students (2)

(Same as Biology 486.) Prerequisites: Graduate standing and teaching assignment. Discussion and practice of techniques specific to instruction in the life sciences. Consideration will be given to teaching strategies, curriculum design, evaluation, instrumentation, and student teacher interactions. Recommended for all graduate students with teaching assistantships.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

497 Problems (1-10)

Elementary and Early Childhood Education

Faculty

Richard W. Burnett, Chairperson; Professor*; Director of Reading Clinic

Ed.D., Indiana University

Donna M. Bagley, Assistant Professor*

Ph.D., University of Oregon

Joan Gilley, Lecturer

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

Allison K. Hoewisch, Assistant Professor

Ph.D., University of Southern Mississippi

Carole A. Murphy, Assistant Professor*

Ed.D., Texas A & M University

Wallace Z. Ramsey, Professor Emeritus

Ed.D., University of Missouri-Columbia

Lloyd I. Richardson, Jr., Associate Professor*

Ph.D., George Peabody College

Thomas R. Schnell, Associate Professor*

Ph.D., Southern Illinois University-Carbondale

Cynthia Gordinier, Lecturer

M.Ed., Northeast Missouri State University

Helene Sherman, Assistant Professor*

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

Doris A. Trojcek, Professor*

Ed.D., Indiana University

Gwendolyn Turner, Associate Professor*

Ed.D., University of Arkansas

Huber M. Walsh, Professor Emeritus

Ed.D., University of California-Los Angeles

*members of Graduate Faculty

General Information

The faculty of the Department of Elementary and Early Childhood Education have their offices on the third floor of Marillac Hall. Questions about departmental matters should be directed to 369 Marillac Hall.

The department coordinates programs leading to the B.S. in Education degree in early childhood education and elementary education. The B.S.Ed. in elementary education may also be tailored to the middle school/junior high teaching certificate. A special feature of these programs is the many opportunities to work with children in schools as part of the professional course work.

Note The State Board of Education developed standards for renewable professional certificates, based on specific requirements for training and experience. Details regarding these standards are available in the Office of Undergraduate Studies in Education.

For graduate students, the Department of Elementary and Early Childhood Education offers three programs leading to the M.Ed. in elementary education: generalized or specialized elementary education; elementary education with certification in reading; and elementary education with teaching certification.

Undergraduate Studies

General Education Requirements

Elementary Education (1-8)

English and Communication (9 hours)

English 10, Composition

English 210, Advanced Expository Writing

Communication: 3 hours

Mathematics (6 hours)

Mathematics 50, Structure of Mathematical Systems I and

Mathematics 151, Structure of Mathematical Systems II

Science

Biological Science: includes lab (5 hours)

Biology 130: 3 hours

Physical Science: includes lab (4 hours)

Humanities (8 hours)

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

Social Science (21 hours)

Psychology 3, General Psychology

Psychology 270, Child Psychology

Political Science 11, Introduction to American Politics or equivalent

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

History 3, American Civilization

History 4, American Civilization

and the following **courses**:

Political Science 11, Introduction to American Politics

Political Science 85, Global Ecology

Economics 40, Introduction to the American Economy or

Economics 305, Macroeconomics for the School Curriculum or

Economics 306, Microeconomics for the School Curriculum

Sociology 10, Introduction to Sociology, or any

anthropology course

Early Childhood Education (P-3)

General education requirements are the same as for Elementary Education except that **Mathematics 151**, and economics are not required.

Middle School/Junior High (4-9)

General education requirements are the same as for Elementary Education except that **Psychology 271**, Adolescent Psychology, is taken in lieu of **Psychology 270**, Child Psychology.

Elementary and Early Childhood Education

Degree Requirements

Bachelor of Science in Education: Early Childhood Education The early childhood program is designed for students wishing to teach and direct programs for children from pre-kindergarten through grade three. Students electing this program will work directly with young children as a part of their professional courses.

General Education Requirements

Students are required to take the general education requirements as indicated for Early Childhood Education above.

Program Requirements

ED FND 111, The School in Contemporary Society
ED PSY 312, Psychology of Teaching and Learning
SPC ED 313, The Psychology and Education of Exceptional Individuals

and these **Elementary Education (ELE ED)** courses:

330, Children's Literature and Reading
336, Teaching Language Arts and Reading, N-9
385, Teaching Reading in the Elementary School

plus these **Early Childhood Education (ECH ED)** courses:

290, Student Teaching in Early Childhood Education I
291, Student Teaching in Early Childhood Education II

Note ECH ED 290 and ECH ED 291 must be taken during the same semester.

312, Introduction to Early Childhood Education
317, Assessing Individual Needs for Early Childhood
331, Language Acquisition and Development in Early Childhood
332, Early Literacy
346, The Acquisition of Mathematical Concepts
313, Curriculum and Practice: Infant/Toddler
314, Curriculum and Practice: Preschool
315, Curriculum and Practice: Primary
303, Curriculum and Practice Laboratory: Infant/Toddler
304, Curriculum and Practice Laboratory: Preschool
305, Curriculum and Practice Laboratory: Primary

Related Area Requirement

PHY ED 130, Elements of Health Education
PHY ED 282, Physical Growth and Motor Development

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Post-degree certification students may take ED FND 330, History of American Education, or ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

Total: 120 hours

Bachelor of Science in Education: Elementary Education

The elementary education program prepares students to teach in grades one through six, nondepartmentalized grades, seven and eight, and in departmentalized social studies (4-8).

Related Area Requirements

PHY ED 130, Elements of Health Education
PHY ED 165, Physical Education Activities for the Elementary School
ELE ED 177, Elementary School Music
ELE ED 179, (Art 139), Art Activities for Elementary School

Program Requirements

EDUC 101, Introduction to Classroom Teaching
ED FND 111, The School in Contemporary Society
ED PSY 312, Psychology of Teaching and Learning
SPC ED 313, The Psychology and Education of Exceptional Individuals

and these **Elementary Education (ELE ED)** courses:

246, Teaching Mathematics in the Elementary School
253, Teaching of Social Studies in the Elementary School
***290**, Elementary School Student Teaching I
***291**, Elementary School Student Teaching II
330, Children's Literature and Reading
336, Teaching Language Arts and Reading, N-9
341, Teaching of Science in the Elementary School
385, Teaching Reading in the Elementary School
389, The Analysis and Correction of Reading Problems in the Classroom

***Note** ELE ED 290 and ELE ED 291 must be taken during the same semester.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Post-degree certification students may take ED FND 330, History of American Education, or ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

Total: 120 hours

Bachelor of Science in Education: Elementary Education (Middle School/Junior High Certification)

This area of specialization in elementary education prepares students to teach in middle school/junior high school, grades 4-8 or 7-9.

General Education Requirements

Students are required to take the general education requirements as indicated for Middle School/Junior High above.

Related Area Requirement

PHY ED 132, Personal Health

Elementary and Early Childhood Education

Program Requirements

ELE ED 101, Introduction to Classroom Teaching
ED FND 111, The School in Contemporary Society
ED PSY 312, Psychology of Teaching and Learning
SPC ED 313, The Psychology and Education of Exceptional Individuals

and these **Elementary Education (ELE ED)** courses:

230, Children's Literature and Reading
246, Teaching Mathematics in the Elementary School
253, Teaching of Social Studies in the Elementary School
***290**, Elementary School Student Teaching I
***291**, Elementary School Student Teaching II
336, Teaching Language Arts and Reading, N-9
341, Teaching of Science in the Elementary School

***Note** ELE ED 290 and ELE ED 291 must be taken during the same semester.

plus these **Secondary Education (SEC ED)** courses:
222, Middle School/Junior High School Organization, Philosophy and Curriculum
386, Teaching Reading in Secondary School Content Areas

Area of Concentration for State Certification Middle School 4-8 requires a minimum of 21 hours in the content area.

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Post-degree certification students may take ED FND 421, Philosophy of Education, in lieu of ED FND 111.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

Total: 120 hours

Graduate Studies

Master of Education: Elementary Education

General Curricular Program or Specialization in Selected Curricular Areas

The M.Ed. student in elementary education may elect either of these programs. Please note, however, that in either case the degree is the Master of Education in Elementary Education. Diplomas and transcripts do not show areas of specialization nor are special certificates awarded.

1) Core Competencies (12 hours)

To include ELE ED 410, Current Research in the Elementary School Curriculum; ELE ED 411, Curricular Issues in the Elementary School; and six hours selected, in consultation with advisers, from among cognate fields or professional education.

2) Content Competencies (12 hours)

Students desiring to specialize through a sequence of courses should select at least nine hours in one of the following areas: Children's Literature, Early Childhood, Language Arts, Mathematics Education, Reading, Science Education, Social Studies Education, or Special Education. Students who elect a general sequence should take no more than six hours in any one area.

3) Curricular Applications Competencies (9 hours)

Students must select, in consultation with their advisers, a measurement course, and complete the following: ELE ED 422, Curriculum Construction in Elementary Schools, and ELE ED 423, Curriculum Implementation in the Elementary School.

Upon completion of ELE ED 410 and ELE ED 411 in phase one, each candidate selects a curricular area or areas, identifies an adviser from the elementary and early childhood education faculty, and plans appropriate course sequences. A candidate enrolling in the specialist program should select an adviser in the area of specialization.

The sequence of courses, ELE ED 410 and ELE ED 411 should be taken at the beginning of the program; ELE ED 422 and ELE ED 423 constitute the final two program courses. Students should note that ELE ED 411 is typically offered only during the Winter and Summer Semesters, ELE ED 422 is offered only during the Fall Semester and ELE ED 423 only during the Winter Semester.

Electives should be selected according to candidates' needs and/or interests.

Emphasis in Reading

The M.Ed. program with emphasis in reading is designed to enable candidates to further their competencies as reading teachers and prepares them for positions as remedial reading specialists, reading consultants, and/or for further graduate study. The minimum required and recommended courses are as follows:

1) Core Requirements

At least one graduate-level course in each of the following areas: learning psychology; research, statistics, and measurements; and elementary curriculum.

2) Courses in Reading

The following required courses in reading should be taken in sequence. **Courses denoted by asterisks are required for certification in remedial reading by Missouri teacher certification regulations.** Students, with their advisers' permission, may substitute other courses for any requirement if they have had a recent upper-class undergraduate course covering the same material. Required are:

Elementary and Early Childhood Education

- ELE ED 385**, Teaching Reading in the Elementary School
- SEC ED 386**, Teaching Reading in Secondary School Content Areas

these **Elementary Education (ELE ED)** courses:

- 486**, Clinical Diagnosis and Treatment of Reading Disabilities
- 493**, Clinical Methods in Child Study I
- 494**, Clinical Methods in Child Study II

Note **ELE ED 493** is offered in Fall and Summer Semesters; **ELE ED 494** is offered in the Winter and Summer.

and also:

ELE ED 482, Problems and Research in Teaching Elementary School Reading (offered only in the Winter Semester).

- ED REM 420**, Classroom Measurement and Evaluation
- SPC ED 315**, Speech and Language Problems, or
- ECH ED 331**, Language Acquisition and Development
- SPC ED 320**, Behavioral Management
- CNS ED 310**, Introduction to the Counseling Profession
- ED PSY 417**, Psychology of the Elementary School Child
- ED PSY 418**, Psychology of Adolescence

Note **SPC ED 412**, Psychology of Exceptional Children, is required for certification if it has not been taken previously at the undergraduate or graduate level. It is not a degree requirement.

3) Electives

Following is a list of possible elective courses. Other courses may be selected from cognate fields after conferring with an adviser in reading.

- English 220**, Development of the English Language
- ED FND 421**, Philosophy of Education
- ADU ED 311**, Teaching Basic Reading Skills to Adults
- ELE ED 484**, Developmental Reading (K-13)

ELE ED 488, Supervision of School Reading Programs Certification Options

A combined M.Ed. and certification option exists. Options include Elementary Education (1-8), Early Childhood Education (P-3), and Middle School/Junior High (4-9). Students should consult certification advisers. Graduate credit will not be given for courses at the 100 or 200 level.

Career Outlook

Undergraduate and graduate degrees in Early Childhood Education and Elementary Education are most directly applicable to teaching at the level appropriate to the program emphasis. Increasing specialization of teaching assignments and downward extensions of "ages of schooling" continue to open employment opportunities. As in the past, early childhood and elementary education graduates at all degree levels also continue to be attractive candidates for employment in many positions which require (or are well suited to) training in social and behavioral sciences. Positions in constant contact with and service to the general public such as sales, service, public relations, and general business are most common examples. Future expansions of opportunities in schools are tied to population growth, increased specialization of services, and reduction in ratios between professional staff and children served. Many presently employed teachers will retire within the next 5-10 years; consequently, a shortage of teachers is anticipated.

Elementary and Early Childhood Education

Course Descriptions

Courses in this section are grouped as follows: Early Childhood Education (ECH ED) and Elementary Education (ELE ED).

Prerequisites may be waived by consent of the department.

Early Childhood Education (ECH ED)

290 Student Teaching in Early Childhood Education I (5)

Prerequisites: ED FND 111, Psychology 270, ECH ED 312, ECH ED 333, ELE ED 385, ELE ED 336, Communication 40, English 210, ED PSY 312, ELE ED 230, ELE ED 389, ECH ED 321, ECH ED 331, ECH ED 317, ECH ED 346, and ECH ED 314; and admission to student teaching. Must be taken with ECH ED 291, and must immediately precede ECH ED 291 in the semester. Clinical teaching experience in early childhood education classrooms in the schools under University and school supervision. Required for all majors in early childhood education.

291 Student Teaching in Early Childhood Education II (5)

Prerequisite: ECH ED 290. Must be taken "in block" with ECH ED 205 and ECH ED 290 and must follow ECH ED 290 in the semester. Clinical teaching experience in early childhood education classrooms in the schools under University and school supervision. Assignments will be in different school districts, buildings serving families of different socio-economic and cultural backgrounds, and at different age/grade levels from those of the ECH ED 290 assignments. Required of all majors in early childhood education.

303 Curriculum and Practice Laboratory: Infant/Toddler (1)

Classroom experience in infant or toddler classrooms under direction of university personnel. Must be taken concurrently with ECH ED 313, Curriculum and Practice: Infant/Toddler.

304 Curriculum and Practice Laboratory: Preschool (1)

Classroom experience in preschool classrooms under direction of university personnel. Must be taken concurrently with ECH ED 314, Curriculum and Practice: Preschool.

305 Curriculum and Practice Laboratory: Primary (1)

Classroom experience in primary classrooms under direction of university personnel. Must be taken concurrently with ECH ED 315, Curriculum and Practice: Primary.

312 Introduction to Early Childhood Education (3)

Prerequisites: ED FND 111 and ED PSY 312. Study of basic principles underlying good schools for young children. Students will use theoretical base as well as on-site observations to develop an awareness of teaching-learning strategies appropriate for the developmental needs of children from birth through age eight. Scheduling, classroom arrangement, and child management practices will be considered. Throughout the course, students will be expected to begin developing their own philosophy of early childhood education.

313 Curriculum and Practice: Infant/Toddler (2)

Prerequisite: ECH ED 312. Focuses on planning integrated curriculum for child from birth to 30 months. Includes working with parents and community resources. Lab required.

314 Curriculum and Practice: Preschool Education (2)

Prerequisite: ECH ED 312. Focuses on planning integrated curriculum for the preschool classroom with emphasis on science, social studies, creative activities and technology. Working with parents and parent education emphasized. Lab required.

315 Curriculum and Practice: Primary Education (2)

Prerequisite: ECH ED 312. Focuses on planning integrated curriculum for the primary classroom with emphasis on science, social studies, creative activities and technology. Working with parents and parent education emphasized. Lab required.

317 Assessing Individual Needs for Early Childhood Instruction (3)

Prerequisites: ECH ED 312. Techniques of observing children and using assessment instruments to plan an individualized program for early childhood. Practicum experience required.

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

Prerequisite: Admission to the School of Education or graduate status. Competencies for working with parents and community agencies will be developed through a study of community and community resources. Procedures for parent participation and use of service agencies in the education of all young children, including those with special needs, will be examined.

331 Language Acquisition and Development in Early Childhood (3)

Prerequisite: ED PSY 312. Development of language and the effects environmental and cultural factors have on the acquisition process. Identification of language problems for purpose of referral. Includes preschool classroom practices to support language development. Practicum experiences included.

Elementary and Early Childhood Education

332 Early Literacy (3)

Prerequisites: ECH ED 312 and ECH ED 331. Study of children as they construct literacy knowledge from birth to early elementary. Development of meaningful and developmentally appropriate activities in which reading and writing are used to support children's skills. Criteria for choosing and assessing literature as a vehicle for literacy for children from birth to eight will be addressed.

341 Exploring the Physical World with Young Children (3)

Prerequisites: ECH ED 312 and completion of science requirements in general education. A study of and experiences with materials, techniques, and resources for broadening the child's awareness and understanding of science.

346 The Acquisition of Mathematical Concepts (3)

Prerequisites: ELE ED 246 or equivalent and consent of instructor. Applications of the major theorists (Bruner, Piaget, Gagne, etc.) to mathematics for children of mental ages 3-8. Considerations suggested by research and implications in the areas of logical thinking, pre-number ideas, geometry, topology, problem solving, and arithmetical operations.

351 Exploring the Social World With Young Child (3)

Prerequisites: ECH ED 312 and completion of social science requirements in general education. A study of and experience with materials, techniques, and resources for furthering the child's mastery of the skills of communication; understanding of people, social roles, society, and various cultures; and ability to develop satisfying relationships with peers and adults.

390 Student Teaching in Early Childhood Education III (5)

Prerequisites: ECH ED 291 or equivalent and admission to student teaching. Clinical teaching experience in early childhood education classrooms in the schools under University and school supervision with seminar included. For students who wish an additional student teaching experience.

410 Foundations of Preschool Education (3)

Prerequisite: A course in child psychology or equivalent. A study of the various types of early childhood programs and the philosophy upon which they are based. Attention will also be directed to the implementation of such programs, problems of parent involvement, and the social environment of the children.

413 The Educational Role of Play (3)

Prerequisite: ECH ED 312 or equivalent. Emphasizes play as a constructive process with applications to cognitive and social development. Special attention to facilitating play in early childhood classrooms.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

497 Problems (1-10)

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

Elementary Education (ELE ED)

82 Effective Reading and Study Skills (2)

Designed to increase reading rate and comprehension and to develop study techniques appropriate to the purpose and difficulty of materials. Use is made of mechanical pacer, comprehension tests, vocabulary materials, and lecture demonstrations. No credit toward a degree.

177 Elementary School Music (2)

Prerequisite: Consent of department. The role of the classroom teacher in the development of the elementary school general music program; selection of music, demonstration and practice of methods, and study of resources. This course will not apply toward requirements for a music major.

179 Art Activities for Elementary Schools (3)

(Same as Art 134.) A study of art principles; provides laboratory experiences with various media and materials. Stresses curriculum planning and developments of the elementary school program in art.

192 Educational Laboratory/Field Experience (1-3)

A laboratory/field experience requiring systematic observation and/or participation in appropriate educational settings. To precede student teaching. May be repeated to maximum of three hours.

246 Teaching Mathematics in the Elementary School (3)

Prerequisites: ED FND 111, junior standing, and completion of mathematics requirements in general education. Organization and implementation of a modern elementary school mathematics program. A field experience involving several visits to local elementary schools is a required assignment of the course.

253 Teaching of Social Studies in the Elementary School (3)

Prerequisites: ED FND 111, junior standing, and completion of social science requirements in general education. Study of elementary school social studies emphasizing the current social studies curricular content, methods of teaching, and instructional materials. Analysis of forces affecting objectives, materials, and teaching techniques.

Elementary and Early Childhood Education

277 Teaching Music in the Elementary School (3)
(Same as Music 257.) Prerequisites: Music 131 and ED FND 111. For the music education major. A study of the elementary school music curriculum emphasizing the objectives, methods of teaching and staffing music classes, and analysis of instructional materials and resources.

290 Elementary School Student Teaching I (5)
Prerequisites: ED FND 111, ELE ED 101, Psychology 270, ELE ED 336, ELE ED 385, Communication 40, English 210, ED PSY 312, ELE ED 230, ELE ED 341, ELE ED 253, ELE ED 246, ELE ED 389, and admission to student teaching. Must be taken with ELE ED 291, and must immediately precede ELE ED 291 in the semester. Clinical teaching experience in elementary school classrooms under University and school supervision. Required for all majors in elementary education.

291 Elementary School Student Teaching II (5)
Prerequisite: ELE ED 290. Must be taken "in block" with ELE ED 205 and ELE ED 290, and must immediately follow ELE ED 290 in the semester. Clinical teaching experience in elementary school classrooms under University and school supervision. Assignments will be in different school districts, buildings serving families of different socio-economic and cultural backgrounds, and at different grade levels from those of the ELE ED 290 assignments. Required for all majors in elementary education.

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

316 Middle Level Curriculum and Instruction (3)
Prerequisites: ED PSY 312 and admission to Teacher Education Program. Preparation for teaching and learning in a middle school, grades 5-9. Content focuses on curriculum development, methods, techniques, materials, planning, organization, and assessment in middle level education for early adolescents.

330 Children's Literature and Reading (3)
Prerequisite: Junior standing. A course designed to provide a knowledge of the various types of literature for young people, including books, magazines, comics, television, and films; criteria for evaluating and selecting material; uses of material in the classroom and home; and motivating reading for enjoyment and information, bibliotherapy, and communication.

336 Teaching Language Arts and Reading N-9 (3)
Prerequisites: Six hours of English/Communication; ED PSY 312. Involves study of methods and materials for implementing a total language arts program, including reading in the elementary school. Emphasis is placed on using the language experience approach in teaching listening, reading, spelling, handwriting, grammar, and spoken or written composition as basic skills.

341 Teaching Science in the Elementary School (3)
Prerequisites: Completion of science requirements in general education, ED FND 111, and upper-level standing. An analysis of teaching science to elementary school children with emphasis on current science education trends, science curricular materials, and strategies of instruction.

342 Teaching Remedial Mathematics (3)
Prerequisite: ELE ED 246. Methods for diagnosing and remediating mathematical skills and concepts of the special needs learner. Course requires testing and tutoring assignments in area school districts outside of scheduled University class time.

346 Advanced Methods in Elementary School Mathematics (3)
Prerequisites: ELE ED 246 and consent of instructor. Review, evaluate, develop, and provide classroom trial of instructional components prepared for teaching mathematics. Course will develop greater depth of preparation in: elementary program content; programs for exceptional children; and curricular extensions such as transformational geometry, rational numbers, and intuitive algebra.

385 Teaching Reading in the Elementary School (3)
Prerequisites: ED PSY 312 and junior standing. Systematic study of methods for teaching elementary school reading with greatest emphasis on teaching word recognition, vocabulary, and comprehension. Ten hours of observation-participation is required.

387 Teaching Reading and Language Arts to Culturally Diverse Children (3)
Prerequisites: ED FND 111 and senior standing. Systematic study of the problems of teaching reading and related language arts in ghetto schools. Attention is given to the ways in which the selection of materials and methodology of teaching relating to inner-city children is influenced by their physical and psychological needs, their experience backgrounds, their spoken language patterns, their cultural heritage, and the sociology of their environment.

389 The Analysis and Correction of Reading Problems in the Classroom (3)
Prerequisites: ELE ED 385 or SEC ED 386, or equivalent. Study of causes of reading difficulties and procedures that may be used to analyze and correct them in the group setting. Ten hours of diagnostic tutoring is required.

390 Elementary School Student Teaching III (5)
Prerequisites: ELE ED 291 or equivalent and admission to student teaching. Clinical teaching experience in elementary school classrooms under University and school supervision with seminar included. For students who wish an additional student teaching experience.

Elementary and Early Childhood Education

405 Seminar (1-10)

410 Current Research in the Elementary School Curriculum (3)

A systematic examination of research related to elementary school curriculum. Students will be expected to become effective consumers of educational research and to utilize appropriate research findings in their decision-making processes when planning instruction.

411 Curricular Issues in the Elementary School (3)

Prerequisite: ELE ED 410. Selected contemporary problems which affect elementary classroom decisions. Computer literacy values, meeting individual needs, and dealing with discipline are studied through investigative discussions, reading, and a research paper.

412 Microcomputers in Elementary Education (3)

Focuses on principles and procedures for using microcomputers for instructional and classroom management activities in the elementary classroom.

422 Curriculum Construction in Elementary Schools (3)

Prerequisite: ELE ED 410. A study of the elementary curriculum with regard to selection of objectives and content and to provisions for curricular change.

423 Curricular Implementation in the Elementary School (3)

Prerequisite: ELE ED 422. Culminating experience for curricular project in ELE ED 422. Course will include procedures and techniques for curricular design implementation in the field.

425 Elementary School Supervision (3)

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

427 Supervision of Clinical Experiences in Teacher Education (3)

Prerequisite: Teaching experience and consent of instructor. A consideration of the clinical phase of the teacher education program, with special emphasis on student teaching. Examination of role responsibilities and supervisory practices. Study of professional literature for research findings, theoretical formulation, and recent developments in the field.

430 Problems of Teaching the Language Arts (3)

Procedures used in teaching integrated language arts in elementary schools.

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

Prerequisites: ELE ED 430, ED REM 431, and six hours of English. A systematic study of research in teaching speaking, listening, written composition, handwriting, spelling, and linguistics as it focuses on the problems of teaching these skills in the elementary school. Attention is given to innovations in the field.

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

Prerequisite: ELE ED 330 or equivalent. A survey of children's literature published in the last ten years. Special emphasis will be placed on the relationship between children's literature and contemporary issues of society. Students will experience the materials themselves rather than reading about books. In addition, students will begin to study the literary elements that make literature interesting and meaningful for children.

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

Prerequisite: ELE ED 330 or equivalent. A study of literary elements that make literature interesting and meaningful for children will be completed. Further emphasis will focus on the application of trade books for children as resources in school curriculum planning. Children's Literature II may be taken either before or after Children's Literature I.

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

Prerequisites: Eight hours of science, ELE ED 341, and ED PSY 411. A thorough examination of research related to elementary school science instruction with particular emphasis on innovative programs. Includes methods of investigation and techniques for interpreting the professional literature.

443 Teaching Physical Science in the Elementary School (3)

Activity-oriented experiences with basic physical science concepts, laboratory skills, and techniques that are appropriate for elementary school teachers. The physical science concepts in elementary school curricula will be analyzed in depth.

444 Environmental Studies for Elementary Teachers (3)

Activity-oriented training in developing environmental awareness, field and/or laboratory skills and techniques, and the use of elementary environmental curricula. Materials and activities appropriate for one's students and locale will be developed.

Elementary and Early Childhood Education

445 Problems of Teaching Mathematics in the Elementary School (3)

A study of the mathematics program in the elementary school from the viewpoint of goals, content, techniques, and evaluation.

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

Prerequisite: ECH ED 346 or ELE ED 246. Curricular development and implementation on reflecting recent research findings. Content, materials, methods of teaching the general topic: measurement. Applications in both the metric and standard systems.

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

Prerequisite: ELE ED 445. A thorough examination of research related to recurrent problems in elementary school mathematics instruction, as well as current problems arising within modern programs. Includes methodology appropriate to investigation of such problems and techniques for assessment of the literature.

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

Prerequisite: ELE ED 445. Causes of mathematical disabilities. Materials and techniques for diagnoses and corrective programs for children and youth.

450 Problems of Teaching Social Studies in the Elementary School (3)

A classroom-oriented study of curricular and instructional problems encountered in social studies. Emphasis is placed upon development of materials, techniques, and resources.

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

Prerequisite: ELE ED 450. An advanced study of pedagogical problems germane to social studies education with particular emphasis on application of research findings to the solution of classroom problems.

482 Problems and Research in Teaching Elementary School Reading (3)

Prerequisite: ELE ED 385 or equivalent. Systematic study of research as it focuses on the problems of teaching reading in the elementary school. Attention is given to innovations in the field.

484 Developmental Reading (K-13) (3)

Prerequisite: ELE ED 385 or SEC ED 386, or equivalent. Designed to update classroom teachers' skills in reading instruction. Study of basic reading instruction at all grade levels with special emphasis on current instruction programs, innovative approaches to reading instruction, basic techniques, commercial reading materials, and recent research findings which have a bearing on methodology.

486 Clinical Diagnosis and Treatment of Reading Disabilities (3)

Prerequisites: A graduate course in reading and in measurement or statistics. Etiology of specific reading disability; procedures that are used to diagnose and treat in the clinical setting.

488 Supervision of School Reading Programs (3)

Prerequisite: ELE ED 385 or SEC ED 386. Processes and techniques of developing, evaluating, and/or modifying the reading program in a school or district. The course would enable those seeking positions as consultants, coordinators, and directors of reading to conform with standards specified by the International Reading Association.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

493 Clinical Methods in Child Study I (3)

Prerequisites: ELE ED 486 and ED REM 422. Clinical experience in diagnosing learning problems, especially reading disability, in school children.

494 Clinical Methods in Child Study II (3)

Prerequisite: ELE ED 493. Clinical experience in applying remedial procedures to school children with learning problems, especially reading disability.

495 Supervision of Practicum in Clinical Reading (3)

Prerequisites: ELE ED 385 or SEC ED 385; ELE ED 486, ELE ED 493, ELE ED 494; and ED REM 422. Supervising graduate students in diagnosis and remedial process within the reading clinic.

497 Problems (1-10)

Selected problems to meet the needs of individual students.

Physical Education

Faculty

Bruce A. Clark, Associate Professor*

Ph.D., University of Illinois

Linda Gagen, Lecturer

M.Ed., Kent State University

Kathleen M. Haywood, Associate Dean of Instruction:

Director of Graduate Studies, Professor*

Ph.D., University of Illinois-Urbana-Champaign

B. Darlene Johnston, Assistant Professor*

Ph.D., University of New Mexico

Thomas J. Loughrey, Associate Professor*

Ph.D., University of Iowa

Charles G. Smith, Associate Professor*;

Athletic Director Emeritus

M.S., Washington University

*members of Graduate Faculty

General Information

The Department of Physical Education is housed on the second floor of the Mark Twain Building. Information about offerings and related matters may be obtained in the departmental office, 234 Mark Twain.

The department coordinates work in physical education. At the undergraduate level this work leads to the B.S. in Education degree with emphasis in either elementary or secondary physical education.

Note: The State Board of Education developed standards for renewable professional certificates, based on specific requirements for training and experience. Details regarding these standards are available in the Office of Undergraduate Studies in Education.

The master of education degree in elementary and secondary education provides courses for graduate students who choose physical education as their teaching field. Graduate students should consult their advisers about the requirements.

Undergraduate Studies

Bachelor of Science in Education: Physical Education

General Education Requirements (42 hours required):

Humanities

At least one course from two of the following fields: music (excluding applied music), art, foreign language, Western and non-Western cultures, philosophy, literature, classical studies, and theatre and drama.

Communication Skills

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

Social Studies

Courses in American history and American government, and one additional course selected from the following areas: geography, sociology, economics, anthropology, and psychology.

Natural Science

One course in a physical or earth science; one course in a biological science. At least one of these courses must have a laboratory component.

Mathematics

One college-level mathematics course.

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

Electives 11-14 hours

Program Requirements

Students must pass Proficiencies in first aid, cardio-pulmonary resuscitation, personal physical fitness, and water safety instructor. The proficiency evaluations are regularly scheduled each semester. Contact the department for further information. Students are urged to complete these requirements as early in the program as possible. Successful completion is required prior to student teaching. No credit hours are granted for satisfying this requirement.

Elementary School Emphasis

Students are required to take 12 hours of analysis and teaching courses in Physical Education (PHY ED):

121, Analysis and Teaching of Physical Activities I

122, Analysis and Teaching of Physical Activities II

123, Analysis and Teaching of Physical Activities Laboratory

The following is a list of laboratories for PHY ED 123:

Offered Fall Semester Only

Golf, Bowling, and Archery

Ballroom, Folk, and Square Dancing

Racquet Sports

Gymnastics and Tumbling

Outdoor Education

Offered Winter Semester Only

Soccer/Basketball

Rhythmic Activities and Modern Dance

Track and Field

Aquatics

Baseball/Softball/Volleyball

Physical Education

The following theory of Physical Education (PHY ED) courses are required (38 hours):

- 130**, Elements of Health Education
- 165**, Physical Education Activities in the Elementary School
- 232**, Sports Medicine
- 261**, Physical Activity for the Exceptional Learner
- 275**, Psychological Aspects of Physical Education
- 276**, Sociocultural Foundations of Sport and Physical Education
- 280**, Human Anatomy and Physiology, or **Biology 113**, Human Physiology and Anatomy I
- 282**, Physical Growth and Motor Development
- 283**, Kinesiology
- 284**, Physiology of Human Exercise

The following Professional Education courses are required (28 hours):

- EDUC 101**, Introduction to Classroom Teaching
- ED FND 111**, The School in Contemporary Society
- Psychology 270**, Child Psychology
- ED PSY 312**, Psychology of Teaching and Learning
- SPC ED 313**, The Psychology and Education of Exceptional Individuals
- SEC ED 386**, Teaching Reading in Secondary School Content Areas
- PHY ED 268**, The Curriculum and Methods of Teaching Physical Education
- PHY ED 290**, Student Teaching in Physical Education I
- PHY ED 291**, Student Teaching in Physical Education II

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

Total: 120 hours

Secondary School Emphasis

Students are required to take 12 hours of analysis and teaching courses in Physical Education (PHY ED):

- 121**, Analysis and Teaching of Physical Activities I
- 122**, Analysis and Teaching of Physical Activities II
- 123**, Analysis and Teaching of Physical Activities Laboratory

The following is a list of laboratories for PHY ED 123:

Offered Fall Semester Only

- Golf, Bowling, and Archery
- Ballroom, Folk, and Square Dancing
- Racquet Sports
- Gymnastics and Tumbling
- Outdoor Education

Offered Winter Semester Only

- Soccer/Basketball
- Rhythmic Activities and Modern Dance
- Track and Field
- Aquatics
- Baseball/Softball/Volleyball

The following theory of Physical Education courses are required (32 hours):

- 165**, Physical Education Activities in the Elementary School
- 232**, Sports Medicine
- 261**, Physical Activity for the Exceptional Learner
- 275**, Psychological Aspects of Physical Education
- 276**, Sociocultural Foundations of Sport and Physical Education
- 280**, Human Anatomy and Physiology, or **Biology 113**, Human Physiology and Anatomy I
- 282**, Physical Growth and Motor Development
- 283**, Kinesiology
- 284**, Physiology of Human Exercise

The following Professional Education courses are required (31 hours):

- ED FND 111**, The School in Contemporary Society
- SEC ED 213**, Techniques of Secondary School Teaching and Field Experience
- Psychology 271**, Adolescent Psychology
- ED PSY 312**, Psychology of Teaching and Learning
- SPC ED 313**, The Psychology and Education of Exceptional Individuals
- SEC ED 386**, Teaching Reading in Secondary School Content Areas
- PHY ED 268**, The Curriculum and Methods of Teaching Physical Education
- PHY ED 290**, Student Teaching in Physical Education I
- PHY ED 291**, Student Teaching in Physical Education II

Attention Education Majors: Professional Education courses must be completed with a grade point average of 2.50 and no grade lower than a C (2.0). A C- grade is not acceptable.

Changes in teacher certification requirements in this area are upcoming. To obtain the latest information on requirement changes or to find out whether the new requirements will apply to you, contact the Office of Undergraduate Teacher Education, 155 Marillac Hall.

Total: 120 hours

Athletic Coaching Minor

An Athletic Coaching Minor is available (minimum of 20 hours). The following courses are required:

Physical Education

PHY ED 280, Human Anatomy and Physiology (this course is a prerequisite to PHY ED 232, PHY ED 283, and PHY ED 284)
PHY ED 232, Sports Medicine
PHY ED 275, Psychological Aspects of Physical Education
PHY ED 283, Kinesiology
PHY ED 284, Physiology of Human Exercise
PHY ED 121, Analysis and Teaching of Physical Activities I
PHY ED 123, Analysis and Teaching of Physical Activities Laboratory
PHY ED 312, Management of Sports Programs
PHY ED 330, Prescribing Physical Activity

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

Graduate Studies

Master of Education: Elementary or Secondary Education with Physical Education as Teaching Field

Students in elementary or secondary education master's degree programs may elect physical education as their teaching field. For further information about this option, consult an adviser or faculty from the Department of Physical Education.

Career Outlook

The employment outlook for physical educators has been improving, especially at the elementary school level. In addition to elementary or secondary physical education teaching, graduates may want to consider coaching, athletic training, dance, research, and gerontological careers. Graduates have been employed as specialists in recreation and physical fitness organizations, as special physical educators and coaches.

Students are urged to consult with their advisers in order to broaden the career options available by combining physical education with other specialties for positions in community agencies, business, and industry.

Physical Education

Course Descriptions

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

121 Teaching Physical Education Skills I (2)

The study of skill analysis and techniques of teaching specific physical activities selected in PHY ED 123. Particular emphasis will be given to biomechanical analysis of movement, application of concepts of motor learning, and organization and management of instructional settings. Must be taken concurrently with four of the PHY ED 123 laboratory sections.

122 Teaching Physical Education Skills II (2)

Prerequisite: PHY ED 121. A continuation of PHY ED 121 with emphasis on the planning and teaching processes. Students will have opportunities to micro-teach, peer-teach, and videotape. To be taken concurrently with four of the PHY ED 123 laboratory sections.

123 Analysis and Teaching of Physical Activities Laboratory (4-10)

The study and performance of physical activities. Emphasis will be given to skill analysis, drills, strategy, rules, materials, and teaching of the various activities. Registration in four laboratory sessions is required. Must be taken concurrently with PHY ED 121 or PHY ED 122.

124 Principles and Practice in First Aid and Cardiopulmonary Resuscitation (1)

The course provides theory and supervised practice in first aid and cardiopulmonary resuscitation leading to American Red Cross certification in those areas.

130 Elements of Health Education (3)

Prerequisites: ED FND 111 and admission to the School of Education. Basic school health for teachers. Considers health as it relates to the school and the child.

132 Personal Health (3)

A study of factors that contribute to physical and mental well-being at all stages of the life cycle. Particular attention will be given to the identification and analysis of individual health behaviors.

134 Personal Physical Fitness (3)

A study of the relationship between vigorous physical activity and individual well-being. Emphasis will be placed on an individualized analysis of health fitness, resulting in a prescribed program to develop optimal levels of physical fitness, including aerobic fitness, strength, muscular endurance, flexibility, body composition, and lifetime sports considerations.

165 Physical Education Activities in the Elementary School (3)

Objectives of physical education for the elementary school child with applications of choice of activities, organization of program, theory, and practices.

190 Clinical Experience in Physical Gerontology (3)

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

193 Clinical Experience in Youth Sport Programs (3)

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

204 Special Topics in Physical Education (1-3)

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

232 Sports Medicine (3)

Prerequisite: PHY ED 280. Study of the medical supervision of sports participants, training, and prevention and care of injuries. Course grants Red Cross first aid certificate.

261 Physical Activity of the Exceptional Learner (3)

Prerequisites: SPC ED 311 and SPC ED 313. A study of the special physical activity and exercise needs, interests, and problems of the exceptional learner, with considerable emphasis on the development of methods and competencies in modifying physical activities.

267 Performance Analysis in Physical Education (3)

Prerequisite: College-Level Mathematics. A study of quantitative and qualitative approaches, processes and instruments used in assessing student progress in physical education activities. Emphasis will be given to the application of statistical methods to the results of evaluations of human motor performance and the interpretation of those results, as well as to the construction and administration of measurement instruments.

268 Curriculum and Methods of Teaching Physical Education (3)

Prerequisite: PHY ED 101 or SEC ED 213. Study of the scope and sequence of the school program in physical education with emphasis on planning processes, content selection, management procedures, instructional strategies, and program assessment.

275 Psychological Aspects of Physical Education (3)

Prerequisites: Psychology 3. A study of the following aspects of psychology as they influence performance in sport and physical activity: learning, retention, transfer, practice, feedback, motivation, anxiety, perception, motor control, social facilitation, cohesion, leadership, and reinforcement.

276 Sociocultural Foundations of Sport and Physical Education (3)

Prerequisite: Junior standing. Study of the role of sport and physical activity programs in society and schools. The study is based on historical, philosophical, sociological, and cultural perspectives.

Physical Education

280 Human Anatomy and Physiology (5)

Prerequisite: Biology 1 and Biology 3, or consent of instructor. Study of the basic aspects of human anatomy and physiology and their relationship to concepts in sport and physical activity. Two hours of laboratory per week.

282 Physical Growth and Motor Development (3)

Prerequisite: Psychology 270 or Psychology 271. An examination of the physical growth and aging, and motor development of the human being over the life span. Emphasis on evaluative tools, techniques, and studies of research findings. Laboratory field experience for observing individuals. Attention is directed toward acquisition of basic skills, perceptual-motor development, fitness development, and age-related changes in information processing. A required course for physical education majors; an elective course for early childhood, special, and elementary education majors.

283 Kinesiology (3)

Prerequisite: PHY ED 280. Study of the biomechanics of human motion with particular application to performance in sport activities.

284 Physiology of Human Exercise (3)

Prerequisite: PHY ED 280. Study of the physiological effects of human exercise, training, and sport activities upon the human body; understanding and evaluation of physical fitness components, with consideration given also to areas including work, fatigue, nutrition, age, sex, and environment.

290 Student Teaching in Physical Education I (5)

Prerequisites: SEC ED 213; eight of the following courses: PHY ED 121, 122, 123, 130, 232, 275, 276, 277, 283, and 284; and admission to student teaching. Must be taken "in block" with PHY ED 268 and PHY ED 291 and must immediately precede PHY ED 291 in the semester. Clinical teaching experience in physical education settings in the schools under University and school supervision. Required for all majors in physical education.

291 Student Teaching in Physical Education II (5)

Prerequisite: PHY ED 290. Must be taken "in block" with PHY ED 268 and PHY ED 290, and must immediately follow PHY ED 290 in the semester. Clinical teaching experience in physical education settings in the schools under University and school supervision. Assignments will be in different socioeconomic and cultural backgrounds, and at different grade levels from those of the PHY ED 290 assignments. Required of all majors in physical education.

292 Internship in Physical Gerontology (6-12)

(Same as Gerontology 292.) Prerequisite: PHY ED 190. Clinical experience in gerontological physical education. Clinical experience in selected gerontological setting as a physical education practitioner under University and institutional supervision. Experiences

will include at least two separate experiences completed concurrently or successively. Seminar accompanies internship experiences.

306 Dance Workshop (1)

312 Management of Sports Programs (3)

Prerequisite: Consent of instructor. A study of administrative theory, roles, responsibilities, and functions in the management of sports programs.

330 Prescribing Physical Activity (3)

(Same as Gerontology 330.) Prerequisite: PHY ED 280 or consent of instructor. Prescription of physical activity for individualized and group programming based upon physical fitness assessment. Health, nutrition, age, physical fitness, and testing aspects are considered in developing specialized exercise programming based upon current physiological and biomechanical research.

380 Nutrition for Human Performance (3)

A study of human nutrition and its relationship to human performance. Consideration is given to nutrients—function, food source, health concerns and implications, and energy intake and expenditure. Special consideration is given to the following: body composition including weight gain and loss, ergogenic aids, competitive athletes, older adults, children and teens, pregnant women, disease risk, fluid and electrolyte balance, and specific sport activities.

390 Student Teaching in Physical Education III (5)

Prerequisites: PHY ED 291 or equivalent and admission to student teaching. Clinical teaching experience in physical education settings in the school under University and school supervision with seminar included. For students who wish an additional student teaching experience.

462 The Physical Education Curriculum (3)

Prerequisite: Consent of instructor. A study of current practices, problems, trends, and research involved in the analysis and development of the physical education curriculum.

464 Analysis of Teaching in Physical Education (3)

Prerequisite: Consent of instructor. A study of trends and research relating to teaching methodology, teacher effectiveness, and supervision of instruction in physical education. Emphasis will be given to the application of research on teacher effectiveness in the instructional process in physical education.

474 Psychological Dynamics of Sport Performance (3)

Prerequisite: PHY ED 275 or consent of instructor. Application of specific principles of social psychology to the teaching of physical education and sport and of mental aspects of peak physical performance. Explores the techniques of improving team and individual performance in interscholastic and elite competition through sport psychology. Attention is

Physical Education

given to motivation, competitive anxiety, attitude, aggression, team cohesion and leadership, exercise adherence, personality, individual differences, and gender roles as they pertain to sport performance.

475 Motor Learning and Control (3)

Prerequisite: PHY ED 275 or consent of instructor. Application of specific principles of learning and the control of movement to the teaching of motor skills in physical education and sport. Surveys neurologic systems involved in perception and motor performance. Explores theoretical perspectives, including open versus closed loop control, schema theory, information processing, and dynamical systems theory. Attention is given to efficiency of learning skills by accommodating transfer of training, utilizing feedback, manipulating practice schedules, and promoting retention.

476 Social Inquiry of Sport (3)

Prerequisite: PHY ED 276 or consent of instructor. A study of basic social processes in sport, such as socialization, social facilitation, and assimilation.

478 Problems and Research in Physical Education (3)

A study of potential research problems and research processes in specific physical education subdisciplines. A research project will be completed in the student's physical education subdiscipline interest area.

482 Life Span Perceptual and Motor Development (3)

Prerequisite: PHY ED 282 or consent of instructor. A study of sensory and perceptual development and change, and the age-related qualitative and quantitative changes in motor skill. Both current theory and current empirical findings are stressed. Attention is given to methods of structuring learning environments to maximize development. Study is from a life span perspective.

483 Biomechanics of Sport Techniques (3)

Prerequisite: PHY ED 283 or consent of instructor. A study of the biomechanical concepts important to analysis of techniques used in selected sports. Explores recent research findings on efficient sports techniques. Provides experience in the analysis of skill performance.

484 Physiological Bases of Physical Performance (3)

Prerequisites: PHY ED 280 and PHY ED 284 or consent of instructor. Physiological bases and contemporary trends in the study of human performance and exercise stress; will analyze research literature and study experimental strategies with the focus upon application to teaching and coaching.

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

Prerequisite: Completion of PHY ED 484 or equivalent. A study of the effects of exercise on the basic epidemiology, physiology, and management of unavoidable and avoidable cardiovascular risk factors. Special attention will be given to the examination of the effect of exercise in the management of cardiovascular disease risk.

490 Internship (1-10)

Prerequisite: Consent of instructor. Closely supervised experience in a field setting under the direction of a graduate faculty member. An appropriate level of competence and evidence of growth in the professional role must be demonstrated by the intern. The internship will include planning, research, evaluation, and related professional activities.

497 Problems (1-10)

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

St. Louis

1995-96 Bulletin



Evening College

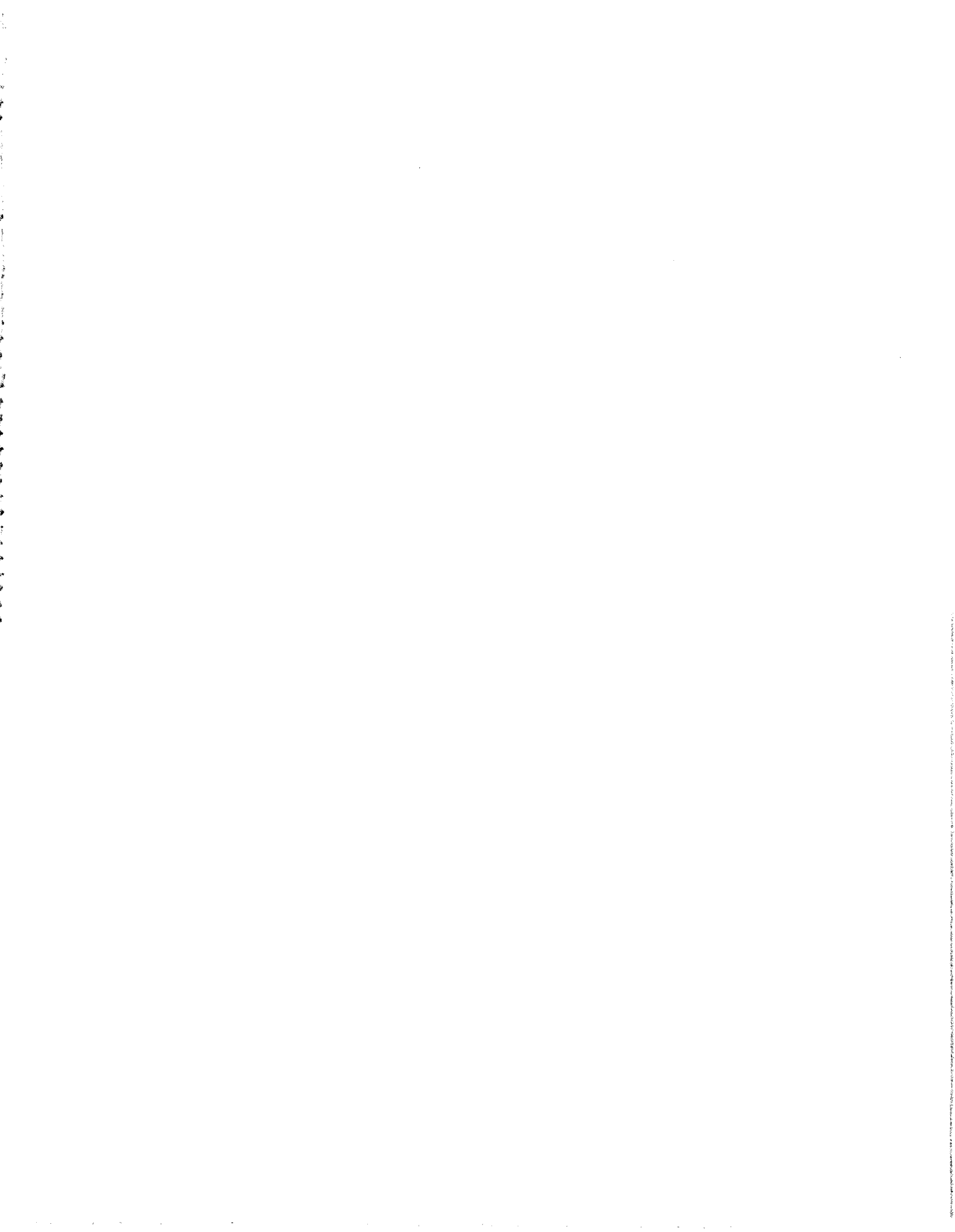


Evening College



1995-96 Bulletin

St. Louis



Evening College

Administration

Everette E. Nance, Dean
Ed.D., Western Michigan University
Harry Gaffney, Associate Dean
Ph.D., St. Louis University

General Information

The Evening College provides undergraduate degree programs for students who, for various reasons, choose to attend evening classes. Twenty-six degree programs are offered through the Evening College. Courses needed as prerequisites for graduate programs are available. In addition, persons who want to maintain their professional competence or broaden their educational background without pursuing degree work will find a broad array of courses which may be taken for credit or on an audit basis.

Recognizing the value of continuing education and career advancement, many St. Louis institutions, businesses, and industries encourage their employees to avail themselves of the educational opportunities offered by the Evening College. The Veterans Administration has approved either full-time or part-time study for educational benefits.

Since most Evening College students are employed full time, they normally carry less than a full academic load. To enable students to carry as many courses as they wish, the Evening College schedules classes after 5:00 p.m. Classes and degree programs are conducted according to the same standards as the day program.

Course Areas

The Evening College offers courses in 28 academic areas: anthropology, art, astronomy, biology, business administration, chemistry, communication, computer science, criminology and criminal justice, cytotechnology, economics, education, English, French, geography, geology, German, history, mathematics, medical technology, music, philosophy, physics, political science, psychology, sociology, social work, and Spanish.

Academic Advising and Program Planning New students are encouraged to consult with an academic adviser to help develop programs appropriate to their needs. Appointments may be made by calling the Evening College, 516-5162.

Transfer students or students with 40 or more credit hours who wish to be assigned advisers and to graduate from the Evening College must file a Declaration-of-Major form.

Facilities The facilities of the University of Missouri-St. Louis, including the computer center, library, laboratories, cafeteria, bookstore, health service, placement service, and admissions office, are open in

the evening. Evening College students are also eligible to participate in any of the University sports programs that interest them. The athletic facilities of the Mark Twain Building are available.

Alpha Sigma Lambda The Beta Epsilon Chapter of Alpha Sigma Lambda is a national honorary scholastic society for Evening College students. To be eligible for membership, a student must have completed at least four semesters of college or university work, completed a minimum of 30 semester hours in the Evening College, have a cumulative grade point average of 3.2, and be enrolled in the Evening College. Individuals already in possession of a college degree are not eligible for membership.

Degree Programs

General Education Requirements All candidates for a degree through the Evening College must meet the University general education requirements.

Bachelor of Arts Majors available for the B.A. degree are biology, chemistry, communication, economics, English, history, mathematics, physics, political science, psychology, and sociology. For further information, consult the appropriate departmental section of the College of Arts and Sciences portion of this *Bulletin*.

Bachelor of Science The B.S. degree is available in applied mathematics, biology, chemistry, computer science, criminology and criminal justice, economics, physics, and sociology. For further information, consult the appropriate departmental section of the College of Arts and Sciences portion of this *Bulletin*.

Specialized Bachelor's Degrees Also available are the Bachelor of Science in Business Administration (B.S.B.A.), the Bachelor of Science in Education (B.S.Ed.), and the Bachelor of Science in Public Administration (B.S.P.A.). The B.S. in Education offers specialization in any of the following: early childhood education, elementary education, middle school/junior high school, special education, and secondary education (in 11 teaching areas). Students should consult the appropriate departmental section of the College of Arts and Sciences portion of this *Bulletin* or the sections for the School of Business Administration or the School of Education.

Bachelor of Social Work The B.S.W. degree program is designed to prepare persons for employment in social welfare agencies, schools, hospitals, correctional institutions, or day care, geriatric, or rehabilitation centers. Individuals currently working in social welfare settings can improve their skills or increase their opportunities for job advancement. For further information, consult the Social Work section of this *Bulletin*.

Evening College

Bachelor of General Studies Degree

The Bachelor of General Studies degree (B.G.S.) is also offered through the Evening College. It is designed to provide mature students with a meaningful alternative to traditional degree programs. It appeals to a variety of students whose circumstances, goals, and aspirations are different from those of the "typical" college student. The B.G.S. program provides the flexibility needed to enable students, with careful advisement, to develop individualized programs of study.

Some of the educational goals pursued by students in the program are designed to reflect students' interests in the fields of public relations, corporate communication, medical technology and cytotechnology.

The Evening College, in cooperation with the Jewish Hospital College of Nursing and Allied Health, has made courses in medical technology and cytotechnology available for students.

Admission Requirements for the B.G.S. Program

Candidates for the B.G.S. degree must be admitted to the Evening College and must complete an application for admission to the program. Applications must be approved by the General Studies Committee and the Evening College dean. The criteria for admission are:

- 1) Students must be mature, their programs of study reasonable and be in good academic standing.
- 2) Students should have a broad education and must have demonstrated the equivalent of academic proficiency required for any other undergraduate degree at UM-St. Louis.
- 3) Study programs should be structured to meet students' unique educational goals and should not be readily available under any other UM-St. Louis degree program.
- 4) That the degree will better qualify the recipients to deal with their life goals than if they had some other degree.

Degree Requirements for the B.G.S. Program

General Education Requirements

Students must complete the University's general education requirements. For details refer to the General Education Requirements section of this *Bulletin*.

Personal Emphasis Area In consultation with a faculty adviser, students shall develop a personal emphasis area of at least 30 advanced semester hours of graded credit that meets their educational goals. Graded credit consists of degree credit courses in which the student received a letter grade of A, A-, B+, B, B-, C+, C, C-, D+, D, D-. Regardless of the focus, theme, or purpose, the personal emphasis area should result from self-examination and contribute to self-realization and an advanced level of academic competence and achievement. The study program must be approved by the

faculty adviser, dean, and General Studies Committee. Students and advisers periodically review the program toward attaining the goal or objective and make appropriate modifications where necessary, subject to the dean's approval.

Hour and Grade Requirements The degree requires completion of 120 semester hours with a 2.0 grade point average overall and in the personal emphasis area. No more than 30 hours may be taken in any one department without written consent of the departmental chairperson. At least 45 hours must be earned in courses beyond the introductory level. A minimum of 24 hours of graded credit must be completed in residence at UM-St. Louis, of which 15 hours must be in the personal emphasis area. No more than 18 hours may be taken on a satisfactory/unsatisfactory basis. Each candidate must be in residence for 24 of the last 30 hours of graded credit (exclusive of courses taken on a satisfactory/unsatisfactory basis).

Credit for Experience, Special Projects, Examinations, and Non-Traditional Forms of Study Credit may be earned through the College Level Examination Program in accordance with University policy or through examinations proposed or approved by University departments. Credit also may be earned through correspondence study, supervised independent research study, and college-level courses offered by television or similar education media. Students are responsible for obtaining approval for credit applied under this option.

Students also may receive credit for vocational experience, community service projects, or cultural activities after they have completed 24 hours of course work in residence.

Vocational Experience Credit may be granted for vocational experience when related to the personal emphasis area. Credit cannot exceed three semester hours for each year of experience with a maximum of 12 hours allowed only in exceptional circumstances. Petitions for vocational experience credit must be accompanied by a job description verified by the employer or similar appropriate evidence. Credit may be granted only upon recommendation of the adviser and approvals of the dean and the General Studies Committee.

Community Service Projects/Cultural Activities Credit not exceeding six hours may be earned for participation in approved community service projects or cultural activities. The projects or activities must be formulated by the student and carried out under the supervision of a faculty member with the approval of the adviser, dean, and General Studies Committee. Students must submit a written report approved by the supervisor upon completion of the projects or activities.

Evening College

Credit for vocational experience or community service/cultural activities may be applied toward the credits required for the degree but may not be used to complete the personal emphasis area or general education requirements. Students must file a degree application form in the Evening College at least one year before the expected graduation date.

Minors

Minor in Employee Training and Development

The Evening College and the School of Business Administration offer a minor in employee training and development. The requirements are:

Business Administration 318, or **Psychology 318**, Industrial and Organizational Psychology
Business Administration 319, Employee Training and Development
ED PSY 312, Psychology of Teaching and Learning
ED TEC 340, Selection and Utilization of Educational Media
Psychology 219, Research Methods

One additional course selected from these approved electives:

Business Administration 309, Personnel Management
Communication 141, Business and Professional Speaking
Sociology 354, Occupations and Their Work Settings

Students should consult with an adviser when planning their programs. A 2.0 grade point average is required for the minor. No courses may be taken on a satisfactory/unsatisfactory basis. At least 12 credits of those required must be completed in residence at UM-St. Louis.

This minor is designed for personnel managers in small companies and training managers or personnel specialists in larger companies. The required 18 hours, including the approved elective course, enable the student to be exposed to different skills essential for the occupational area.

Other Minors

Minors are also available in biology, black studies, business administration, chemistry, communication, computer science, criminology and criminal justice, economics, English, history, legal studies, mathematics, political science, psychology, sociology, and urban studies. For currently offered minors, consult your adviser.

Certificates

Certificate programs are available in biochemistry, gerontology, women's studies, and writing. For more information consult the Certificate Programs section of this *Bulletin*.

Career Outlook

Many graduates of the Evening College have found their careers advanced upon obtaining their degree. Some have entered new careers in mid-life and others have found personal satisfaction in the acquisition of knowledge for its own sake. The Evening College staff consists of advisers with extensive experience concerning adult students' needs. For an appointment, call the Evening College office.

Inter-school Studies



1995-96 Bulletin

Louis

Public Policy Administration Graduate Degree Program

Faculty

Carol W. Kohfeld, Director of MPPA Program; Professor of Public Policy Administration and Political Science*

Ph.D., Washington University

E. Terrence Jones, Professor of Public Policy Administration and Political Science*; Dean, College of Arts and Sciences

Ph.D., Georgetown University

George J. McCall, Professor of Public Policy Administration and Sociology*

Ph.D., Harvard University

Eugene J. Meehan, Curators' Professor Emeritus of Public Policy Administration and Political Science*

Ph.D., London School of Economics

Donald Phares, Professor of Public Policy Administration and Economics*

Ph.D., Syracuse University

Dennis L. Dossett, Associate Professor of Public Policy Administration and Management*

Ph.D., University of Washington

Andrew D. Glassberg, Associate Professor of Public Policy Administration and Political Science*

Ph.D., Yale University

J. Germain Gros, Assistant Professor of Public Policy Administration and Political Science

Ph.D., University of California-Berkeley

Michele M. Hoyman, Associate Professor of Public Policy Administration and Political Science*

Ph.D., University of Michigan

J. Fred Springer, Associate Professor of Public Policy Administration and Political Science*

Ph.D., University of California-Davis

Lana Stein, Associate Professor of Public Policy Administration and Political Science*

Ph.D., Michigan State University

James M. Krueger, C.P.A., Assistant Professor of Public Policy Administration and Accounting*; Associate Vice Chancellor for Budgeting and Academic Planning

D.B.A., Indiana University

Timothy D. McBride, Assistant Professor of Public Policy Administration, Gerontology, and Economics

Ph.D., University of Wisconsin-Madison

Anne E. Winkler, Associate Professor of Public Policy Administration and Economics*

Ph.D., University of Illinois

Jane C. Sweney, Internship Coordinator

M.A., St. Louis University

*members of Graduate Faculty

The Master's Program in Public Policy Administration (MPPA) is an interdisciplinary program designed to prepare students for managerial positions in the public sector or in agencies having substantial interaction with the public sector. The program is a unit of the Graduate School and is accredited by the National Association of Schools of Public Affairs and Administration. Faculty are on joint appointment in public policy administration and in either economics, political science, sociology, or business administration. The program includes courses in policy analysis, public administration, management, accounting, and economics in the basic curriculum.

The MPPA program at the University of Missouri-St. Louis differs from existing programs available in the Missouri-Illinois region in its interdisciplinary nature and emphasis on the development of analytic and administrative skills. It is designed to meet the needs of

prospective full-time students, as well as those who wish to earn a degree in the evening while continuing to work.

In addition to the distinguished doctoral-level faculty in public policy administration, students have access to courses and faculty in business and other social sciences, in the Center for Metropolitan Studies, and in the Center for International Studies. The MPPA Program, together with similar programs at UM-Columbia and UM-Kansas City, is responsible for the editorship of the *American Review of Public Administration*.

The full facilities of the Office of Computing, including the urban data program, are available. UM-St. Louis is also a member of the Inter-University Consortium for Political and Social Research.

Admission Requirements

Applicants to the MPPA program must meet the general requirements for admission to Graduate School as explained in the Graduate Study section of this *Bulletin*. Students entering the MPPA program may be required to take up to nine hours of prerequisites in mathematics, accounting, and social science. Up to three hours of graduate-level work at UM-St. Louis, taken to meet prerequisite requirements, may be applied to the 40 hours required for the MPPA degree.

Degree Requirements

The program includes 40 hours, 25 in the core curriculum sequence and 15 in a special field chosen by students in consultation with their advisers.

Prerequisites

Students must demonstrate competency in micro-computer-based applications, including spreadsheets and data bases. These competencies must be acquired at the beginning of the degree program, if students are not already familiar with these applications. Competency may be demonstrated by examination, or by successfully completing approved short courses in spreadsheets and data bases, or by completing **Public Policy Administration 480, Management Information Systems**.

Core Curriculum

All candidates for the MPPA degree must complete 25 hours in the core curriculum sequence composed of the following public policy administration courses:

Administration

440, Proseminar in Public Policy Administration

460, Organizational Behavior and Administrative Processes

Accounting and Budgeting

418, Governmental Budgeting and Financial Control

Economics

421, Public Sector Microeconomics

Public Policy Administration Graduate Degree Program

Policy Analysis

- 410**, Introduction to Policy Analysis
419, Cases in Public Policy Analysis

Statistics and Applications

- 401**, Introduction to Policy Research
475, Introduction to Evaluation Research Methods

Exit Project

- 499**, Exit Project Research

A thesis is not required, but students must complete written analyses as part of their course work and/or internships. There is also a one credit hour exit project (PPA 499) examining a problem in public policy administration in the final semester. Public Policy Administration 419 is a capstone course and should be taken toward the end of the program.

Students may select one of four emphasis areas in which to concentrate their advanced studies: (1) Public Sector Human Resource Management, (2) Public Policy Analysis, (3) Public Policy Processes, or (4) the Individualized Policy Emphasis Area. Possible fields for the latter include financial administration, health care policy, criminal justice policy, and urban policy. Specific requirements for each emphasis area are as follows:

Public Sector Human Resource Management Emphasis Area (15 hours)

a. Required Courses (6 hours)

- Management 461**, Managing Human Resources
Public Policy Administration 449, Human Resources in the Public Sector

b. Choose **one** of the following courses (3 hours); additional courses may be applied toward optional electives (c).

- Management 462**, Advanced Organizational Behavior and Administrative Processes
Management 466, Personnel Administration: Theory and Practice
Psychology 452, Survey of Industrial/Organizational Psychology

c. **Optional Electives** (6 hours—may include courses listed but not counted in (b)).

- Public Policy Administration 495**, Internship (up to 6 hours).
Management 463, Organizational Training
Management 464, Compensation
Management 467, Dynamics of Interpersonal Relations
Psychology 429, Psychometric Theory
Economics 480, Labor Economics: Theory and Public Policy

Public Policy Analysis Emphasis Area (15 hours)

a. Required Course (3 hours)

- Public Policy Administration 365**, Introduction to Econometrics or **Political Science 402**, Intermediate Techniques in Policy Research

b. Choose **two** of the following courses (6 hours); additional courses may be applied toward optional electives (c).

- Political Science 411**, Seminar in Policy Analysis
Political Science 422, Law, Courts, and Public Policy
Sociology 304, Survey Research Practicum
Sociology 331, Qualitative Methods in Social Research

c. **Optional Electives** (6 hours—may include courses listed but not counted in (b)).

- Public Policy Administration 495**, Internship (up to 6 hours).
Economics 366, Applied Econometrics or **Political Science 403**, Advanced Techniques in Policy Research
Economics 317, Public Finance: State and Local
Economics 450, Topics in Managerial Economic Analysis
Economics 470, The Political Economy of Metropolitan Areas
Economics 480, Labor Economics: Theory and Public Policy
Economics 490, Advanced Topics in Economic Analysis

Public Policy Processes Emphasis Area (15 hours)

Required Electives

a. Required Course (3 hours)

- Political Science 442**, The Policy Process

b. Choose **two** of the following courses (6 hours); additional courses may be applied toward optional electives (c).

- Political Science 420**, Proseminar in Public Law
Political Science 430, Proseminar in American Politics
Political Science 432, Intergovernmental Relations
Political Science 470, Proseminar in Urban Politics
Political Science 448, Political Economy and Public Policy
Sociology 430, Policy Mediation Processes

c. **Optional Electives** (6 hours—may include courses listed but not counted in (b) above).

- Public Policy Administration 495**, Internship (up to 6 hours).
Economics 470, The Political Economy of Metropolitan Areas
Economics 480, Labor Economics: Theory and Public Policy
Economics 450, Topics in Managerial Economic Analysis
Economics 317, Public Finance: State and Local
Economics 490, Advanced Topics in Economic Analysis

Individualized Policy Emphasis Area (15 hours)

Prior to completion of 15 hours in the MPPA program, the student must present a proposal of specific course work for 15 credit hours of optional electives for approval by the MPPA faculty. No more than 9 hours in a given area (e.g., Financial Administration, Health Policy, Criminal Justice Policy, Urban Policy) may be applied toward degree requirements. The fifteen hours may include Public Policy Administration 495 (Internship) for up to 6 hours.

Internships

There currently exists a need for well-trained policy administrators and analysts. Frequent contact is maintained with public practitioners and public officials in the St. Louis metropolitan area, providing valuable input for program development, creation of a wide variety of internship possibilities, and assistance with a vigorous placement program for MPPA graduates. Interns may be placed in planning agencies, city managers' offices, administrative departments, or budgeting offices.

Public Policy Administration Graduate Degree Program

MPPA students employed in public agencies may receive up to six hours of credit for internships in those agencies. To do so, students must develop, in consultation with their advisers, special research projects outside the scope of their regular employment duties. Credit is granted after successful completion of the project and a written paper at the end of the semester.

Career Outlook

The current outlook for graduates of the interdisciplinary Master's Degree in Public Policy Administration program is quite promising. Recent graduates of this program have found careers as budget analysts, personnel analysts, transportation planners, and human resources planners with local, regional, state, and federal agencies.

Public Policy Administration Graduate Degree Program

Course Descriptions

365 Introduction to Econometrics (3)

(Same as Economics 365.) Prerequisites: Economics 52; Economics 251 or Business Administration 410; Economics 265 or Management Science/Information Systems 481 or Public Policy Administration 401; Mathematics 80 or Mathematics 101. An introduction to quantitative analysis of economic behavior. The ordinary least squares technique and the assumptions underlying it are developed. Methods designed to detect and correct for the violations of these assumptions are examined. Special emphasis is given to the practical application of the procedures discussed through the use of computer exercises.

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

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

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

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

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

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

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

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

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

394 Leadership and Management in Nonprofit Organizations (3)

(Same as Political Science 394, Social Work 308, and Sociology 308.) Prerequisite: Junior standing. This course addresses the role and scope of the indepen-

dent sector in the United States, as well as the leadership and management of nonprofit organizations within that sector. Topics include the economic and political scope of the independent sector, the role of volunteerism in a democratic society, and the role and scope of philanthropy. Topics in voluntary organization management and leadership include: (1) the dynamics, functions and membership structure of NPOs, especially staff-board and other volunteer relations; (2) governance and management of NPOs (3) resource mobilization; and (4) program development management and evaluation.

401 Introduction to Policy Research (3)

(Same as Political Science 401.) Procedures for testing explanations, including research design, principles of measurement, probability sampling, methods of data collection, and techniques for analyzing data.

410 Introduction to Policy Analysis (3)

(Same as Political Science 410.) Systematic development of a critical/analytic base for dealing with public policy.

415 Directed Reading and Research in Public Policy (1-10)

(Same as Political Science 415.) Prerequisite: Consent of Instructor. Independent study through readings, reports, research projects, and conferences. May be repeated for credit, provided the subject matter is different.

417 Income and Pension Policy for the Aged (3)

(Same as Political Science 417 and Gerontology 417.) Prerequisite: Graduate standing or consent of instructor. Examination of federal, state, and local policies that affect the economic well-being of the elderly. The development of social security programs and pension programs is explored within a historical context. Emphasis is placed on the analysis of current policy problems and proposed solutions.

418 Governmental Budgeting and Financial Control (3)

(Same as Business Administration 418.) Prerequisite: Business Administration 440. A study of municipal and federal financial control and budgeting procedures with emphasis on public policy. The impact of financial control on top management decisions and the effect of budget strategies on the allocations of public funds.

419 Cases in Public Policy Analysis (3)

(Same as Political Science 419.) Intensive analysis of several public policy cases. Cases will be problem-solving exercises in areas such as personnel management, program financing, budget preparation, and planning.

421 Public Sector Microeconomics (3)

(Same as Economics 421.) Prerequisites: Economics 251, or Business Administration 410, or equivalent. Application of tools of intermediate microeconomics to address public sector issues. Special emphasis is placed on critically analyzing current public policy

Public Policy Administration Graduate Degree Program

debates using the models developed. Topics covered include: cases in which competitive market fails to allocate resources efficiently (e.g., externalities and public goods), importance of property rights, incentive effects of the tax and transfer system, and the fundamentals of cost-benefit analysis.

434 Seminar in City Administration (3)

This course provides an overview of the working environment of a city administrator and is jointly sponsored by the local city managers association. Professional city personnel make presentations to the students on six major topics: political structure, organizational structure, service delivery, finance, personnel policies and practices, and leadership. The course provides direct observation of city council meetings, visits to various city facilities, exposure to different philosophies and styles of city management, and provides students a chance to assemble facts, evaluate options, and present policy recommendations for real problems that local administrators face.

440 Proseminar in Public Administration (3)

(Same as Political Science 440.) Examination of major approaches to analyzing public policies and their administration. Emphasis is on the effects of administrative organization and procedures on policy decisions and their impacts. Specific topics may include administrative accountability, intergovernmental relations, public-private interaction, implementation processes, bureaucratic expertise, the legal environment of public policy administration, and public service and merit issues.

443 Health Care Policy (3)

(Same as Political Science 443, and Gerontology 443.) Prerequisites: Graduate standing and consent of instructor. Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

444 Seminar in Public Policy and Aging (3)

(Same as Gerontology 444 and Political Science 444.) Prerequisite: Consent of instructor. The study of specialized issues and methods related to federal, state, and local policies that affect the elderly. Potential policy areas to be covered include housing, taxation, mental health, transportation, etc. May be repeated for credit, provided the subject matter is different.

446 Selected Topics in Health Care Policy (3)

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

449 Human Resources in the Public Sector (3)

(Same as Political Science 449.) Prerequisite: Public Policy Administration 460 or consent of instructor. This

course presents an overview of personnel and labor relations in the public sector. The course has particular emphasis on issues which are unique to the public sector, such as the merit system, the questions of representative bureaucracy and the constraints of personnel in the nonprofit sector. The topics include personnel reforms in the federal sector, equal employment and affirmative action policies, testing, selection, hiring, comparable worth, job evaluation, and labor relations including grievance arbitration and collective bargaining.

460 Organizational Behavior and Administrative Processes (3)

(Same as Management 460.) The theoretical and research contribution of the behavioral sciences to management and administration are examined and applied to selected organizational situations. Areas to be considered from the standpoint of both individual and organizational performance are communication, motivation, conflict, decision making, goal setting, leadership, organizational design, climate, development, and control. Utilizing a systems perspective, the course attempts to develop in each student an ability to analyze and solve organizational problems.

475 Introduction to Evaluation Research Methods (3)

(Same as Psychology 475, Sociology 475, and Criminology and Criminal Justice 475.) Prerequisites: At least one course in Research Design and Statistics at the graduate level. A comparative study of research strategies with regard to data sources, data collection, and modes of analysis that are appropriate for program evaluation research. Attention is given to observational, survey, and quasi-experimental designs.

480 Management Information Systems (3)

(Same as MS/IS 480.) Prerequisite: Economics 351 or Mathematics 101 or Mathematics 102. An overview of management information systems is presented, including various information systems concepts and technologies. Students are introduced to a mainframe operating system, a microcomputer-based operating system and a programming language. Students are also exposed to several common microcomputer-based software packages.

495 Internship (1-6)

Independent study involving work with an appropriate public or private agency.

499 Exit Project Research (1)

Prerequisites: Completion of or simultaneous enrollment in other degree requirement courses. The exit project is viewed as the capstone of the MPPA program. As such, it is meant to be undertaken toward the end of a student's program, usually during the final semester. Its purpose is to provide evidence to the faculty that the degree candidate has mastered the skills acquired in the various courses completed during residence at the University and can apply them to the analysis of a practical research problem.

Gerontology

Faculty

Robert J. Calvyn, Director; Professor* of Psychology and Gerontology

Ph.D., Northwestern University

Carl J. Bassi, Associate Professor of Optometry

Ph.D., Vanderbilt University

Anna Biggs, Lecturer School of Nursing

Ph.D., University of Colorado Health Sciences Center

Bruce Clark, Associate Professor* of Physical Education

Ph.D., University of Illinois

K. Peter Etzkorn, Professor* of Sociology

Ph.D., Princeton University

Norman Flax, Associate Professor* of Social Work

Ph.D., St. Louis University

Joan Hashimi, Associate Professor* of Social Work

Ph.D., Washington University

Margo-Lea Hurwicz, Associate Professor of Anthropology and Gerontology

Ph.D., University of California-Los Angeles

W. Howard McAlister, Associate Professor of Optometry

O.D., Ohio State University

Timothy D. McBride, Assistant Professor of Public Policy

Administration, Economics, and Gerontology

Ph.D., University of Wisconsin-Madison

Ann M. Steffen, Assistant Professor of Psychology

Ph.D., Indiana University

Nanora L. Sweet, Senior Lecturer of English

M.A., University of Missouri-Columbia

Nina Tumosa, Assistant Professor of Optometry

Ph.D., State University of New York at Albany (SUNYA)

Chikako Usui, Assistant Professor of Sociology and Gerontology

Ph.D., Stanford University

Timothy A. Wingert, Assistant Professor of Optometry

O.D., Illinois College of Optometry

Myra Aud, Adjunct Lecturer,

M.S.N., St. Louis University

Kathleen O'Brien, Adjunct Lecturer,

M.S.W., Washington University

*members of Graduate Faculty

Faculty from 10 departments and schools are involved in the undergraduate and graduate programs in gerontology.

Master of Science in Gerontology

The Master of Science Degree in Gerontology program is a multidisciplinary program designed to prepare students for management or direct service positions working with the aged. The program of study includes courses from a variety of departments including anthropology, biology, nursing, political science, psychology, sociology, social work, physical education, English, public policy administration, and optometry. Courses are offered primarily in the evening to accommodate part-time, as well as full-time, students.

Admission Requirements

Program applicants must have the following:

1. Baccalaureate degree
2. 3.0 or (B) average (students with exceptions should contact the Director of the Gerontology Program)
3. Official transcripts of all previous undergraduate/graduate work
4. Three letters of recommendation

In addition students must meet the other general requirements for admission to the Graduate School as explained in the Graduate Study section of the *Bulletin*.

Degree Requirements

The students are required to complete 45 credit hours including 27 hours in gerontology courses, a three-hour research methods course, and a 15-hour specialization that is individually tailored to the student's career goals. Depending on the student's prior course work in gerontology, up to fifteen hours of credit may be waived. The required courses are listed below.

Gerontology Distribution Requirements

A. Public Policy and Aging—6 credits

Gerontology (Public Policy Administration, Political Science) 443, Health Care Policy

Gerontology (Public Policy Administration, Political Science) 417, Income and Pension Policy for the Aged or **Gerontology (Sociology) 449**, Issues in Retirement

B. Health Behavior of the Elderly—2 credits

Gerontology (Nursing) 401, Health and Wellness in the Elderly, or **Gerontology 441**, Aging and Health Behavior

C. Physiological Theories of Aging—3 credits

Biology 311, Physiology of Aging

D. Psychological Aspects of Aging—3 credits

Gerontology (Psychology) 373, Psychology of Aging, or **Gerontology (Psychology) 376**, Mental Health and Aging

E. Sociocultural Aspects of Aging—3 credits

Gerontology (Sociology) 361, Sociology of Aging, or **Gerontology (Anthropology) 440**, Cultural Aspects of Aging

F. Gerontology 494, Integrative Research in Gerontology—3 credits

G. Gerontology 495, Practicum in Gerontology—3 credits.

H. Electives in Gerontology, 3-4 Credits depending on courses taken to meet gerontology distribution requirements.

Other Requirements

A. Graduate level statistics course, approved by the Director of Gerontology. Acceptable courses include Public Policy Administration (Political Science) 401, Introduction to Policy Research; ED REM 432, Educational and Research Methods II, 3 credits.

B. Specialization Area—15 credits

Each student develops a 15-hour specialization area with the guidance of the Director of Gerontology. Most specialization areas focus on administration or counseling.

Gerontology

Graduate Certificate in Gerontology

The Graduate Certificate in Gerontology is designed for those students who wish to receive postbaccalaureate training in gerontology. The Graduate Certificate in Gerontology can be taken by itself or in conjunction with pursuit of a graduate degree in another field. Eighteen credit hours are required.

Admission Requirements

Program applicants must have the following:

1. Baccalaureate degree
2. 2.75 grade point average (students with exceptions should contact the director of the Gerontology Program)
3. Official transcripts of all previous undergraduate/graduate work
4. Two letters of recommendation

Distribution Requirements

A. Public Policy—3 credits

Gerontology (Public Policy Administration, Political Science) 443, Health Care Policy, or **Gerontology (Public Policy Administration, Political Science) 417**, Income and Pension Policy for the Aged, or **Gerontology (Sociology) 449**, Issues in Retirement

B. Health and Physical Aspects of Aging—2 credits

Gerontology (Nursing) 401, Health and Wellness in the Elderly, or **Gerontology 441**, Aging and Health Behavior, or **Biology 311**, Physiology of Aging, or **Gerontology 458 (Optometry 558)**, Geriatric Optometry, or **Gerontology (Optometry) 497**, Interdisciplinary Geriatric Care

C. Psychological Aspects of Aging—3 credits

Gerontology (Psychology) 373, Psychology of Aging, or **Gerontology (Psychology) 376**, Mental Health and Aging

D. Sociocultural Aspects of Aging—3 credits

Gerontology (Sociology) 361, Sociology of Aging, or **Gerontology (Anthropology) 440**, Cultural Aspects of Aging

E. Electives in Gerontology—6-7 credits depending on courses taken to meet distribution requirements listed above.

Graduate Certificate in Gerontological Social Work

The Graduate Certificate in Gerontological Social Work is a program designed for students who wish to pursue advanced study in Social Work practice with the elderly. While the program draws from several disciplines, the focus is on practice and/or administration in gerontological settings. The program can be taken by itself or in conjunction with the pursuit of a graduate degree in another field.

Admission Requirements

Program applicants must have the following:

1. Baccalaureate degree
2. 2.75 grade point average (students with exceptions should contact the director of the Gerontology program)
3. Official transcripts of all previous undergraduate/graduate work
4. Two letters of recommendation

Certificate Requirements

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

Required Core Courses

Gerontology 316, Clinical Gerontology, or **Social Work 316**, Clinical Gerontology

Gerontology 373, Psychology of Aging, or **Psychology 373**, Psychology of Aging

Gerontology 361, Social Gerontology, or **Sociology 361**, Social Gerontology

Gerontology 444, Public Policy and Aging, or **Political Science 444** Public Policy and Aging

Social Work 412, Research Design in Social Work

Social Work 491, Professional Leadership Practice

Undergraduate Certificate in Gerontological Studies

A Certificate in Gerontological Studies, a multidisciplinary course of study, is available at the University of Missouri-St. Louis. This program provides an opportunity for students to obtain a focused specialty in gerontology in addition to their majors. It utilizes offerings in the College of Arts and Sciences and the Schools of Business Administration, Nursing, and Education. It is appropriate for students in the College of Arts and Sciences or any of the Schools of the University.

Certificate Requirements

A student may earn the Certificate in Gerontological Studies by completing a total of fifteen hours. Courses must be chosen from at least two of the following four topic areas. No more than three credit hours from Research/Practicum Experience courses will be allowed. The student must have the approval of the Director of the Gerontology Program before enrolling in the course. Courses taken to fulfill the requirements may not be taken on a satisfactory/unsatisfactory basis. New courses continually are added, so it is advisable to check with the Director each term. Many courses are cross-listed and also have a Gerontology designation.

Humanities

English 13, Topics in Literature: Images of Age in Literature
Gerontology 156, Medical Ethics, or **Philosophy 156**, Medical Ethics

Gerontology

Natural Sciences and Mathematics

Gerontology 111, Issues in Geriatric Health Care,
or **Biology 111**, Issues in Geriatric Health Care,
or **Nursing 111**, Issues in Geriatric Health Care
Biology 311, Physiology of Aging

Social Sciences

Gerontology 272, Adult Development and Aging,
or **Psychology 272**, Adult Development and Aging
Gerontology 280, The Psychology of Death and Dying,
or **Psychology 280**, The Psychology of Death and Dying
Gerontology 373, The Psychology of Aging,
or **Psychology 373**, The Psychology of Aging
Gerontology 316, Clinical Gerontology, or **Social Work
316** Clinical Gerontology
Gerontology 361, Social Gerontology, or **Sociology 361**,
Social Gerontology

Education

Gerontology 190, Clinical Experience in Physical
Gerontology,
or **PHY ED 190**, Clinical Experience in Physical
Gerontology
Gerontology 292, Internship in Physical Gerontology,
or **PHY ED 292**, Internship in Physical Gerontology
Gerontology 330, Prescribing Physical Activity,
or **PHY ED 330**, Prescribing Physical Activity

Career Outlook

The increasing number of elderly in the population has greatly expanded job opportunities in gerontology in the last decade, and job prospects for the future are equally bright. Career possibilities include nursing home administration, administration and planning of community-based programs for the elderly, recreational programming, and counseling of the elderly.

Gerontology

Course Descriptions

15 Images of the Elderly in Film (3)

(Same as English 15.) Analysis of the portrayal of older adults in various films. Class discussions focus on the style and thematic content of the film, as well as intergenerational relationships.

16 Images of Age in Literature (3)

(Same as English 16.) Reading and discussion of literature that portrays aging and old age in various settings. Emphasis is on contemporary novels, but poetry and drama such as *King Lear* are read as well. Discussion and short essays enable consideration of how literature helps in the study of aging and also how the process of aging can be a creative force within literature.

60 Aging in America (3)

(Same as Interdisciplinary 60.)

An introduction to the major issues, research, problems, and current service approaches in the study of the aging process. An overview of information useful for students in the arts and sciences, business, education, and nursing schools.

111 Issues in Geriatric Health Care (2)

(Same as Nursing 111 and Biology 111.) A course designed to acquaint the student with aspects of chronic disease frequent in later life, as well as a synopsis of biological aging processes. Disease symptomology aspects of health maintenance and medical intervention with an older adult population will be discussed. In addition, issues in health care delivery will also be explored.

120 Special Topics in Gerontology (1-3)

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

156 Medical Ethics (3)

(Same as Philosophy 156.) An examination of ethical issues in medical practice and research and in public policies affecting health care. Topics include abortion, euthanasia, medical experimentation, informed consent, and the right to health care.

190 Clinical Experience in Physical Gerontology (3)

(Same as PHY ED 190.) Prerequisite: Consent of instructor. Early supervised experience in gerontological physical activity programming. Seminar precedes and accompanies clinical experience.

215 Growing Old in Other Cultures (3)

(Same as Anthropology 215.) This course examines the wide ranging variability in the roles of older people across different cultures and the effects these have on older people, their families, and their societies.

272 Adult Development and Aging (3)

(Same as Psychology 272.) Personality, social, and physiological development from the onset of early adulthood through maturity and old age.

280 The Psychology of Death and Dying (3)

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

292 Internship in Physical Gerontology (6-12)

(Same as PHY ED 292.) Prerequisite: PHY ED 190. Clinical experience in gerontological physical education. Clinical experience in selected gerontological setting as a physical education practitioner under University and institutional supervision. Experiences will include at least two separate experiences completed concurrently or successively. Seminar accompanies internship experiences.

316 Clinical Gerontology (3)

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

330 Prescribing Physical Activity (3)

(Same as PHY ED 330.) Prerequisite: PHY ED 280 or consent of instructor. Prescription of physical activity for individualized and group programming based upon physical fitness assessment. Health, nutrition, age, physical fitness, and testing aspects are considered in developing specialized exercise programming based upon current physiological and biomechanical research.

361 Social Gerontology (3)

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

373 Psychology of Aging (3)

(Same as Psychology 373.)

Prerequisite: Nine hours of Psychology or consent of instructor. This course focuses on the developmental changes associated with aging including sensation, memory, emotions, and attitudes.

376 Mental Health and Aging (3)

(Same as Psychology 376.) Prerequisites: Consent of instructor plus Psychology 272, Psychology 373, or graduate student status. A survey of recent theory and research in mental health issues for older populations.

Gerontology

The primary focus is on major psychological disorders prevalent among the elderly and in treatment approaches for elders.

401 Health and Wellness in the Elderly (2)

(Same as Nursing 401.) Prerequisite: Graduate standing. Factors contributing to longevity and health in old age, including genetic predisposition, lifestyle, culture and environment, are related to aspects of maintaining health and promoting wellness. Through a holistic approach, explores aspects of nutrition, exercise, and activity, prevention of hazards to health, maintaining self-responsibility, managing stress, and meeting continued developmental, emotional, and spiritual needs. Considers intervention and support to promote health and wellness in the elderly.

417 Income and Pension Policy for the Aged (3)

(Same as Public Policy Administration 417 and Political Science 417.) Prerequisite: Graduate standing or consent of instructor. Examination of federal, state, and local policies that affect the economic well-being of the elderly. The development of social security programs and pension programs is explored within a historical context. Emphasis is placed on the analysis of current policy problems and proposed solutions.

440 Cultural Aspects of Aging (3)

(Same as Anthropology 440.) Focuses on the variety of solutions encountered in different sociocultural contexts for dealing with the problems, challenges, and opportunities of growing old. It is organized around topics that are of concern to both anthropology and social gerontology: the status of the aged, intergenerational relations, aging in modernizing societies, ethnic dimensions of aging in complex societies, health in later life, death and dying. Both in-depth case studies and cross-cultural comparisons are examined in an effort to arrive at a culturally informed assessment of factors affecting aging and the aged in the United States.

441 Aging and Health Behavior (3)

Prerequisite: Graduate standing. This course examines sociocultural influences on health care practices of older adults. The role of social support and other social resources in the health behavior of older adults is emphasized. Topics include self-care decisions, formal service utilization, family caregiving, and planned interventions for older adults.

442 Minority Aging (3)

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

443 Health Care Policy (3)

(Same as Political Science 443 and Public Policy Administration 443.) Prerequisites: Graduate standing and consent of instructor. Survey course examining current issues in health policy that face the nation. Policies are placed in a historical context to show how issues have been influenced by different political and economic conditions. Secondary consequences and limitations of current trends in health policy are explored.

444 Seminar in Public Policy and Aging (3)

(Same as Public Policy Administration 444 and Political Science 444.) Prerequisite: Consent of instructor. The study of specialized issues and methods related to federal, state, and local policies that affect the elderly. Potential policy areas to be covered include housing, taxation, mental health, transportation, etc. May be repeated for credit, provided the subject matter is different.

445 Sociological Dimensions of Chronic Illness (3)

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

449 Issues in Retirement (3)

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

458 Geriatric Optometry (3)

(Same as Optometry 558.) Special examination and management considerations of the geriatric patient will be discussed. Psychological, physiological, social, and demographic aspects of aging, as well as ocular changes associated with the aging process will be taught. Supervised interactions with nursing home residents will occur.

490 Directed Study (1-3)

Prerequisite: Consent of instructor. Designed to give the student an opportunity to pursue a more in-depth study of a problem area in gerontology than is normally covered in more formal courses. May be repeated for a total of six credit hours.

Gerontology

494 Integrative Research Seminar in Gerontology (3)

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

495 Practicum in Gerontology (3)

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

496 Gerontology Colloquium (1)

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

497 Interdisciplinary Geriatric Care (2)

(Same as Optometry 497.) Prerequisite: Consent of instructor. Interdisciplinary approaches that address the medical and social needs of the elderly will be examined. Information about geriatric care and social issues affecting the well-being of older adults will be provided. Clinical, theoretical, and educational perspectives will be presented.

498 Advanced Seminar in Gerontology (3)

Prerequisite: Graduate standing. This course will provide in-depth analysis of specialized topics in gerontology which are not covered in required courses. (Course may be repeated for a maximum of nine credits, assuming topics are different.)

499 Topics in Gerontology (1)

Prerequisite: Graduate standing. Analysis of a current problem in gerontology. (Course may be repeated for maximum of five credits, assuming topics are different.)

International Studies

International Studies Certificates Undergraduate

The Center for International Studies offers, in cooperation with the College of Arts and Sciences, certificate programs in East Asian, European, Latin American, and International Studies, and in cooperation with the College and the School of Business Administration, the International Business certificate. Students seeking certificates (except International Business) must take an independent study course (three hours) in which a research paper will be written focusing upon some aspect of the particular field or on one of the fields offered in the program.

Interested students should petition for one of these certificates through the Center for International Studies by the first semester of the senior year. For further information, contact the Center at 516-5753.

Requirements for Each Program

East Asian Studies Certificate

- 1) First- and second-year Chinese, Japanese, Korean, or other appropriate Asian language (20 hours taken in four semesters).
- 2) **History 61** and **History 62**, East Asian Civilization
- 3) One course in three of the following six areas, a total of nine hours:

Area 1: Anthropology

110, Cultures of Asia

Area 2: Art and Art History

107, The Arts of China
108, The Arts of Japan
208, Topics in Asian Art

Area 3: History

162, The Chinese Revolution: Readings in Chinese Literature
361, Modern Japan: 1850 to Present
362, Modern China: 1800 to Present
***393**, Senior Seminar

***Note** Students should take History 393 only when the topic is appropriate to East Asia.

Area 4 Music

9, Non-Western Music I
10, Non-Western Music II

Area 5: Philosophy

120, Asian Philosophy

Area 6: Political Science

155, East Asian Politics
***359**, Studies in Comparative Politics
***388**, Studies in International Relations

***Note** Students should take Political Science 359 or Political Science 388 only when the specific topic is appropriate.

European Studies Certificate

- 1) Four semesters of college work or the equivalent in a modern European foreign language.

- 2) **History 32**, Topics in European Civilization: 1715 to the Present.

- 3) One course each from at least four of the following eight areas, a total of 12 hours. Students should consult advisors at the Center to determine how these courses can best be arranged to meet their interests.

Area 1: Art and Art History

135, Renaissance Art
145, Baroque Art
235, Topics in Renaissance Art
245, Topics in Seventeenth- and Eighteenth-Century European Art
255, Topics in Nineteenth- and Twentieth-Century European Art

Area 2: Economics

238, Comparative Economic Systems

Area 3: English

127, Survey of European Literature from 1650 to the Second World War
128, The Contemporary World in Literature
132, English Literature II
323, Continental Fiction
346, Restoration and Eighteenth-Century Drama
364, The Eighteenth-Century English Novel
365, The Nineteenth-Century English Novel
372, The Later Nineteenth Century
383, Modern British Fiction

Area 4: History

31, Topics in European Civilization: Emergence of Western Europe to 1715
331a, The Age of the Renaissance
331b, The Age of Reformation
332d, The Rise of the Modern British State
332e, Europe from the French Revolution to World War I, 1789-1914
333a, Contemporary France: Since 1870
333b, Germany in the Modern Age
333c, History of Russia From 1917-Present
333d, Europe in the Twentieth Century
333e, Contemporary Europe, 1939-Present

Area 5: Foreign Languages and Literatures

FRENCH

110, Modern French Literature in Translation
150, European Literature in Translation: Special Topics
211, Contemporary French Civilization
281, French Literature II: Nineteenth and Twentieth Centuries
341, Seventeenth-Century French Theatre and Poetry
342, Seventeenth-Century French Prose
353, Eighteenth-Century French Literature
354, Eighteenth-Century French Theatre and Novel
362, Nineteenth-Century French Novel
371, Twentieth-Century French Novel
375, Modern French Theatre

GERMAN

110, Masterpieces of German Literature in Translation
150, European Literature in Translation: Special Topics
201, Masterpieces of German Literature
202, The German *Novelle* and Drama
210, German Culture and Civilization
315, German Classicism and Romanticism
320, German Realism and Naturalism

International Studies

- 345**, Modern German Literature
397, Survey of German Literature Part I
398, Survey of German Literature Part II

SPANISH

- 110**, Spanish Literature in Translation
150, European Literature in Translation: Special Topics
310, Spanish Literature from 1898 to 1939
315, Spanish Literature from 1939 to the Present
320, Realism and Naturalism in the Nineteenth-Century Spanish Novel
321, Poetry and Drama of the Nineteenth Century
325, Poetry and Drama of the Golden Age

Area 6: Music

- 322**, Music of the Renaissance
323, Music of the Baroque
324, Music of the Classic Period
325, Music of the Romantic Period

Area 7: Philosophy

- 103**, Early Modern Philosophy
104, Kant and Nineteenth-Century Philosophy
105, Twentieth-Century Philosophy
205, The Rationalists
206, The British Empiricists

Area 8: Political Science

- 251**, Comparative Politics of Europe
256, Russia and the New Republics
284, European International Relations
***351**, Comparative Public Policy and Administration
***359**, Studies in Comparative Politics
***388**, Studies in International Relations
 *Note Students should take Political Science 351, Political Science 359, or Political Science 388 only when the topic is appropriately European.

Latin American Studies Certificate

- 1) Thirteen credit hours or the equivalent in Spanish.
 2) Either History 71, Latin American Civilization, or Spanish 211, Hispanic Culture and Civilization: Spanish America.
 3) A total of 12 hours from at least three of the following areas:

Area 1: Anthropology

- 134**, The Inca, Aztec, and Maya
140, Cultures of Mexico and Central America
145, Indians of South America

Area 2: Art and Art History

- 119**, Pre-Columbian Art of Mexico and Central America

Area 3: History

- 371**, History of Latin America: To 1808
372, History of Latin America: Since 1808

Area 4: Political Science

- 253**, Political Systems of South America
254, Political Systems of Mexico, Central America, and the Caribbean
***359**, Studies in Comparative Politics

*Note Students should take Political Science 359 only when the topic is appropriate to Latin America.

Area 5: Spanish

- 111**, Spanish-American Literature in Translation
211, Hispanic Culture and Civilization: Spanish America
281, Introduction to Hispanic Literature: Spanish America
340, Spanish-American Literature of the Nineteenth Century
341, Modernismo
345, Spanish-American Literature of the Twentieth Century
351, Spanish-American Fiction in the Twentieth Century
360, Spanish-American Poetry from Modernismo to the Present

International Studies Certificate

- 1) Satisfactory completion of the language requirements for the degree program in which the student is enrolled.
 2) Political Science 180, World Politics.
 3) A total of 12 hours from at least three of the following nine areas:

Area 1: Anthropology

- 201**, Comparative Economic Behavior
202, Culture, Politics, and Social Organization

Area 2: Biology

- 120**, Environmental Biology

Area 3: Business Administration

- 316**, International Marketing
317, International Management
380, International Finance

Area 4: Communication

- 332**, Intercultural Communication
354, Comparative Telecommunication Systems
356, International Communication

Area 5: Economics

- 230**, International Economic Analysis
231, International Finance
238, Comparative Economic Systems
331, International Economic Analysis: Finance

Area 6: Geography

- 102**, World Regions

Area 7: History

- 112**, America in World Affairs
332e, Europe from the French Revolution to World War I, 1789-1914
333d, Europe in the Twentieth Century
333e, Contemporary Europe, 1939-present

Area 8: Political Science

- 80**, Global Issues
282, United States Foreign Policy
285, International Organizations and Global Problem Solving
289, Middle Eastern Politics
385, International Law
386, Studies in War and Peace
388, Studies in International Relations

Area 9: Sociology

- 314**, Social Change
342, World Population and Ecology
354, Sociology of Business and Work Settings

International Studies

International Business Certificate

- 1) Students must complete a minimum of 12 hours in the Business Internship Program in London or in some other approved overseas study program.
- 2) One course from Area 1 and one from Area 2, a total of six hours.

Area 1: Business Administration:

316, International Marketing
317, International Management
380, International Finance

Area 2: International Studies:

Anthropology 238: Culture and Business in East Asia
Economics 230: International Economics Analysis
Economics 231: International Finance
Economics 238: Comparative Economic Systems
Economics 240: Economic Development
Political Science 283: International Political Economy
Political Science 388: Studies in International Relations.
 (International Relations of East Asia)
Sociology 241: Selected Topics in Macro-sociology. (Work and Industry in Japan)
Sociology 354: Sociology of Business and Work Settings

In lieu of a course from Area 2, students may substitute one course (3 hours) at the advanced level of a foreign language. Advanced level is defined as a course beyond the 13 hour introductory language sequence.

- 3) An independent study course is not required for this certificate option.

Note: Students participating in other approved overseas study programs such as Hogeschool Holland Business School, Ecole Supérieure de Commerce de Saint Etienne, or Université Jean Moulin, may also qualify to apply 12 credit hours toward the International Business Certificate.

International Studies Certificate Graduate

A Graduate Certificate in International Studies is a program of study featuring advanced, multidisciplinary course work designed for individuals, including teachers and other professionals, who wish to expand their knowledge and understanding of international and cross-cultural affairs. The Certificate is sponsored by the Center for International Studies, and the Departments of Economics, History, Foreign Languages and Literatures, and Political Science. A broad set of course offerings is available in these and other departments, with the flexibility for students to tailor the program to their particular interests and needs. The program has been developed as a vehicle for bringing together the resources of a distinguished faculty in international studies and for providing an opportunity for further graduate learning. For further information, contact the Center for International Studies at 516-5753.

Applicants to the Certificate program must meet the general requirements for admission to Graduate School as explained in the graduate study section of this *Bulletin*. The Certificate is awarded after completion of 18 hours, including a minimum of 12 hours drawn from a list of core courses and an additional six hours selected from a wide variety of offerings in eight different disciplines. No more than 12 hours may be from any one discipline. Students may simultaneously earn a graduate degree and count credits earned in their degree program toward the Certificate when appropriate.

Requirements

Students must complete **at least 12 hours** chosen from the following list of **core courses**:

Anthropology

425, Peoples and Cultures of Southeast Asia
430, Global Refugee Crisis

Business Administration

416, International Finance, Investment, and Commercial Relations
417, International Business Operations
443, International Accounting

Economics

430, International Trade
431, International Monetary Analysis

History

419, Readings in East Asian History
431, Readings in European History
460, Readings in Latin American History
470, Readings in African History

Political Science

450, Proseminar in Comparative Politics
451, Seminar in Comparative Politics
480, Proseminar in International Relations
481, Seminar in International Relations
488, Studies in International Relations

Sociology

410, Comparative Social Structures

Students may complete an additional six hours chosen from the following:

Business Administration

316, International Marketing
317, International Management
380, International Finance

Communication

332, Intercultural Communication
354, Comparative Telecommunication Systems
356, International Communication

Criminology and Criminal Justice

305, Comparative Criminology and Criminal Justice

International Studies

Economics

- 331**, International Economic Analysis: Finance
395, Special Readings

English

- 323**, Continental Fiction

History

- 314**, American Foreign and Military Affairs, 1900-Present
320, History of Feminism in Western Society
332a, History of Spain
332b, Russian History to 1917
332c, Modern France: to 1870
332d, The Rise of the Modern British State
332e, Europe from the French Revolution to World War I, 1789-1914
333a, Contemporary France: Since 1870
333b, Germany in the Modern Age
333c, History of Russia from 1917-Present
333d, Europe in the Twentieth Century
333e, Contemporary Europe, 1939-Present
361, Modern Japan: 1850 to Present
362, Modern China: 1800 to Present
372, History of Latin America: Since 1808
381, West Africa: Since 1800
382, Crisis in Southern Africa
390, Special Readings

Foreign Languages and Literatures

- French 362**, Nineteenth-Century French Novel
French 365, Modern French Poetry
French 371, Twentieth-Century French Novel
French 375, Modern French Theatre
German 315, German Classicism and Romanticism

- German 320**, German Realism and Naturalism

- German 345**, Modern German Literature

- German 398**, Survey of German Literature Part II

- Spanish 310**, Spanish Literature from 1898-1939

- Spanish 315**, Spanish Literature from 1939 to Present

- Spanish 320**, Realism and Naturalism in the Nineteenth-Century Spanish Novel

- Spanish 321**, Poetry and Drama of the Nineteenth Century

- Spanish 340**, Spanish-American Literature of the Nineteenth Century

- Spanish 341**, Modernismo

- Spanish 345**, Spanish-American Literature of the Twentieth Century

- Spanish 351**, Spanish-American Fiction in the Twentieth Century

- Spanish 360**, Spanish-American Poetry from Modernismo to the Present

Music

- 325**, Music of the Romantic Period

- 326**, Music of the Twentieth Century

Political Science

- 351**, Comparative Public Policy and Administration

- 359**, Studies in Comparative Politics

- 385**, International Law

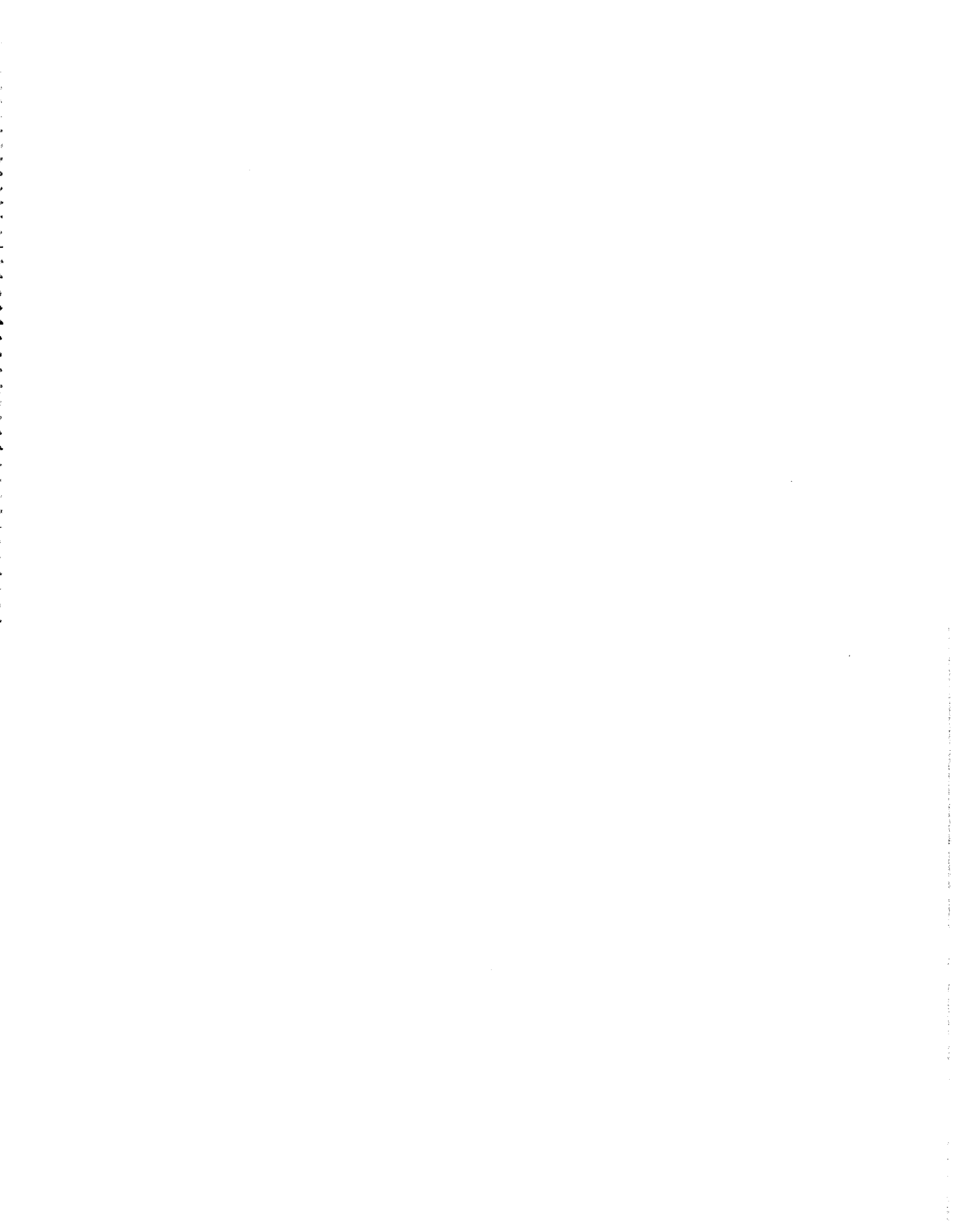
- 386**, Studies in War and Peace

- 388**, Studies in International Relations

- 485**, Directed Readings and Research in International Relations

Sociology

- 342**, World Population and Ecology



College of Nursing



1995-96 Bulletin

LOUIS

College of Nursing

Faculty

Shirley A. Martin, Dean; Professor*
Ph.D., St. Louis University

Connie K. Koch, Assistant Professor*; Associate Dean
Ed.D., Southern Illinois University-Edwardsville

Dotty Akerson, Clinical Associate Professor
MSN, St. Louis University

Joyce Altholz, Clinical Instructor
Ph.D., Southern Illinois University-Carbondale

Janice M. Attala, Assistant Professor*
Ph.D., Southern Illinois University-Carbondale

Margaret Jean Auffarth, Clinical Instructor
MSN, University of Missouri-Kansas City

Jean Bachman, Assistant Professor*
D.S.N., University of Alabama

Karen Balakas, Clinical Associate Professor
MSN, Marquette University

Bertha Ballard, Clinical Assistant Professor
MSN, St. Louis University

Laura Bernaix, Clinical Assistant Professor
Ph.D., St. Louis University

Anna J. Biggs, Clinical Professor
Ph.D., University of Colorado

Deborah Birk, Clinical Instructor
MSN, Southern Illinois University-Edwardsville

Donna Bridgman Musser, Clinical Assistant Professor
M.S.N., Southern Illinois University-Edwardsville

Mary Ellen Brockman, Clinical Assistant Professor
MSN, St. Louis University

Wilma Calvert, Clinical Assistant Professor
MSN, University of Oklahoma

Mary Reardon Castles, Professor Emeritus*
Ph.D., St. Louis University

Virginia Drake, Associate Professor*
DNSc, Catholic University of America

Gretchen Drinkard, Clinical Associate Professor
MSN, University of Missouri-Columbia

Marianne Fox, Clinical Assistant Professor
MSN, Webster University

Patricia Freed, Instructor
MSN, Southern Illinois University-Edwardsville

Kay Gaeble, Clinical Assistant Professor
MSN, St. Louis University

Walter Glauber, Clinical Instructor
MSN, RRT, Northwestern University

June Hertell, Clinical Assistant Professor
MSN, St. Louis University

Joyce Hunter, Clinical Assistant Professor
MSN, St. Louis University

Ruth L. Jenkins, Associate Professor*
Ph.D., St. Louis University

Mary Ann Baroni-Kaestner, Clinical Assistant Professor
MSN, St. Louis University

Kathy Klepzig, Clinical Instructor
MSN, Southern Illinois University-Edwardsville

Gail Lewis, Clinical Associate Professor
MSN, University of Nebraska

Sandy Lindquist, Instructor
MSN, St. Louis University

Nancy Magnuson, Student Health Administrator and
Adjunct Lecturer
DSN, University of Alabama at Birmingham

Judith Maserang, Assistant Professor*
Ph.D., St. Louis University

Maryellen McSweeney, Professor*
Ph.D., University of California-Berkeley

Shirley Moore, Associate Professor*
Ph.D., St. Louis University

Joyce Murabito, Clinical Instructor
MSN, St. Louis University

Teri Murray, Clinical Assistant Professor
MSN, St. Louis University

Jean Nelson, Clinical Assistant Professor
MSN, Southern Illinois University-Edwardsville

Susan Panzarine, Associate Professor*
Ph.D., University of Utah

Robyn Rice, Clinical Associate Professor
MSN, Southern Illinois University-Edwardsville

Shirley Saunders, Clinical Assistant Professor
MSN, St. Louis University

Anne Schappe, Clinical Associate Professor
MSN, St. Louis University

Mary Jo Stralka, Clinical Associate Professor
Ph.D., St. Louis University

Lanette Tanaka, Clinical Assistant Professor
MSN, St. Louis University

Margaret Ullone, Assistant Professor*
Ph.D., University of Maryland

Georgia Urban, Clinical Assistant Professor
MSN, St. Louis University

Valerie Yancey, Clinical Associate Professor
MSN, St. Louis University

Linda York, Instructor
MS, Indiana University

Marilyn M. Dickerson, Adjunct Assistant Professor**
MA, PNP

Mary L. Krywanio, Adjunct Assistant Professor**
DNS

Carol W. Trotter, Adjunct Assistant Professor**
RNC, MPH, NNP

Lyn Vargo, Adjunct Assistant Professor**
RNC, MSN, NNP

Judith Annette Vinson, Adjunct Assistant Professor**
RN, BSN, MSN

* Members of Graduate Faculty

** Affiliated Adjunct Faculty

General Information

Barnes College of Nursing offers nursing studies at the undergraduate and graduate levels. Knowledge and skills needed to complete the professional licensure examination to become a registered nurse are available through a basic baccalaureate option. Nurses who have obtained their basic nursing education through associate degree or diploma nursing programs may complete the RN Completion option without repetition of previous nursing education. The Master of Science in Nursing program is offered in cooperation with the School of Nursing at University of Missouri-Kansas City. The PhD in Nursing is offered in cooperation with the Schools of Nursing at University of Missouri-Columbia and Kansas City. Admission to the PhD is available at the post BSN and MSN levels.

Undergraduate Studies

The Barnes College of Nursing provides course work leading to the Bachelor of Science in Nursing. The program is accredited by National League for Nursing and the Missouri Board of Nursing. The undergraduate program offers two means for achieving the bachelor's degree in nursing:

College of Nursing

- studies which are preparatory for completion of the professional nurse licensure examination.
- advanced placement for the professional registered nurse without repetition of fundamental nursing courses (RN completion).

Admission Policies

Basic Baccalaureate

- 1) Admission to the University (see Undergraduate Admission and Application Procedure section in this *Bulletin*);
- 2) Cumulative high school grade point average of 2.5 (4.0 scale);
- 3) Rank in upper third of high school class;
- 4) High school course work required in Chemistry and Biology
- 5) "B" average preferred for high school course work in English Composition, Algebra I and II, Geometry, Chemistry, and Biology.

RN Completion

- 1) Admission to the University (see Undergraduate Admission and Application Procedure section in this *Bulletin*);
- 2) Graduate of either a NLN accredited diploma or associate degree program in nursing;
- 3) Evidence of current licensure as a registered nurse with eligibility for licensure in Missouri;
- 4) Cumulative grade point average of 2.5 (4.0 scale)* on all previous college-level course work;
- 5) Minimum of 30 hours of college credit applicable to a degree.
- 6) Validation of basic nursing knowledge (total of 30 credits granted).

* Cumulative GPA of 3.0 required of individuals seeking accelerated access to MSN option.

Acceptance into the

B.S.N. Program

Following the completion of the University's admission requirement, the Admissions Committee of the College of Nursing will review the application for acceptance into the program.

Students are required to furnish their own transportation to and from campus and clinical agencies. Students must have automobile access for all community experiences throughout the program.

All students are required to submit the following health records after admission to the College: physical examination by a physician or certified nurse practitioner, immunization records as detailed on the immunization form.

Services are available through the University's Student Health Services for a nominal fee.

For specific information regarding the B.S.N. degree program, please contact Nursing Student Services and Records office at (314) 516-6066.

Credit by Transfer and Examination

Credit may be granted for selected general studies. See Admission and Application Procedure section in this *Bulletin* for credit information.

Graduates of diploma nursing programs will be awarded 30 college credits for successful validation of basic nursing knowledge as part of the admission process. A processing fee is assessed for this procedure.

Degree Requirements

The Bachelor of Science in Nursing degree requires comprehensive course work in general education and nursing. A minimum of 125 credit hours is required for graduation from the basic baccalaureate program option.

Satisfactory/Unsatisfactory

Undergraduate nursing majors may not take required related area general education or nursing courses on a satisfactory/unsatisfactory basis.

General Education Requirements

All nursing majors must complete all general education requirements of the University as outlined in this *Bulletin* (see Undergraduate Studies, General Education Requirements). The College's required general education requirements are in keeping with those of the University. See a curriculum planning guide for specific courses and proper sequencing.

Within the general education requirements, the following are related area requirements for the nursing major:

Basic Baccalaureate

1) Natural science course work

Biology 110, Human Biology or equivalent
Biology 113, Human Physiology and Anatomy I
Biology 114, Human Physiology and Anatomy II
Biology 116, General Microbiology
Chemistry 1, General Chemistry

2) Behavioral science course work

Sociology 10, Introduction to Sociology
Psychology 3, General Psychology
Psychology 268, Human Growth and Behavior
Economics 40, Introduction to American Economy
Anthropology/Advanced Sociology, 3 semester hours of choice

3) Statistics selected from one of the following:

Business Administration 131, Elementary Statistics
Mathematics 31, Elementary Statistical Methods
Nursing 373, Quantitative Analysis in the Health Sciences
Psychology 201, Psychological Statistics
Sociology 220, Sociological Statistics

RN Completion

1) Natural science course work

Biology 213, Vertebrate Physiology
Chemistry 2, General Organic Chemistry

2) Statistics selected from one of the following:

Business Administration 131, Elementary Statistics
Mathematics 31, Elementary Statistical Methods
Nursing 373, Quantitative Analysis in the Health Sciences
Psychology 201, Psychological Statistics
Sociology 220, Sociological Statistics

College of Nursing

Nursing Requirements

Basic Baccalaureate

The following are **required** nursing courses:

- Demonstration of basic computer literacy
- 100**, Nursing as Human Caring
- *101**, Application of the Human Caring Process
- *102**, Human Caring Process for the Developing Family
- 105**, Professional Relationships: Communicating with Care
- 110**, Nutrition and Health Promotion
- 115**, Pathophysiology
- 120**, Introduction to Pharmacology
- *230**, Human Caring in Illness: Threats to Survival Needs
- *232**, Human Caring in Illness: Threats to Functional, Integrative and Growth-Seeking Needs
- *235**, Assessment of Clients in Health and Illness
- 240**, Ethics of Human Caring
- 326**, Nursing Research
- *345**, Management of Clients with Complex Needs
- *355**, Leadership in Health Care Delivery Systems
- 360**, Nursing Seminar

RN Completion

The following are **required** nursing courses:

- *200**, Dimensions of Professional Nursing Practice
 - *217**, Information Systems Utilized in Health Care
 - *220**, Health Assessment
 - *236**, Families and Communities
 - 316**, Management and Leadership in Nursing
 - 326**, Nursing Research
 - *340**, Synthesis in Nursing Practice
 - 350**, Contemporary Nursing Issues
- *Includes a laboratory and/or clinical component.

Graduate Studies

Cooperative Graduate Programs in Nursing

Master of Science in Nursing

The College of Nursing at St. Louis, in cooperation with the School of Nursing at University of Missouri-Kansas City, offers graduate nursing studies in three areas of clinical specialization:

- Health Care of the Adult
- Health Care of Children
- Health Care of Women

This graduate program offers students two ways of completing the Master of Science in Nursing Degree: one means is through completion of a minimum of 36 credit hours with functional role emphasis in administration, education, or clinical specialization; the second concentrates on the functional role of practitioner with completion of a minimum of 43 credit hours. Those selecting the practitioner functional role option will be eligible to complete national certification examinations.

Admission Requirements

Applicants must meet the following:

- 1) B.S.N. from NLN-accredited nursing program or B.S.N. program comparable to UM-St. Louis College of Nursing's B.S.N. program.

- 2) Minimum cumulative grade point average of 3.0 (4.0 scale).
- 3) Current professional nurse licensure with eligibility for licensure in Missouri.
- 4) Basic cardiac life support certification.
- 5) Successful completion of an undergraduate descriptive and inferential statistics course.
- 6) Successful completion of an undergraduate health assessment course.
- 7) Nurse practitioner functional option is available on a limited basis and requires a two-step admission process: initial admission to the M.S.N. followed by application to the practitioner functional role.

Degree Requirements

Core Courses (completed by all students)

- *404**, Health Assessment for Advanced Nursing Practice
- 445**, Foundations of Advanced Nursing Practice
- 448**, Pathophysiology for Advanced Nursing Practice
- 450**, Theoretical Foundations in Nursing
- 455**, Quantitative Methods in Nursing Research
- *472**, Advanced Practice Nursing: Synthesis Practicum

Emphasis Courses* (Students must complete one course from each focal area.)

Health Promotion Focus

- 460A**, Health Promotion and Protection in Adult Health Nursing
- 460C**, Health Promotion in the Nursing Care of Children
- 460W**, Women's Health Care I

Acute and Chronic Nursing Care Focus

- 461A**, Acute and Chronic Adult Health Nursing
- 461C**, Acute and Chronic Child Health Nursing
- 461W**, Women's Health Care II

Functional Role Courses

Role Foundation (Students must complete one course.)

- 471NA**, Role of the Nurse Administrator
- 471NE**, Role of the Nurse Educator
- 471NS/NP**, Role of the Clinical Specialist/Nurse Practitioner

Role Enactment (Practitioner functional role only)

- *464**, Ambulatory Care Management
- 407**, Pharmacology for Advanced Nursing

Elective (Completed by all students)

Students complete three hours which support the chosen functional role. Course work may be taken within the College of Nursing or from an approved list available from the Student Services Office in the College of Nursing.

Culminating Research Activity

(All students complete seminar course. Students choose either project or thesis.)

- 477**, Thesis/Directed Research Seminar
- 478**, Directed Research
- 479**, Research Thesis

*Includes a clinical component

Doctoral education has recently been approved for the University Schools of Nursing (St. Louis, Columbia, and Kansas City). Both academic (Ph.D.) and clinical (N.D.) options are planned.

College of Nursing

Ph.D. in Nursing The College of Nursing at St. Louis, in cooperation with the Schools of Nursing at Columbia and Kansas City, offers doctoral studies in three substantive areas:

Health Promotion and Protection—Addresses modes of delivery in nursing that are supportive-educative, encompassing concepts which promote and maintain health as well as concepts which focus on reducing risk for injury or illness.

Health Restoration and Support—Addresses human responses to acute, critical, and chronic health conditions.

Health Care Systems—Focuses on nursing and health care systems with both health promotion and protection, and health restoration and support considered.

The Ph.D. is designed to promote scholarly inquiry within the discipline of nursing. Each program of study is individualized to best reflect the research interests of the student. Course work in research and inquiry, nursing theory and analysis, and nursing applied science are focal in the program.

Admission Requirements

Applicants must meet the following:

- 1) Graduate of NLN Baccalaureate program or equivalent with 3.2 minimum GPA (4.0 scale).
- 2) Graduate of NLN Master's program or equivalent with 3.5 minimum GPA (4.0 scale).
- 3) Graduate Record Examination (composite score of 1500 or better desired).
- 4) Three letters of reference.
- 5) Original essay (3–7 pages) addressing doctoral study and research interests related to Health Promotion and Protection, Health Restoration and Support, and/or Health Care Systems.
- 6) Interview by invitation contingent on ranking related to above criteria.

Degree Requirements

While each program of study is individualized, BSN graduates complete a minimum of 60 hours of graduate level course work. MSN graduate course work which supports the chosen substantive area is individually evaluated to determine eligibility for transfer. The following defines the overall structure of the program:

Modes of Inquiry

Research and Inquiry, 8–16 hours external to the College of Nursing, such as advanced statistics, research design, computer applications, philosophical foundations of science.

Nursing Research and Inquiry, 8–16 hours within the College of Nursing, such as advanced quantitative nursing research design, advanced qualitative nursing research design, health survey methods, issues in research design, doctoral seminar.

Dissertation, 12 hours.

Nursing Content Areas

Nursing Theory Analysis and Development, 8–16 hours within the College of Nursing which advance the chosen substantive area, such as conceptual structures, nursing practice models, theory development, theoretical foundations, doctoral seminar.

Nursing Applied Sciences, 8–16 hours within selected substantive area.

Collateral

Support Courses, 12 hours external to the College of Nursing which support selected substantive area.

Professional Organizations

American Nurses Association

Students, as registered nurses, are eligible for membership in the American Nurses Association. Membership and participation in this professional organization is strongly urged for all nurses practicing today. Nurses, as the largest group of health professionals, have a responsibility to assume leadership positions in the determination of health care policy, and this activity can best be accomplished by participating in the professional organization.

Rho Nu

Rho Nu is the student association of the College of Nursing. It is a collegial group providing professional development activities for the registered nurse student. All students enrolled in the College of Nursing are eligible for membership.

Honor Society

Effective Spring 1994 the Nursing Honor Society became an official chapter of Sigma Theta Tau International Nursing Honor Society with the chapter designated to be Nu Chi. Nurses are invited to membership based on GPA. and number of academic credits completed in undergraduate and graduate studies. B.S.N. graduates are nominated based on their outstanding contribution to nursing in the areas of education, clinical practice, research, administration, and publication.

Continuing Education-Extension

Continuing education offerings in the field of nursing are currently presented to provide nurses with new information, techniques, and trends within the nursing profession.

Credit courses which will apply to the B.S.N. program are offered at various off-campus sites.

College of Nursing

Course Descriptions

100 Nursing as Human Caring (2)

Offers an introduction to the history and theoretical development of nursing. Examines the profession as an art and a science. Presents theory of human caring as it applies to nursing practice.

101 Application of the Human Caring Process (7)

Prerequisites: Biology 113; Biology 114; Psychology 3; Nursing 100. Introduces a caring framework for nursing practice with acquisition of basic psychomotor and critical thinking skills. Application of caring factors with emphasis on health promotion and illness prevention. Includes a clinical component.

102 Human Caring Process for the Developing Family (7)

Prerequisites: Sociology 10; Psychology 268; Nursing 101; Nursing 105. Provides a holistic perspective on family health care. Emphasis on health promotion and maintenance across family life cycles. Includes a clinical component.

105 Professional Relationships: Communicating with Care (3)

Prerequisite: English 10. Assists in the development of communication abilities utilized in professional nursing. Introduces interpersonal skills which enable the student to develop effective human caring relationships with clients and colleagues.

110 Nutrition and Health Promotion (3)

Prerequisites: Biology 113; Biology 114. Examines nutritional needs throughout the life span with emphasis on nutritional principles related to health promotion and illness prevention. Includes discussion of dietary requirements associated with illness states.

111 Issues in Geriatric Health Care (2)

(Same as Biology 111 and Gerontology 111.) A course designed to acquaint the student with aspects of chronic disease frequent in later life, as well as a synopsis of biological aging processes. Disease symptomology aspects of health maintenance and medical intervention with an older adult population will be discussed. In addition, issues in health care delivery will also be explored.

115 Pathophysiology (3)

Prerequisites: Biology 113; Biology 114; Biology 116; Chemistry 1. Studies the nature of disease, its causes and the bodily changes which accompany it. Includes study of general principles of disease, specific diseases of individual organs and systems, and the clinical implications.

120 Introduction to Pharmacology (3)

Prerequisites: Biology 113; Biology 114; Biology 116; Chemistry 1. Surveys general classifications of drugs. Emphasizes general principles of drug action and

toxicity, as well as clinical considerations and application.

200 Dimensions of Professional Nursing Practice (6)

Prerequisites: Admission to the College of Nursing as RN. This transition practicum course for the registered nurse who successfully completed an associate degree or diploma nursing program investigates the roles and responsibilities of the professional nurse within a rapidly changing health care system. Key issues are explored with emphasis on health promotion and primary prevention.

217 Information Systems Utilized in Health Care (4)

Prerequisite: Admission to College of Nursing as an RN or consent of instructor. This laboratory course establishes competency in health information systems. The course incorporates the impact of information systems on health care delivery.

220 Health Assessment (3)

Prerequisites: Junior standing and Nursing 200 (may be taken concurrently). Focuses on the development of systematic approaches to assess the comprehensive health status of individuals. The assessment phase of the nursing process provides the framework to determine the individual's self-care abilities and needs based on the collection of a complete data base.

224 Sociology of the Family (3)

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

230 Human Caring in Illness: Threats to Survival Needs (8)

Prerequisites: All sophomore level nursing courses. Explores the application of caring factors to children and adults experiencing pathophysiologic processes affecting body regulatory mechanisms. Includes a clinical component.

232 Human Caring in Illness: Threats to Functional, Integrative and Growth-Seeking Needs (8)

Prerequisites: All sophomore level nursing courses. Explores the application of caring factors to children and adults experiencing pathophysiologic and psychopathologic processes related to growth and development, functional abilities, and integrative components. Includes a clinical component.

235 Assessment of Clients in Health and Illness (3)

Prerequisites: All sophomore level nursing courses. Builds on theoretical knowledge, communication abilities, and the technical skills of basic assessment. Integrates the practice of human caring in the assessment of clients experiencing altered health states. Includes a clinical component.

236 Family and Community Nursing (6)

Prerequisites: Nursing 200, Nursing 217 and Nursing

College of Nursing

220. This practicum course introduces the concepts, principles, skills, and professional nursing roles essential to practice community-based professional nursing with families and groups.

240 Ethics of Human Caring (3)

Prerequisites: Nursing 102; Philosophy course; or consent of instructor. Focuses on examination of ethical dimensions of professional nursing practice with exploration of applied nursing ethics, moral development, ethical theories and principles, and moral reasoning.

299 Special Study in Nursing (1-3)

Prerequisite: Consent of instructor. In-depth study of selected topics in nursing under the guidance of a specific instructor. No more than six hours may be taken under this option.

316 Leadership and Management in Nursing (3)

Prerequisite: Completion of all junior-level nursing courses. Focuses on organizational processes and management theories and provides an examination of motivational theories, group processes, critical thinking, leadership and communication skills, as well as authority and accountability.

320 Perioperative Nursing (2)

Prerequisite: Consent of instructor. Provides experiences in preoperative, intraoperative, and postoperative settings. Includes a clinical component.

322 Transcultural Nursing (3)

Prerequisite: Consent of instructor. Examines transcultural nursing concepts, theories and practices in relationship to human caring. Focuses on application and analysis of health care and scope of practice (within selected cultural contexts. Includes practicum experiences.

326 Nursing Research (3)

Prerequisites: Senior status; Psychology 210 or equivalent course in statistics. Introduces the values and characteristics of quantitative and qualitative research within an ethical perspective. Examines research process through analysis and critique of published nursing research.

332 Dimensions of Health Care: Implications for Professional Nursing Practice (3)

Prerequisite: Completion of junior-level nursing courses or consent of instructor. Legislative, legal, economic, and bioethical concepts are explored as they impact professional nursing practice and health care delivery in a changing society.

338 Sociology of Health (3)

(Same as Sociology 338.) Prerequisites: Sociology 10 and junior standing. Exploration of social dimensions and issues related to health and illness such as access to the health care delivery system; factors influencing prevention, utilization, and compliance; changing

relationships among health care providers and consumers; health care costs, trends, and cross-cultural variations.

340 Synthesis in Nursing Practice (4)

Prerequisites: Nursing 316, Nursing 326, and Nursing 332 (may be taken concurrently). Focuses on synthesis of professional nursing roles in a selective practice setting. Includes assessment of cognitive and affective growth achieved while in nursing program. This clinical course must be taken in the student's final semester.

341 Advanced Nursing Assessment and Management of Clients with Cardiac Dysrhythmias (3)

Prerequisite: Senior status. Focuses on advanced nursing assessment and management of clients with cardiac rhythm problems and conduction disturbances. Includes a clinical component.

345 Management of Clients with Complex Needs (8)

Prerequisites: All junior level nursing courses. Synthesizes human caring and human science in developing megastrategies that address the complex needs of persons. Includes a clinical component.

350 Contemporary Nursing Issues (2)

Prerequisites: Nursing 316, 326, 332, and 340 (may be taken concurrently). Analyzes the development of the professional nursing role in the health care delivery system in contemporary and future society. (This course must be taken in the student's final semester.)

355 Leadership in Health Care Delivery Systems (8)

Prerequisites: All junior level nursing courses. Explores a conceptual foundation for community health nursing that recognizes community as client. Studies human caring related to leadership and management roles of the nurse in health care institutions and the community. Includes a clinical component.

360 Nursing Seminar (3)

Prerequisite: Senior status. Explores current issues related to health care delivery and nursing practice through review of professional literature, group presentations, and discussions.

365 Women's Issues in Health Care (3)

This course is open to nursing majors and other persons interested in women's issues in health care. This seminar offers students the opportunity to explore women's issues in health care from the perspectives of both providers of health care and consumers of health care. Wellness, rather than pathology, is the emphasis of discussion of specific health care issues related to women. Student interest will determine specific issues to be examined.

370 Topics in Nursing (1-3)

Prerequisite: Consent of instructor. Explores special topics in the areas of clinical practice, nursing education, nursing administration, and professional development. No more than six hours may be taken under this option.

College of Nursing

373 Quantitative Analysis in the Health Sciences (3)

Prerequisite: Mathematics 30 or equivalent or permission of instructor. Uses examples and content from health sciences to provide the basic conceptual structure for quantitative analysis.

376 Child Assessment: Denver II (2)

This course identifies principles of growth and development and trains persons to be screeners using the Denver II. The Denver II is a general developmental screening test that primarily evaluates personal-social ability, fine motor-adaptive skills, language, and gross motor skills. To a lesser extent, Denver II is used as a very rough gauge of speech intelligibility, hearing, and vision. This screening instrument is currently used on all Medicaid children and in the Parents as Teachers program.

385 Family Health Behavior (3)

Prerequisite: Nursing 445; or consent of instructor. This course considers various theoretical perspectives and research approaches for studying and providing nursing care to families over the life cycle (from childbearing families through aged families). Attention is given to theoretical and methodological issues related to family nursing and research from a family perspective.

399 Interdisciplinary Identification of Developmental Delays in Children Birth to Three Years (3)

Prerequisite: Permission of instructor or adviser. This course provides an overview of the Missouri state initiative of Public Law 99-457 and focuses on identification of children birth to 36 months who are at risk for developmental delays. Case finding and case management, the importance of parental-professional partnerships and available resources are addressed. Screening methods used to identify developmental delays by nursing, physical and occupational therapy, psychology, audiology, education and speech, and language therapy are presented.

401 Health and Wellness in the Elderly (2)

(Same as Gerontology 401.) **Prerequisite:** Graduate standing. Factors contributing to longevity and health in old age, including genetic predisposition, lifestyle, culture, and environment, are related to aspects of maintaining health and promoting wellness. Through a holistic approach, explores aspects of nutrition, exercise and activity, prevention of hazards to health, maintaining self-responsibility, managing stress, and meeting continued developmental, emotional, and spiritual needs. Considers cross-disciplinary interventions to promote health and wellness in the elderly.

404 Health Assessment for Advanced Nursing Practice (2)

Prerequisite: Undergraduate Health Assessment or consent of instructor. This course is designed to provide a systematic approach to the advanced assessment of physiological, psychological, sociocultural, developmental and spiritual assessment of

individuals. The course builds on basic health assessment skills and emphasizes advanced assessment skills, lab work interpretation, validation, documentation and analysis of assessment findings.

407 Pharmacology for Advanced Nursing Practice (3)

Prerequisite: Nursing 445 (may be taken concurrently) or consent of instructor. This course centers on clinical pharmacotherapeutics used for primary health care management. Emphasis is placed on the clinical use of drugs in the management of specific illnesses.

421 Child Growth and Development (3)

Prerequisite: Basic course in child growth and development or consent of instructor. Seminar discussions in child growth and development and child rearing practices as influenced by cultural, family, and organic conditions. Theories of growth and development, normal development, variation from normal and the use of current developmental screening methods are included.

445 Foundations of Advanced Nursing Practice (3)

Prerequisite: Admission to master's nursing program. This course provides a foundation for advanced nursing practice. Major issues related to clinical and functional role development are addressed. (This course must be taken in the first semester of the master's nursing sequence.)

448 Pathophysiology for Advanced Nursing Practice (3)

Prerequisite or corequisite: Nursing 445. This course focuses on implications for advanced nursing practice through examination of selected pathophysiological phenomena which occur frequently in the diverse populations to whom advanced nurses provide care.

450 Theoretical Foundations in Nursing (3)

Prerequisite: Nursing 445 (may be taken concurrently). This course analyzes major concepts and theories relevant to nursing. Ethical issues and dilemmas inherent in advanced nursing practice are also addressed.

455 Quantitative Methods in Nursing Research (3)

Prerequisites: Nursing 373 or equivalent; Nursing 450 (may be taken concurrently). This course provides the principles and techniques common to scientific investigation as applied to nursing. A plan of study for a nursing problem is developed.

457 Qualitative Methods in Nursing Research (3)

Prerequisites: Nursing 450; Nursing 455 or equivalent. This course introduces the skills necessary to understand and conduct qualitative research in nursing. Emphasis is placed on utilization of qualitative research methods in the study of selected nursing problems.

458 Research Utilization in Nursing (3)

Prerequisites: Nursing 445 and Nursing 455. This course prepares nurses to implement a research utilization model to validate practice. The theoretical

College of Nursing

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.

460A Health Promotion and Protection in Adult Health Nursing (3)

Prerequisites: Nursing 445, Nursing 404, Nursing 448 (may be taken concurrently). This clinical course focuses on advanced primary care nursing of individuals with emphasis placed on health promotion. Consideration is given to the impact of health promotion and protection on individuals, families and selected aggregates.

460C Health Promotion in the Nursing Care of Children (3)

Prerequisites: Nursing 445, Nursing 404, Nursing 448 (may be taken concurrently). This clinical course focuses on comprehensive primary care for children and families addressing various developmental stages, multiple socio-economic groups, and multiple cultural backgrounds.

460F Family Health Promotion (3)

Prerequisites: Nursing 445, Nursing 404 (may be taken concurrently). This clinical course examines principles and concepts critical to the family nurse practitioner role within a primary care environment. Attention is given to the decision-making process and clinical management from a health promotion focus of the family system across the life span.

460W Women's Health Care I (3)

Prerequisites: Nursing 445, Nursing 404, Nursing 448 (may be taken concurrently). This clinical course addresses advanced nursing practice with women across the life span. Emphasis is placed on the years from puberty through climacteric.

461A Acute and Chronic Adult Health Nursing (3-4)

Prerequisites: Nursing 404, Nursing 445, Nursing 448. Corequisite: Nursing 450. This clinical course provides opportunities to apply advanced knowledge and skills to advanced nursing care of patients and families experiencing acute and/or chronic health problems.

461C Acute and Chronic Child Health Nursing (3-4)

Prerequisites: Nursing 404, Nursing 445, Nursing 448. Corequisite: Nursing 450. This clinical course provides opportunities to apply advanced knowledge and skills to advanced nursing care of children and families experiencing acute and/or chronic health problems.

461F Acute and Chronic Problems in the Family I: Parent-Child (4)

Prerequisites: Nursing 404, Nursing 445, Nursing 448. Corequisite: Nursing 450. This course is designed to examine concepts and skills essential to family nurse practitioners. Advanced nursing care of families experiencing acute and chronic health problems with particular emphasis on women's and children's health will be addressed.

461W Women's Health Care II (3-4)

Prerequisites: Nursing 404, Nursing 445, Nursing 448. Corequisite: Nursing 450. This clinical course provides opportunities to apply advanced knowledge and skills to advanced nursing care of women, neonates and families in the childbearing cycle.

464 Ambulatory Care/Case Management (3-4)

Prerequisites: Nursing 404, Nursing 407, Nursing 460, and Nursing 461. This course focuses on the therapeutic management of common health problems encountered by nurse practitioners in selected health care settings. Enrollment limited to those in the practitioner functional role.

464F Acute and Chronic Problems in the Family II: Adult (4)

Prerequisites: Nursing 404, Nursing 445, Nursing 448. Corequisite-Nursing 450. This clinical course is designed to examine concepts and skills essential to family nurse practitioners. Advanced nursing care of families experiencing acute and chronic health problems with particular emphasis on adult health will be addressed.

471NA Role of the Nurse Administrator (3)

Prerequisite: Nursing 445. This course builds on the fundamentals of advanced nursing practice by focusing on the sub-role of the nurse administrator. Content focuses on essential knowledge for today's senior and executive level nurse managers in health care.

471NE Role of the Nurse Educator (3)

Prerequisite: Nursing 445. This course facilitates development of the nurse educator role in a variety of settings. Knowledge and skills essential for the enactment of the nurse educator role are provided.

471NS/NP Role of the Clinical Nurse Specialist/Nurse Practitioner (3)

Prerequisite: Nursing 445. This course focuses on issues impacting the merging roles of clinical nurse specialist and nurse practitioner. It facilitates role development and emphasis on primary care providers and/or specialists within specific clinical areas of advanced nursing practice.

472NA Advanced Nursing Practice: Synthesis Practicum (3)

Prerequisites: All required courses except Nursing 478/479. This clinical course is a concentrated, experiential opportunity to function in the advanced practice nursing role of nurse administrator, educator, clinical specialist, or practitioner within a chosen setting.

475 Special Study in Graduate Nursing (1-3)

Prerequisites: Nursing 445 and permission of the instructor. In-depth study of selected topics in nursing under the guidance of a specific instructor. No more than three hours may be applied to the master's program of study.

College of Nursing

477 Thesis/Directed Research Seminar (1)

Prerequisites: Nursing 455 and permission of thesis/directed research chair. Presentation and discussion of selected research problems in nursing.

478 Directed Research (1-6)

Prerequisites: Nursing 455 and permission of faculty research adviser. Individual participation in the investigation of a research problem of relevance to nursing under the direction of a faculty research adviser.

479 Research Thesis (1-6)

Prerequisites: Nursing 455 and permission of faculty. Individual investigation of a research problem of relevance to nursing. Student works under the direction of a faculty committee to prepare and orally defend a thesis.

480 Doctoral Seminar (1-10)

Prerequisites: Admission to PhD in Nursing Program and consent of instructor. This course provides for discussion, analysis, and critique of selected contemporary issues and research in nursing. Topics will be chosen from among issues in health promotion and protection, health restoration and support, and health care systems. May be repeated for maximum of 10 hours on unduplicated topics.

481 Nursing Theory Analysis and Development (3)

Prerequisites: Admission to PhD in Nursing Program and N450 or equivalent. This course examines foundations of nursing using both traditional and hermeneutic methods of theory analysis and evaluation. Relevant historical and contemporary writings are analyzed.

485 Issues and Methods in Quantitative Analysis in Nursing (3)

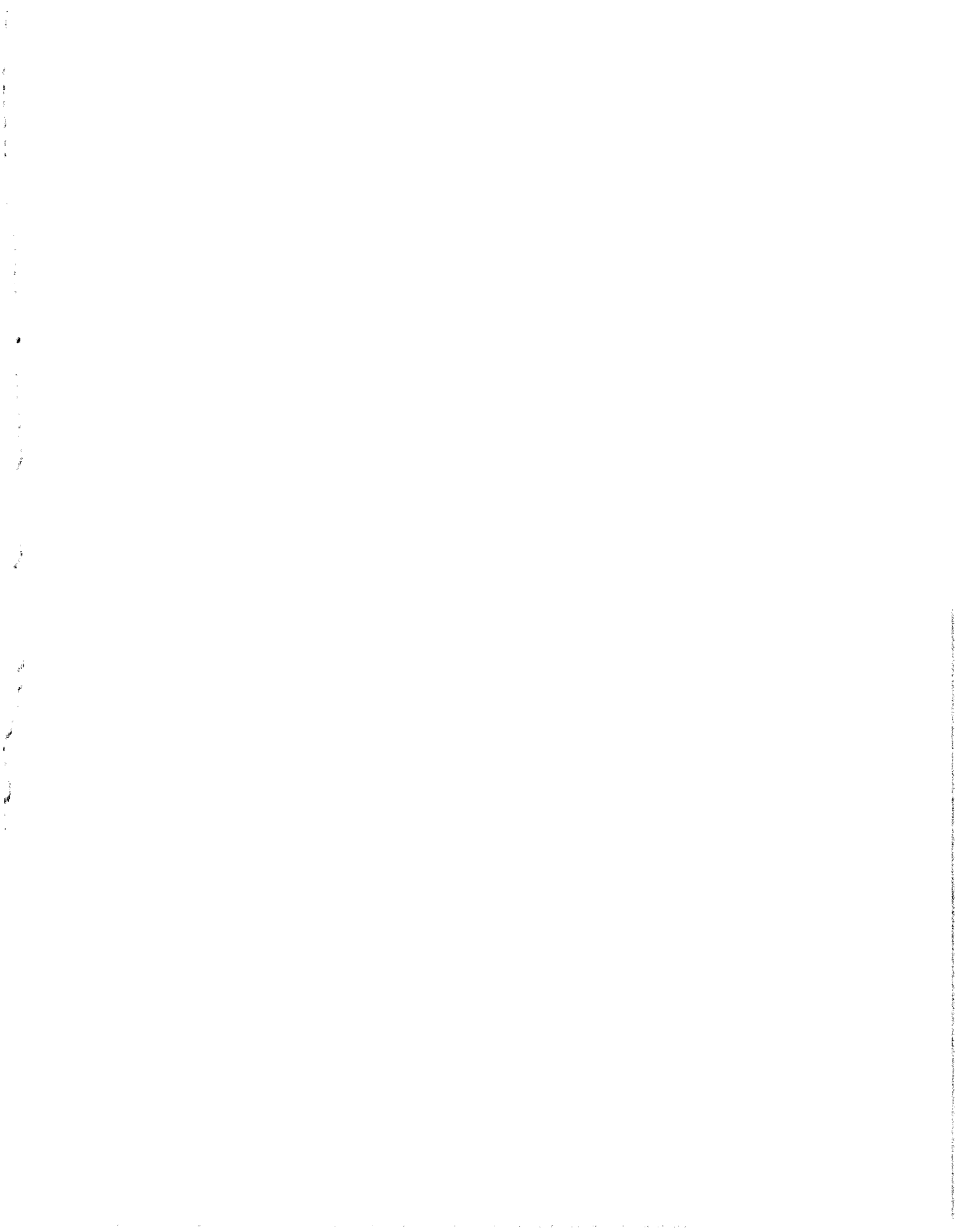
Prerequisites: N455 or equivalent; graduate level quantitative research methods course and graduate course work in univariate and multivariate applied statistics. This course provides the opportunity to consolidate prior knowledge of quantitative analysis methods; to apply those methods to the analysis of nursing phenomena; and to explore at an advanced level issues relevant to their use in nursing. Techniques of particular use in the analysis of health data will be considered.

College of Optometry



1995-96 Bulletin

St. Louis



School of Optometry

Faculty

Jerry L. Christensen, Dean; Professor*
O.D., Ph.D., Ohio State University

Stephen W. Lehmkuhle, Professor*
Ph.D., Vanderbilt University; Postdoctoral Fellow,
University of Virginia

Carol K. Peck, Professor*; Director, Graduate Programs
Ph.D., Postdoctoral Fellow, University of California-Los
Angeles

W. Gary Bachman, Associate Professor*; Director,
Center for Cornea and Contact Lens Research
M.S., University of Alabama-Birmingham; O.D., Southern
College of Optometry

Carl J. Bassi, Associate Professor*
Ph.D., Vanderbilt University; Postdoctoral Fellow, University
of Southern California, Doheny Eye Institute

Edward S. Bennett, Associate Professor*; Chief,
Contact Lens Clinic
M.S.Ed., O.D., Indiana University-Bloomington

Robert E. Carty, Clinical Associate Professor
M.S.Ed., Troy State University; O.D., Southern College
of Optometry

David W. Davidson, Associate Dean for Academic and
Student Affairs; Associate Professor*
M.S., University of Alabama-Birmingham; O.D., University
of California-Berkeley

Gerald A. Franzel, Associate Dean for Clinical Education,
Continuing Education and Community Relations; Clinical
Associate Professor
O.D., University of Houston

Ralph P. Garzia, Associate Professor*; Director, Optometric
Services; Chief, Pediatric Binocular Vision Services
O.D., Residency, Pediatric Optometry, Pennsylvania College
of Optometry

William F. Long, Associate Professor*
Ph.D., Michigan State University; O.D., Indiana University

W. Howard McAlister, Associate Professor*; Director,
Residency Programs
M.A., Webster College; M.P.H., University of Illinois-Chicago;
O.D., Ohio State University

Leonard L. Naeger, Adjunct Associate Professor of
Pharmacology
Ph.D., University of Florida; Residency, Hospital-Based
Pharmacy, VA Medical Center, St. Louis

Frank O. Donnell, Jr., Clinical Associate Professor of
Ophthalmology
M.D., Johns Hopkins University; Residency, Ophthalmology,
Wilmer Institute, Johns Hopkins University

Faye DeClue Allen, Clinical Assistant Professor; Acting
Director, Optometric Center
O.D., University of Missouri-St. Louis

P. Douglas Becherer, Clinical Assistant Professor
O.D., Southern College of Optometry

Paul R. Boyt, Clinical Assistant Professor
O.D., Illinois College of Optometry

Larry J. Davis, Assistant Professor
O.D., Indiana University

James A. DeClue, Clinical Assistant Professor
O.D., Illinois College of Optometry

Gail B. Doell, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Aaron S. Franzel, Assistant Professor*
O.D., University of Missouri-St. Louis

Carrie S. Gaines, Clinical Assistant Instructor
O.D., University of Missouri-St. Louis

John M. Garber, Clinical Assistant Professor
O.D., Southern College of Optometry

James M. Gordon, Clinical Assistant Professor
of Ophthalmology
M.D., University of Minnesota; Residency, Ophthalmology,
Washington University, Barnes Affiliated Hospitals

Steven J. Grondalski, Clinical Assistant Professor; Chief,
Primary Care Services
O.D., Pennsylvania College of Optometry Residency, Hospital-
Based Optometry, VA Medical Center, Wilkes Barre, PA

Alexander D. Harris, Clinical Assistant Professor; Chief,
External Rotations
M.A., Washington University; O.D., University of
Missouri-St. Louis

Timothy Harkins, Adjunct Assistant Professor
O.D., Southern California College of Optometry

Beth A. Henderson, Clinical Assistant Professor
O.D., The Ohio State University

Vinita A. Henry, Clinical Associate Professor
O.D., Residency, Contact Lenses, University of
Missouri-St. Louis

Lesla M. Klein, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Robert A. Koetting, Clinical Assistant Professor
O.D., Southern College of Optometry

Susan Kovacich, Clinical Assistant Professor
O.D., Indiana University

Vasudevan Lakshminarayanan, Assistant Professor*
M.Sc., University of Madras, India; Ph.D., University of
California-Berkeley

Michael Lane, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Todd Lucas, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Joseph H. Maino, Clinical Assistant Professor
O.D., Illinois College of Optometry; Residency, Rehabilitative
Optometry, VA Medical Center, Kansas City

Carol F. Merritt, Assistant Professor*; Director, East St.
Louis Eye Center
O.D., University of Missouri-St. Louis

Robert L. Mobley, Clinical Assistant Professor
O.D., Illinois College of Optometry

Bruce Morgan, Clinical Assistant Professor
O.D., Northeastern State University

Sean P. Mulqueeny, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Raymond I. Meyers, Clinical Assistant Professor
O.D., Indiana University

Thomas S. Sandler, Clinical Assistant Professor
O.D., Pennsylvania College of Optometry

Jane E. Shea, Clinical Assistant Professor
O.D., University of Missouri-St. Louis

Nina Tumosa, Assistant Professor*
Ph.D., State University of New York-Albany; Postdoctoral
Fellow, University of Calgary; Postdoctoral Fellow,
University of Wisconsin

Jeffrey L. Weaver, Assistant Professor*
M.S., Ohio State University; M.B.A., Drury College; O.D.,
Pennsylvania College of Optometry

Timothy A. Wingert, Associate Professor*
O.D., Illinois College of Optometry

Robert R. Smith, Lecturer
M.S., University of Georgia

Marian C. Welling, Assistant Instructor; Chief,
Dispensing Services
B.S., Ferris State College; J.D., St. Louis University

*members of Graduate Faculty

School of Optometry

General Information

The UM-St. Louis School of Optometry enrolled its first class in 1980, graduating 32 students in May 1984. It is located on the South Campus complex of the University of Missouri-St. Louis at 7800 Natural Bridge Road. A modern five-story building houses the School's classrooms, laboratories, research facilities, administrative offices, health-science library, and the Center for Eye Care and Vision Research campus facility (the University Eye Center). The complex also includes a student lounge and an impressive 350-seat amphitheater.

The University Eye Center located on campus is open to the public, as well as to the faculty, staff, and students of the University. The primary goal of the center is to provide patients with high-quality vision care. This purpose is consistent with the overall goal of training well-qualified eye care practitioners.

In addition to the University Eye Center, the School operates the Optometric Center of St. Louis, a full-scope optometric eye care facility in the Central West End of the city and the East St. Louis Eye Center, jointly owned and operated by the University of Missouri-Saint Louis School of Optometry and Southern Illinois University at Edwardsville.

A number of externships have been established to provide additional sites for the advanced clinical training of fourth-year student interns. These programs have been established to broaden the patient care experiences of the senior clinicians. Through these programs, the students are able to examine more patients than they would see at the UM-St. Louis eye care facilities, and students are usually exposed to different types of patients than seen on campus. Currently, the following are off-campus eye care sites: Carl Albert Indian Health Facility, Ada, Oklahoma; American Eye Institute, Marion, Illinois; Anadarko Indian Health Center Anadarko, Oklahoma; Colorado Optometric Center, Denver, Colorado; Grace Hill Neighborhood Health Center, St. Louis, Missouri; Kessler Air Force Base, Kessler AFB, Mississippi; Missouri Eye Institute St. Louis, Missouri; Lighthouse Low Vision Services, New York, New York; O'Donnell Eye Institute, St. Louis, Missouri; Omaha Eye Institute, Omaha, Nebraska; Omni Eye Services of Georgia, Atlanta, Georgia; Omni Eye Serves of Colorado, Denver, Colorado; Naval Medical Clinic, Pearl Harbor, Hawaii; Marine Crop Air Station, Kaneohe Bay, Hawaii; Scott Air Force Base, Scott AFB, Illinois; St. Louis Comprehensive Neighborhood Health Center, St. Louis, Missouri; Veteran's Administration Hospital, Marion, Illinois; Veteran's Administration Hospital Kansas City, Kansas City, Missouri; Veteran's Administration Hospital, Poplar Bluff, Missouri; Washington University Eye Center, St. Louis, Missouri. Students may also arrange their own off-campus externships which may include private practices and/or institutional sites with the approval of the Director of Externships.

Situated in Missouri's largest metropolitan area, the School enjoys the city's strong community and professional support. The urban setting offers many opportunities for outreach programs, expanding the scope of optometric education and making available highly diverse programs of clinical training. Another asset of the School is the location of the national headquarters of the American Optometric Association, approximately twelve miles from the campus.

The curriculum leading to the Doctor of Optometry degree is a four-year, full-time program of study. The first year of the professional curriculum stresses optics and basic health sciences, and introduces students to optics of the visual system. The second year covers vision science and training in eye examination techniques. The third year emphasizes patient care and introduces the student to various specialty areas within optometry, such as contact lenses, pediatric and geriatric vision care, binocular vision and vision training, and low vision rehabilitation. The second and third years also include course work and clinical training in ocular disease and pharmacology. The fourth year provides additional patient care experiences and includes rotations through a variety of outreach programs, giving the student added experience in the treatment of eye diseases, as well as valuable experience in other optometric clinical specialties.

In 1986 the Missouri Optometry Practice Act was revised by the state legislature to include treatment of certain eye diseases utilizing pharmaceutical agents. Thus, optometry students at UM-St. Louis are uniquely situated to receive excellent training in this aspect of optometric practice. Roughly half of the states in the United States now have laws authorizing optometrists to prescribe drugs in the treatment of certain eye diseases. The training and clinical experience optometry students receive at UM-St. Louis in the diagnosis, treatment, and management of ocular disease is excellent and qualifies UM-St. Louis graduates to practice optometry in any state in the nation.

A student who satisfactorily completes all four years of the professional curriculum will be eligible to receive the Doctor of Optometry degree.

The School of Optometry is a member of the Association of Schools and Colleges of Optometry and is accredited by the Council on Optometric Education of the American Optometric Association, the official optometric agency recognized by the National Commission on Accrediting and by the International Association of Boards of Examiners in Optometry.

All optometry students enrolled in the University of Missouri-St. Louis School of Optometry are eligible for membership in the student optometric association, which is affiliated with the American Optometric Association. Through this organization, students become involved in local and national optometric activities. The organization provides an environment

School of Optometry

for the cultivation of professional leadership skills, and members have organized and participated in a variety of community service activities, including community health screenings and vision care to residents of nursing homes, convalescent hospitals, and mental institutions. Furthermore, optometry students have formed local chapters of SVOSH (Student Volunteer Optometric Services to Humanity), an international organization of optometrists providing free vision care to people in impoverished nations and the NOSA (National Optometric Student Association), which strives to recruit minority students into optometry and encourages retention of minority students.

In addition to the many activities through the School of Optometry, optometry students are able to take advantage of all the activities provided by the University to the entire University community. These include intramural sports; movies and cultural activities; a modern, fully-equipped gymnasium; and access to many social and cultural opportunities in St. Louis at reduced cost.

Class Size

Each entering class will be limited to 40 students.

Admission Requirements

Semester

English - 2

Biology (including laboratory)* - 2

Physics (including laboratory) - 2

Chemistry

General (including laboratory) - 2

Organic (including laboratory) - 1

Mathematics**

Calculus - 1

Statistics - 1

Psychology - 2

Social and Behavioral Sciences - 2

or

Quarter

English - 3

Biology (including laboratory)* - 3

Physics (including laboratory) - 3

Chemistry

General (including laboratory) - 3

Organic (including laboratory) - 2

Mathematics **

Calculus - 1

Statistics - 1

Psychology - 2

Social and Behavioral Sciences - 2

*One semester (or one quarter) of Microbiology is a requirement. Other biological science courses that are recommended include: genetics; cellular physiology; embryology.

**Trigonometry as a prerequisite course for Calculus must be completed either in high school or college.

All courses used to satisfy the admission requirements must have been taken at a fully accredited institution or must be acceptable by an accredited institution toward degree credit. Specific prerequisite courses must be taken for a letter grade; they cannot be taken as an

Audit or on a Pass/Fail or Satisfactory/Unsatisfactory basis. Applicants must have completed 90 semester or 135 quarter hours (the equivalent of three years of college education) prior to the start of classes. The applicant cannot apply more than 60 semester hours or 90 quarter hours which were earned at a two-year institution toward the credit-hour requirement. Applicants holding a bachelor's degree will be given preference over applicants with similar academic credentials who do not have a degree. Applicants to the School come from a variety of undergraduate backgrounds, such as biological sciences, psychology, education, and business.

Admission Test All applicants are required to take the Optometry Admission Test (OAT). The OAT is offered twice each year in February and October. Results are sent to the applicant and colleges of optometry approximately six to eight weeks following the date of testing. Official test scores are acceptable for up to three years from the testing date.

Applicants are encouraged to take the examination in February or October of the year preceding anticipated application to the School of Optometry. If applicants wish to enhance their scores, they are encouraged to repeat the examination. For an OAT application packet and additional information, contact: Optometry Admission Testing Program, 211 East Chicago Ave., Chicago, IL 60611, (312) 440-2693.

Application Procedures

The Admissions Committee begins to process applications on August 1 for the class entering the following year. An applicant's file will be considered complete and ready for consideration by the Admission Committee when the following material has been received:

- 1) Application.
- 2) \$25 non-refundable application fee
- 3) Official high school and college transcripts, followed by updated transcripts as they become available.
- 4) Academic Record form.
- 5) Official OAT results.
- 6) A composite evaluation prepared by the preprofessional advisory committee at the educational institution the applicant is attending. Those applicants not currently attending college or who are at an institution that does not offer a committee evaluation will be required to submit four letters of recommendation.

In addition to the standard application procedures, prospective students living outside the United States and its possessions must take the Test of English as a Foreign Language (TOEFL).

Applications are processed and considered as they are received. Applicants are encouraged to begin the admissions process approximately one year in advance of their planned entrance date. Early submission of applications is encouraged.

School of Optometry

Applications must be complete by March 15 to be considered for admission to the class entering in August of the same year. Application materials received after March 15 will not be evaluated for the class entering in August of the same year.

All correspondence and inquiries, including transcripts, should be addressed to: Chairperson, Admissions Committee, School of Optometry, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4499, (314) 516-6263.

Selection Procedures

The Admissions Committee has the responsibility to review and evaluate all applicants and select the best qualified candidates. The Committee considers: an applicant's overall grade point average, the grade point achieved in the sciences, any grade trends over the years in college, and the scores on the Optometry Admission Test (OAT). Concurrently, candidates are evaluated on less quantitative measures such as extracurricular activities and interests, related or unrelated work experience, written narrative, and letters of recommendation.

Those applicants whom the committee feels to be most competitive will be scheduled for an on-campus interview. The on-campus interview facilitates the committee's assessment of the applicant's interests, motivation, and personal characteristics. In addition, the on-campus interview allows the applicant to tour the facilities, meet with currently enrolled students, have questions answered regarding financial aid and housing, and learn more about the School. From this group of interviewed applicants, the entering class of 40 students will be selected. The policies of the University of Missouri-St. Louis and the School of Optometry comply with the provisions under those laws which forbid discrimination on the basis of race, color, sex, national origin, religion, age, handicap, or veteran status. The School of Optometry encourages minority applicants.

Acceptance Procedures

Students accepted for admission will begin receiving notices of acceptance in December prior to the year of anticipated matriculation. Notices of acceptance may be received as late as the following May. If acceptance to the class is conditional, the terms of the condition must be completed prior to matriculation. Applicants who have indicated that degree requirements will be completed prior to matriculation, and who have been selected for admission, may receive a conditional offer of acceptance contingent upon completion of the degree.

Financial Aid

The University of Missouri-St. Louis maintains an Office of Student Financial Aid to assist eligible students in financing their education when their own and/or their families' resources are insufficient for this purpose. For information regarding available sources

of student financial assistance contact: Student Financial Aid, Room 209 Woods Hall, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, Missouri 63121-4499, (314) 516-5526. In addition, the UM-St. Louis School of Optometry Office of Student Affairs has up-to-date information on numerous scholarships and grants. This information is given to a prospective student during the pre-interview process.

Fees

Tuition/Fees Summer 1995*

Resident - \$2,153.40-2,263.86
Non-resident - \$4,208.40-4,318.86

Tuition/Fees Fall 1995

Resident - \$5,963.32
Non-resident - \$11,443.32

Tuition/Fees Winter 1996

Resident - \$5,963.32
Non-resident - \$11,443.43

*A Summer Session is required between the third and fourth professional year. Tuition/Fees vary according to rotation location.

The above figures include the Education Fee, Student Facility and Activity Fee, the Instructional Computing Fee, and the Health Service Fee; they do not include the optional Parking Fee.

Residence

The UM-St. Louis School of Optometry is state-supported and therefore gives preference to individuals who are bona fide residents of Missouri. Twenty of the forty available positions are reserved for Missouri residents. This number may be revised slightly (upward or downward) based on annual variations in the applicant pool. The remaining places will be allocated to residents of other states with some preference given to qualified applicants from states that provide contract support.

Currently, five nonresident positions are allocated by State Reciprocal Agreements for residents of Kansas. Individuals who are admitted under these Agreements will pay reduced educational fees. For additional information, contact: Optometry Program, Kansas Board of Regents, Suite 609, Capitol Tower, 400 S.W. Eighth, Topeka, KS 66603 (913) 296-3517.

Optometry students will be required to pay Non-resident Educational Fees if they do not meet the University's residency requirements at the time of the enrollment. The definition of "residency" is outlined in the pamphlet *Tuition and Residency Rules* available from the Cashier's Office, (314) 516-5151.

School of Optometry

Four-Year Professional Degree (O.D.) Curriculum

First Year

Fall Semester

- 504**, Neuroanatomy
- 505**, Geometric Optics
- 506**, Practice Management I
- 508**, Human Anatomy and Physiology
- 512**, Biochemistry

First Year

Winter Semester

- 513**, Physical Optics and Photometry
- 514**, Clinical Optometry I
- 515**, Ocular Optics
- 516**, Physiological Optics Laboratory
- 517**, Ocular Motility
- 518**, Anatomy and Physiology of the Eye
- 522**, Systemic Disease

Second Year

Fall Semester

- 520**, Ophthalmic Optics
- 521**, Clinical Optometry II
- 524**, Monocular Sensory Processes
- 541**, Practice Management II
- 555**, General Pharmacology

Second Year

Winter Semester

- 530**, Ophthalmic Dispensing
- 531**, Clinical Optometry III
- 532**, Binocular Vision and Space Perception
- 533**, Ocular Disease I
- 535**, Epidemiology
- 565**, Ocular Pharmacology

Third Year

Fall Semester

- 550**, General Clinic I
- 553**, Contact Lenses I
- 554**, Binocular Vision Anomalies
- 556**, Ocular Disease II
- 558**, Geriatric Optometry
- 596**, Public Health

Third Year

Winter Semester

- 557**, Advanced Clinical Assessment of Visual Processing
- 560**, General Clinic II
- 561**, Specialty Clinic I
- 563**, Contact Lenses II
- 564**, Low Vision
- 567**, Pediatric Optometry
- 582**, Practice Management III
- Elective

Fourth Year

- 570**, External Rotation in General Patient Care
- 571**, Community Service Rotation in Patient Care
- 572**, East St. Louis Center Patient Care
- 573**, UM-St. Louis Pediatric/Binocular Vision Patient Care

- 574**, UM-St. Louis Contact Lens Patient Care
- 575**, UM-St. Louis Co-Management Patient Care
- 576**, Optometric Center Patient Care
- 577**, Optometric Center Low Vision Patient Care
- 578**, External Rotation in Contact Lens Patient Care
- 579**, External Rotation in Pediatric/Binocular Vision Patient Care
- 583**, Practice Management IV
- 585**, External Rotation in Ocular Disease Patient Care
- 586**, External Rotation in Institutional Patient Care
- 592**, External Rotation in Low Vision Patient Care
- 593**, Clinic Seminar

Students must complete a minimum of five credit hours of approved elective courses during the course of their professional curriculum. Additionally fourth year students must complete three elective clinic courses during their fourth year.

Graduate Studies

Physiological Optics

Physiological Optics is a multidisciplinary area concerned with the study of normal and anomalous vision. The goal of this program in Physiological Optics is to train the next generation of researchers in clinical and basic vision science, to conduct research, and to educate faculty for schools of optometry. Students will be required to integrate basic skills in vision science with focal studies in an area of research emphasis. This program will emphasize research aimed at new treatments and cures for vision disorders, as well as research in basic mechanisms of visual functions. The School of Optometry offers both an M.S. degree and a Ph.D. degree. Students may apply to the Graduate School for admission to either the M.S. or the Ph.D. program.

Admission Requirements

Students should have the appropriate background for graduate training in physiological optics and appropriate undergraduate courses for their anticipated research emphasis. Applicants must have a bachelor's degree from an accredited college or university within the United States or from an equivalent institution outside of the United States. In order to be admitted as regular graduate students, applicants must have a grade point average of at least 3.0 in their overall undergraduate work, in their undergraduate major, and in any post-baccalaureate academic work. Students must arrange for transcripts to be submitted from all post-secondary academic work and to have at least three letters of recommendation sent by faculty members at previously attended colleges and universities. Students must also submit Graduate Record Examination (GRE) scores (verbal, quantitative, and analytic). In addition, students from countries where English is not a primary language must submit Test of English as a Foreign Language (TOEFL) scores of 550 or better. All materials and scores must be submitted before an application for admission can be decided.

School of Optometry

Master of Science in Physiological Optics

Degree Requirements

The M.S. degree requires 30 semester hours of course work, including the core courses. At least 25 of these hours will normally be taken from courses offered by the School of Optometry with no more than 10 of these in Physiological Optics 490, Graduate Research in Physiological Optics. Each M.S. student will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

The M.S. degree requires 30 semester hours of course work, including the core courses. At least 25 of these hours will normally be taken from courses offered by the School of Optometry with no more than 10 of these in Physiological Optics 490, Graduate Research in Physiological Optics. Each M.S. student will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

The Core Courses for this program are:

- Physiological Optics 400**, Sensory Processes and Perception (3 credits)
- Physiological Optics 401**, Visual Optics (3 credits)
- Physiological Optics 402**, Ocular Anatomy and Physiology (3 credits)
- Physiological Optics 403**, Psychophysical Methods and Experimental Design (3 credits)
- Physiological Optics 404**, Sensory Neuroscience (3 credits)

Special Topics, Individual Studies, and Advanced Topics courses in Physiological Optics are also offered.

Each M.S. student must also complete a thesis based on research conducted during the program. The thesis must be approved by a committee of at least three members of the graduate faculty, at least two of which must be from the graduate faculty in Physiological Optics.

Ph.D. in Physiological Optics

Degree Requirements

The doctoral degree requires 60 semester hours of course work, including the core courses. Each Ph.D. student will also be required to demonstrate proficiency in a foreign language, computer language, advanced statistical methods, or another acceptable tool skill. The tool skill and level of proficiency must be selected in advance in consultation with the Graduate Committee in Physiological Optics. Students will be required to teach at least two semesters in areas determined by the Graduate Committee in Physiological Optics.

Written qualifying examinations will be offered at the beginning of each semester and regular summer session. Full-time students must attempt qualifying

examinations before beginning their third year of study. Students must declare their intent to take the examinations at least one month prior to the beginning of that semester or summer session. In addition to completing the general qualifying examination, students must complete a major area paper in their area of specialty focus by the end of the semester following the one in which they successfully complete the qualifying examination.

The preparation of the dissertation will be supervised by a dissertation committee, which will be selected by the student and the student's adviser and will consist of at least three members of the graduate faculty, at least two of which must be from the doctoral faculty in Physiological Optics. An oral examination of the written dissertation proposal will be conducted by the Committee. This will be required of all students for advancement to candidacy. An oral defense of the completed written dissertation before the Committee is also required.

The Core Courses for this program are:

- Physiological Optics 400**, Sensory Processes and Perception
- Physiological Optics 401**, Visual Optics
- Physiological Optics 402**, Ocular Anatomy and Physiology
- Physiological Optics 403**, Psychophysical Methods and Experimental Design
- Physiological Optics 404**, Sensory Neuroscience

Special Topics, Individual Studies, and Advanced Topics courses in Physiological Optics are also offered.

Career Outlook

Doctor of Optometry Degree

A Doctor of Optometry or "optometrist," is an independent health care professional who is specifically educated, clinically trained, and licensed to examine, diagnose, and treat conditions or impairments of the human vision system. Optometrists examine the eyes and related structures to determine the presence of vision problems, eye disease, and other ocular abnormalities.

Optometrists are the major providers of vision care. They provide treatment by prescribing ophthalmic lenses or other optical aids, provide vision therapy to preserve or restore maximum efficiency in vision, and in most states (including Missouri) are authorized to prescribe drugs in the treatment of certain eye diseases.

Optometrists can also detect certain general diseases of the human body such as diabetes, hypertension, and arteriosclerosis that have the potential capacity to affect vision. When an eye examination reveals diseases in other parts of the body, the optometrist will refer patients to the appropriate health care practitioner for treatment. Like physicians and dentists, optometrists are primary health care professionals.

School of Optometry

The scope of optometry requires an understanding of the development of vision from infancy through adulthood, and the therapeutic and rehabilitative methods required to care for the problems of vision from infancy through the declining years.

Optometry is the largest eye care profession and one of the largest independent health care professions in the United States. Currently, some 28,900 doctors of optometry practice in America. They are widely distributed across the nation, practicing in more than 7,100 different municipalities. In more than 4,300 of these communities, the optometrist is the only primary care provider. As such, optometrists provide the major portion of primary eye care services in the United States. Nationwide, optometrists' services are available in more than 75 percent of all counties.

Optometric studies indicate that a ratio of one practicing optometrist to every 7,000 people (a ratio of 14.3 practicing optometrists per 100,000 population) is a reasonable average for the United States. Despite recent growth in the profession, few states meet this criteria.

As our society becomes more technically oriented, vision requirements become more exacting. The number of persons needing professional help for reading and other near-point visual tasks, including both older citizens and school children, is steadily growing. Increased demands for vision care result not only from population growth but also from increased understanding of how good vision relates to industrial production, student achievement, adjustments to aging, and other areas crucial to modern society.

The patients whom the practicing optometrist treats may have varied and challenging needs. On any given day, an optometrist might be involved in restoring vision to a partially sighted patient; fitting glasses for a child whose vision problem is affecting academic achievement; treating an eye infection with antibiotics;

improving the function of a patient's eyes through vision training; helping an elderly patient in a nursing home cope with changing vision through critical eye health education; and performing comprehensive eye examinations for those who need glasses or contact lenses to correct astigmatism, nearsightedness, and numerous other vision problems.

The practice of optometry offers independence, flexibility, and diversity. Optometrists have a wide range of modes of practice. They may choose to practice in the inner cities, suburbs, and rural areas. Opportunities exist for solo practice, partnership, optometric or multidisciplinary group practice, government or military service, and clinical or hospital settings. Additional optometric employment opportunities may be found in teaching, research, or both.

Optometry is a rewarding career, both economically and personally. Based on data from the Bureau of Labor Statistics and surveys by professional associations, optometry is one of the top 10 income-earning professions in the country.

Graduate Degrees

The Master of Science program provides research-oriented training beyond that offered in the professional program in optometry. Many optometry schools require that applicants for faculty positions hold an M.S. or Ph.D. degree, as well as an O.D. degree. Additional employment possibilities for individuals with M.S. degrees are found in industry and in both public and private research foundations.

The Ph.D. program prepares students as research professionals in vision science. Employment opportunities are available in college or university teaching and research, in research institutes, and in industry. Within academic optometry, individuals with both O.D. and Ph.D. degrees are in high demand as faculty members.

School of Optometry

Course Descriptions

The following 400-level courses may be taken in the Master of Science or Doctor of Philosophy programs in Physiological Optics.

400 Sensory Processes and Perception (3)

Prerequisite: Consent of instructor required for graduate students not in Physiological Optics. Current views on the encoding of various aspects of the visual stimulus (intensity, space, time, and wavelength) that give rise to the perceptions of brightness, contour, motion, and color will be considered in this course. The psychophysical tools available to examine visual encoding will be emphasized. Other topics will include binocular vision and depth perception, information processing approaches to visual pattern recognition, and the similarities and interactions of the visual system with the other sensory modalities.

401 Visual Optics (3)

Prerequisite: Optometry 406, Optometry 505, or consent of instructor. This course deals with the optical properties of the eye. Included are a review of general optics including physical optics, paraxial and non-paraxial geometric optics, image quality, radiometry and photometry, and optical instrumentation. Topics in visual optics will include schematic eyes, measurement of the parameters of the eye, accommodation, retinal image size, refractive errors, visual axes, spectral absorption by the ocular media, and the optical performance of the eye.

402 Ocular Anatomy and Physiology (3)

Prerequisite: Consent of instructor required for graduate students not in Physiological Optics. The structures and fluids of the eye and orbit, their interactions and functions are considered in this course. Specific topics include the eyelids, tearfilm, conjunctiva, cornea, iris, ciliary body, vasculature, aqueous humor, vitreous body, and the retina.

403 Psychophysical Methods and Experimental Design (3)

Prerequisite: Consent of instructor required for graduate students not in Physiological Optics. Advanced methodology for the design and analysis of experiments in a variety of areas of visual science are considered in this course. Both basic and applied topics will be considered. Special emphasis will be placed on psychophysical methodology, signal detection analysis, and scaling techniques.

404 Sensory Neuroscience (3)

Prerequisite: Optometry 405, Optometry 504, or consent of instructor. This course will deal with the neural organization of the sensory systems with an emphasis on vision. It will include a review of general neurophysiology and neuroanatomy as they relate to the processing of environmental stimuli into neural information, as well as experimental approaches

utilized in neurobiology. Topics to be covered include neural transduction and sensory coding by receptors and neurons, constraints on perception defined by the functional organization of the nervous system, sensory development and plasticity as related to neural development, and evolution of sensory systems.

405 Neuroanatomy (5)

Prerequisite: Graduate standing. Detailed gross and microscopic anatomy of the human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system. Students may not receive credit for both Optometry 405 and Optometry 504.

406 Geometric Optics (5)

Prerequisite: Graduate standing. The principles of geometrical optics as applied to refracting and reflecting surfaces, thin lenses, thick lenses, and lens systems. The optics of various ophthalmic instruments and techniques will be examined. A student may not receive credit for both Optometry 406 and Optometry 505.

451 Corneal Physiology (2)

Prerequisite: Completion of core or consent of instructor. A detailed consideration of the biochemical and biophysical aspects of corneal transparency, including nutrition, metabolism, and methods of investigation. The effects of altered corneal environments (such as exist during sleep or contact lens wear) will be discussed.

452 Growth and Development of the Visual System (2)

Prerequisite: Completion of core or consent of instructor. This course will be an in-depth coverage of topics related to the growth and development of the visual system, including visual deprivation, neuronal specificity and plasticity, and neurotrophic influences.

453 Advanced Physiology of Other Sensory Systems (2)

Prerequisite: Completion of core or consent of instructor. This course will deal with the structure and function of the auditory, vestibular, olfactory, and somatosensory systems. Particular emphasis will be placed on similarities and interrelationships between these senses and vision.

454 Binocular Vision (2)

Prerequisite: Completion of core or consent of instructor. Binocular fusion and summation, binocular rivalry and suppression, and stereopsis and depth perception are the major topics of the course. The neurophysiology of binocular vision, and its development will also be covered in the course.

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.

School of Optometry

Computer models will be evaluated in terms of their efficiency, veridicality, and relation to biology.

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.

457 Comparative and Evolutionary Aspects of Vision (2)

Prerequisite: Completion of core or consent of instructor. This course explores the evolution of visual systems by examination of structural and functional aspects of vision in vertebrate and invertebrate species. Topics include photosensitivity and photoreception; structure of the eye in vertebrates and invertebrates; discrimination of form, motion, and color; visual reflexes, parallel processing; elaboration of central visual pathways; binocular vision; and stereopsis. Structural and functional adaptations to selective pressure will also be discussed.

458 Noninvasive Assessment of the Visual System (2)

Prerequisite: Completion of core or consent of instructor. This course reviews historical topics and emphasizes current topics in the noninvasive clinical and laboratory assessment of the normal and diseased human visual system. Topics will range from delineation of disease mechanisms (such as retinal and choroidal disorders, cataract, corneal disease, glaucoma, strabismus, and amblyopia) to the design and assessment of new techniques and technology for evaluating the function of the visual system (e.g., advances in imaging techniques, fluorophotometry, perimetry, laser interferometry, psychophysics, etc.).

459 Introduction to Computer Programming for Vision Research (3)

Prerequisite: Consent of instructor required for graduate students not in Physiological Optics. This course will expose the student to fundamental concepts of computer programming. The Prograph programming language will be used on the Macintosh computer to illustrate procedural and object-oriented programming philosophies. Examples and assignments will focus upon research applications in vision science.

470 Individual Studies in Physiological Optics (2)

Prerequisite: Consent of instructor. This course designation can be used to cover a variety of topics in visual science. In general, very specific topics of limited interest will be presented as individual studies. Individual studies and advanced topics enable the student's course of study to be sharply tuned to his or her major area of interest.

490 Graduate Research in Physiological Optics (1-15)

Prerequisite: Consent of instructor. Research in an area selected by the student in consultation with faculty members. May be taken to a maximum of 10 hours for the M.S. and 15 hours for the Ph.D.

497 Interdisciplinary Geriatric Care (2)

(Same as Gerontology 497.) Prerequisite: Consent of instructor. Interdisciplinary approaches that address the medical and social needs of the elderly will be examined. Information about geriatric care and social issues affecting the well-being of older adults will be provided. Clinical, theoretical, and educational perspectives will be presented.

499 Current Topics in Optometry and Vision Science (1)

Prerequisite: Consent of instructor. This seminar course examines and analyzes current publications in eye care and vision research. May be taken as an optometry elective to a maximum of 3 hours.

The following 500-level courses are taken in the Doctor of Optometry (O.D.) program.

504 Neuroanatomy (4)

Detailed gross and microscopic anatomy of the human central nervous system with a special emphasis on the cranial nerves, nuclei, and the visual system.

505 Geometric Optics (4)

The principles of geometrical optics as applied to refracting and reflecting surfaces, thin lenses, thick lenses, and lens systems. The optics of various ophthalmic instruments and techniques will be examined.

506 Practice Management I (2)

An introduction to the contemporary practice of optometry, beginning with a consideration of the history of the optometric profession and concluding with the consideration of the present-day scope of optometric practice. The role of optometry in the total health care system will be evaluated along with future projections. Goal setting and financial advisement will also be discussed.

508 Human Anatomy and Physiology (6)

The general anatomy of the human body and the physiology of the major organ systems including the peripheral and autonomic nervous system, the cardiovascular, respiratory, endocrine, digestive, and reproductive systems will be presented. The anatomy of the head and neck will be emphasized and the histology of the basic tissue types and organs will be related to general human anatomy and physiology. (Five hours lecture, two hours laboratory/week.)

512 Biochemistry (3)

Basic concepts of general and cellular biochemistry. Study of nomenclature structure, and reactions of organic molecules. Some emphasis on visual system—tears, intraocular fluids, lens, and photochemistry.

School of Optometry

513 Physical Optics and Photometry (3)

Radiometry and photometry. Physical optics including diffraction, interference, polarization, scatter, birefringence, and holography. Fundamentals of photography.

514 Clinical Optometry I (2)

Selected tests for ocular health, to include perimetry, ophthalmoscopy, biomicroscopy, and tonometry.

515 Ocular Optics (3)

The eye as an image-forming mechanism, the schematic eyes, the optical role of the pupil, the retinal image and its evaluation. Nature, classification, and etiology of ametropia. Mechanism and optical aspects of accommodation.

516 Physiological Optics Laboratory (1)

Experiments designed to accompany Optometry 515 and Optometry 517.

517 Ocular Motility (3)

The anatomy, physiology, neurology, measurement, characteristics, and control of the intra- and extraocular system.

518 Anatomy and Physiology of the Eye (5)

Vegetative anatomy and physiology of the eye, optic nerve, orbit, and adnexa will be discussed. This includes discussion of embryology and the dynamics of ocular fluids and includes a two-hour laboratory.

520 Ophthalmic Optics (3)

History of ophthalmic materials; physical characteristics of lenses, aberration theory and its application to lens design, ophthalmic prisms, lens specifications, special lenses, multifocal lenses, unique designs, low vision aids, aniseikonic lenses, protective eyewear.

521 Clinical Optometry II (5)

Continuation of clinical optometry. Essentials of the case history, patient care in the areas of refraction, binocular integration, and visual performance.

522 Systemic Disease (4)

Principles of health and disease. A survey of disease, disease processes, and disease manifestations. A study of tissue changes in inflammation, tumor formation, allergies, disturbances of metabolism and circulation, and injuries.

524 Monocular Sensory Processes (5)

Monocular sensory mechanisms of vision, photoreception, visual neurophysiology, spatial and temporal effects, visual acuity and resolution, adaptation, brightness discrimination, and color vision. Topics include a consideration of both the psychophysical aspects and neurophysiological bases of these mechanisms.

530 Ophthalmic Dispensing (2)

Physical characteristics of frames, lens and frame specifications, fabrication and verification, fitting and dispensing concepts and procedures.

531 Clinical Optometry III (5)

Correlation and analysis of optometric data. Emphasis on diagnosis, prognosis, and therapy of visual problems.

532 Binocular Vision and Space Perception (4)

Binocular vision and space perception. Visual direction, theory of correspondence, fusion, rivalry, ocular dominance, and stereopsis. Developmental aspects and neurophysiological mechanisms.

533 Ocular Disease I (4)

Prerequisite: Optometry 522. The etiology, epidemiology, symptoms, signs, and course sequelae of ocular disease and anomalies. Disease and anomalies of lids, orbit, conjunctiva, cornea, sclera, iris, ciliary body, lens, vitreous, retina, choroid, and optic nerve.

535 Epidemiology (2)

A review of descriptive statistics, probability sampling, correlation, and prediction. The essentials of epidemiological study procedures and a discussion of the epidemiology of vision disorders.

541 Practice Management II (2)

Prerequisite: Optometry 506. Principles of human interpersonal relationships. The development of patient-doctor relationships. Emphasis will be on preparing the student to understand and deal with the many human interpersonal relationships necessary in the practice of optometry.

550 General Clinic I (6)

The clinical examination and care of general clinic patients, along with the fitting and dispensing of lenses and frames.

553 Contact Lenses I (3)

Historical development of the contact lens and its use. Basic lens terminology, specifications, physiochemical characteristics, optics, fabrication, and verification. Preliminary patient evaluation, indications and contraindications for contact lenses. Basic fitting philosophies for all lens types. Corneal topography and physiology. Patient and practice management considerations. Limited clinical experience.

554 Binocular Vision Anomalies (4)

The etiology, epidemiology, symptoms, signs, and course sequelae of the obstacles to binocular vision—sensory, integrative, and motor. The detection, diagnosis, prognosis, and orthoptic treatment of such anomalies. Clinical care of aniseikonias.

555 General Pharmacology (3)

General pharmacological principles, methods of administration, various systemic drugs and their pharmacological action and side effects, with emphasis on those that affect the visual system. Agencies, laws, and drug abuse.

School of Optometry

556 Ocular Disease II (4)

Prerequisite: Optometry 533. Ocular manifestations of systemic diseases and anomalies. The etiology, epidemiology, symptoms, signs, and course sequelae of visual and ocular neurological anomalies, lid and pupillary anomalies, paralytic strabismus, and visual field problems.

557 Advanced Clinical Assessment of Visual Processing (2)

The course deals with clinical aspects of visual performance, and their assessment by visual psychophysical and electrophysiological tests. The implications for a variety of routine visual skills will be discussed.

558 Geriatric Optometry (3)

(Same as Gerontology 458.) Special examination and management considerations of the geriatric patient will be discussed. Psychological, physiological, social, and demographic aspects of aging, as well as ocular changes associated with the aging process will be taught. Supervised interactions with nursing home residents will occur.

560 General Clinic II (6)

Same as General Clinic I.

561 Pediatric/Binocular Vision Specialty Clinic I (1)

The clinical examination and care of patients in the optometric specialty areas of binocular vision and pediatric vision.

562 Contact Lens Specialty Clinic (1)

The clinical examination and care of patients in the optometric specialty area of contact lenses.

563 Contact Lenses II (3)

Advanced contact lens fitting, theories, and clinical methods for aspheric, astigmatic, presbyopic, keratoconic, and aphakic designs. Special considerations including the application of lenses in high refractive errors, binocular vision training, low vision devices, color deficiency, orthokeratology, and extended wear. Use and fitting of haptic lenses, cosmetic shells, and prostheses. Patient and practice management considerations. Limited clinical experience.

564 Low Vision (3)

The etiology, epidemiology, symptoms, signs, and course sequelae of low-vision problems. Methods of testing, prognosis, selection of therapy, design of environmental and optical aids, problems of rehabilitation. Agencies, laws, public and social assistance for the partially sighted and blind.

565 Ocular Pharmacology (3)

Pharmacology, uses, doses, contraindications, adverse effect of drugs producing miosis, mydriasis, cycloplegia, accommodation, and corneal anesthesia. The pharmacology, use contraindications, and adverse effects of drugs commonly used in treating visual and ocular problems.

567 Pediatric Optometry (3)

Special examination and management considerations of the pediatric patient. Psychological, physiological, social, and demographic aspects of early visual development. Discussion of the optometric considerations of children with learning and reading disabilities.

568 Clinical Medicine (2)

Prerequisite: Successful completion of the first two years of the optometric curriculum or consent of the instructor. This elective course will describe medical treatment of patients with systemic diseases that have ocular manifestations. Co-management practice with family practitioners will be emphasized.

569 Ocular Photography (2)

Optical principles and clinical techniques in photographing the internal and external eye and its adnexa. Includes laboratory exercises on use of the most common types of clinical cameras. (One hour lecture, two hours laboratory)

570 External Rotation in General Patient Care (7)

Comprehensive clinical care of a general population of optometric patients at external sites approved by the School of Optometry's Externship Council. This elective course fulfills one of three elective clinic courses required for graduation.

571 Community Service Rotation in Patient Care (7)

Comprehensive clinical care of patients at St. Louis area community health centers. This elective course fulfills one of the three elective clinic courses required for graduation.

572 East St. Louis Center Patient Care (7)

Comprehensive clinical care of patients at the SIU-E/UM-St. Louis East St. Louis Optometric Center. This course fulfills one of three elective clinic courses required for graduation.

573 UM-St. Louis Pediatric/Binocular Vision Patient Care (3)

Comprehensive clinical care of patients in pediatric/binocular vision clinic at the University of Missouri-St. Louis Center for Eyecare and Vision Research. This course is required for graduation.

574 UM-St. Louis Contact Lens Patient Care (3)

Comprehensive clinical care in contact lens clinic at the University of Missouri-St. Louis Center for Eyecare and Vision Research. This course is required for graduation.

575 UM-St. Louis Co-Management Patient Care (1)

Comprehensive clinical care of patients in the co-management clinic of ocular disease patients with ophthalmologists at the University of Missouri-St. Louis Center for Eyecare and Vision Research. This course is required for graduation.

School of Optometry

576 Optometric Center Patient Care (6)

Comprehensive clinical care of patients at the University of Missouri-St. Louis Optometric Center. This course must be taken in conjunction with Optometry 577. This course is required for graduation.

577 Optometric Center Low Vision Patient Care (1)

Comprehensive clinical care of patients seeking low vision care at the University of Missouri-St. Louis Optometric Center. This course must be taken in conjunction with Optometry 576. This course is required for graduation.

578 External Rotation in Contact Lens Patient Care (7)

Comprehensive clinical care of contact lens patients at an external site approved by the School of Optometry's Externship Council. This elective course fulfills one of three elective clinic courses required for graduation.

579 External Rotation in Pediatric/Binocular Vision Patient Care (7)

Comprehensive clinical care of pediatric/binocular vision patients at an external site approved by the School of Optometry's Externship Council. This elective course fulfills one of three elective clinic courses required for graduation.

582 Practice Management III (3)

Prerequisites: Optometry 506 and Optometry 541. The development and management of an optometric practice from a patient and community service point of view—office design, office routine, patient care administration, personnel management, and recall systems. The establishment, development, and management of an optometric practice from a business point of view. Legal developments, governmental relationships, legislation and the legislative process, malpractice, professional ethics, taxes, fee structures, insurance, and accounting methods.

583 Practice Management IV (2)

Prerequisite: Optometry 582. Further in-depth discussion in practice management.

585 External Rotation in Ocular Disease Patient Care (7)

Comprehensive clinical care of patients with ocular disease at external sites approved by the School of Optometry's Externship Council. Successful completion of this course or Optometry 586 is required for graduation. If Optometry 586 is used as the required course, this course (Optometry 585) may be chosen as one of three elective clinic courses required for graduation.

586 External Rotation in Institutional Patient Care (7)

Comprehensive clinical care of primary care patients at external institution sites approved by the School of Optometry's Externship Council. Successful completion of either this course or Optometry 585 is required for graduation. If Optometry 585 is chosen as the required course, then this course (Optometry 586) may be chosen as one of three elective clinic courses required for graduation.

587 Sports Vision (2)

Special examination and management considerations of the competitive athlete. This elective course includes a study of the special visual requirements and demands resulting from athletic endeavors.

588 Directed Research (3)

Credit is given for independent research. Projects may be laboratory, library, or clinically based research in any area of vision science. All projects must be undertaken under the supervision of a three-member faculty committee. This elective may be repeated once.

589 Directed Readings (1)

Credit is given for independent literature review of a specific topic in any area of basic or clinical vision science. Readings are to be supervised by a two-person faculty committee and at least one member of this committee must be selected from among the full-time regular faculty. Credit is awarded upon approval of a written paper regarding the selected topic. This elective may be repeated once.

591 Geriatric Patient Care Delivery (3-6)

Prerequisite: Consent of Geriatric Residency Instructors. Direct optometric patient care to a population that is largely geriatric. Emphasis will be on integrating specialty care available for these patients to provide comprehensive vision care. Two hours of direct patient care per week are required per hour of credit. In addition, the student will attend weekly supervisory meetings. May be repeated with consent of instructor for a total of 18 credits. Patient care will become more independent of direct supervision and the type of patients seen will be more varied with each repeat.

592 External Rotation in Low Vision Patient Care (7)

Comprehensive clinical care of low vision patients at an external site approved by the School of Optometry's Externship Council. This elective course fulfills one of three elective clinic course required for graduation.

School of Optometry

593 Clinic Seminar (1)

Presentation and discussion of interesting clinical patients. Additional clinical testing techniques and concepts. Further discussion of patient data analysis—the process of determining diagnosis, prognosis, and therapy. Further discussions in the optometric specialties.

594 Topics in Geriatric Optometry (3)

Prerequisite: Optometry 558. This course will address concerns and options in providing optometric care to a geriatric population. New techniques, research, and public policy changes will be discussed to assist students in assembling a global perspective on delivering health care to a specific population.

595 Computer Applications in Optometric Practice (2)

An introduction to microcomputers and computerized office management systems. This course is designed to provide students with training in the use of computers, office management software, and microprocessor technology in an optometric office.

596 Public Health (2)

A review of local, state, and federal organizations involved in health care, comprehensive health planning, new trends in health care delivery, and the assessment of the quality of health care delivery. The relationship of vision care to these topics is emphasized.

598 Clinical Applications of Current Topics in Visual Science (2)

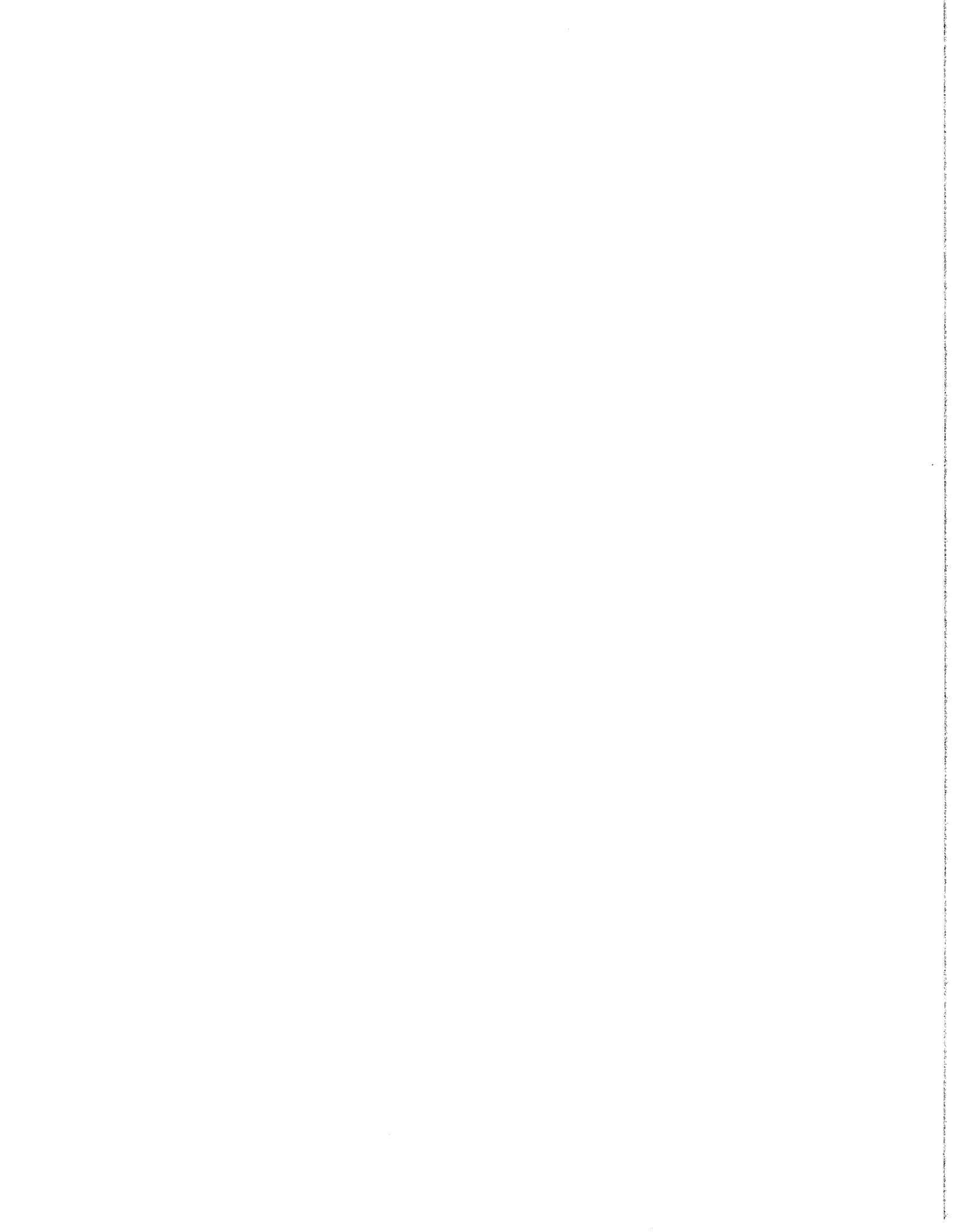
A seminar on the use of new discoveries in visual science in clinical optometry. Students will participate in selecting the topics, which will change from year to year, with the guidance of the instructor. The course will also include laboratory demonstrations of seminar topics.

Honors College



1995-96 Bulletin

Louis



Pierre Laclède Honors College

General Information

The Honors College's goal is to enrich significantly the educational experience of a select group of highly motivated and intelligent undergraduates. With this in mind, it enrolls promising students who give clear indication that they are ready to accept academic challenges and become creatively involved in the learning process together with a team of similarly committed instructors.

Given this special mission, the College has a unique structure and identity. Unlike the University's other Schools and Colleges, it has no academic departments or areas or faculty of its own, and it grants no degrees. Instead, it brings together a cross section of the University's students and teachers in a special curriculum.

Beginning with the Fall 1991 semester, the College will offer two academic formats:

- 1) A Four-Year Program open to entering freshmen and extending over a student's entire undergraduate career;
- 2) A Two-Year Program open to a select group of third-year students who are either continuing at or have transferred to the University and are engaged in work on a major.

Faculty

Honors College instructors are drawn from the various academic departments and areas in those Colleges and Schools which have an undergraduate component. What these teachers have in common is a willingness to work closely with a select, diverse group of intellectually curious and academically high-achieving students. They demonstrate this by designing courses directed toward such an audience. This faculty is an organic body. Each term it adds members to its roster. The newcomers invariably include individuals whose teaching and scholarship have been singled out for special distinction. Their talents add to the Honors College's already rich instructional pool.

Honors Scholars

The Honors College's student Scholars are highly qualified graduates from a broad range of public and private secondary schools predominantly in the St. Louis metropolitan area. They enter the College with different interests and remain part of it while simultaneously enrolling in classes and pursuing Bachelor of Arts and Bachelor of Science degrees in other academic divisions.

Many students major in liberal arts areas spanning the humanities, social sciences, and natural sciences, while others focus on preparing for careers in business or education. Among the Scholars are prospective engineers, lawyers, and doctors. Several plan to go on to graduate study or professional schools.

Curriculum

Four-Year Program

Approximately 40 percent of the 120 hours Honors Scholars earn toward graduation carries Honors credit. Most of this is associated with a sequence of Honors courses designed specifically for them, the majority of which are taken during the first two years. During this period, these students fulfill virtually all of the University's General Education Requirements, usually in innovative ways. In their junior and senior years, Honors Scholars also earn Honors credit for work done within their major fields.

First Year

Honors 10, Freshman Composition
Honors 20, Contemporary Issues and Events Symposium
Honors 30, Critical Analysis
Honors 101, Western Traditions
Honors 102, American Traditions
Honors 103, Non-Western Traditions

Second Year

Scholars take four of the following classes:

Honors 201, Inquiries in the Humanities
Honors 202, Inquiries in the Fine and Performing Arts
Honors 203, Inquiries in the Social and Behavioral Sciences
Honors 204, Inquiries in Business and Economics
Honors 205, Inquiries in Mathematics and the Natural Sciences

During the first two years, a typical Honors Scholar will also take additional course work in other areas, such as mathematics, natural science, foreign language, and major prerequisite classes to satisfy various University, Honors College, and specific degree requirements. Scholars must satisfy special mathematics and natural science requirements.

Third and Fourth Years

Honors 300, Honors Seminar
 Six hours of work in the major field taken for Honors credit.

Two-Year Program

Scholars in this program will take a combination of Honors College courses and also earn Honors credit for work done in their major fields. They must also satisfy the College's special mathematics and natural science requirements if this has not been done prior to their admission into the College.

Pierre Laclede Honors College

Third Year

Honors 20, Contemporary Issues and Events Symposium

Honors 200 (one course in this sequence)

Honors 300, Honors Seminar

Six hours of work in the major field taken for Honors credit

Fourth Year

Same as for Third Year with the exception of Honors 20.

The satisfactory/unsatisfactory option does not apply to any course work undertaken for Honors credit.

Admission and Retention

To be considered for admission into either the Four-Year or Two-Year Honors Program, a candidate must file a special Honors College application. Prospective freshmen must also submit a regular application for admission into the University. These forms and additional information concerning scholarship and stipend awards, general eligibility guidelines, the admission process, and other features associated with participation in the Honors College can be obtained by contacting the College's administrative office: 389-0096.

To remain in good standing, a student must maintain both a cumulative and Honors GPA of at least 3.00 while remaining actively engaged in Honors studies

Additional Honors College Features

Community Mentorship Program

Since students at UM-St. Louis are part of a thriving metropolis and most are likely to remain so, the Honors College seeks to instill a high degree of urban awareness in them. Based on their intellectual and career interests, Honors Scholars are matched with appropriate role models working in various sectors of the community. Some of these relationships may eventually lead to internships.

Scholarships and Stipends

Every new freshman admitted into the Honors College is awarded some form of academic scholarship. Scholars continue to receive these awards as long as they meet the criteria associated with them.

Pierre Laclède Honors College

Course Descriptions

The following courses fulfill the Humanities (H) breadth of study requirements: 30, 101, 102, 103, 201, 202. The following courses fulfill the Social Sciences (SS) breadth of study requirements: 101, 102, 103, 203, 204. The following course fulfills the Natural Sciences and Mathematics (SM) requirements: 205.

Depending on the nature of the topic, Honors 300, Advanced Honors Seminar, also fulfills specific breadth of study requirements.

10 Freshman Composition (3)

Prerequisite: Consent of the dean of the Honors College. Theory and practice of writing expository prose. Emphasis on individual tutorial. Assignments will be linked with topics discussed in Honors 101.

20 Contemporary Issues and Events Symposium (2)

Prerequisite: Consent of the dean of the Honors College. Open discussion of current and usually controversial issues relating to various disciplines. An assigned reading on the topic serves as the catalyst for an exchange of views between the class and a panel made up of students and a guest expert. Students are also required to attend and report on cultural events in the St. Louis area as part of this class.

30 Critical Analysis (30)

Prerequisite: Consent of the dean of the Honors College. An introduction to the forms and techniques of rational discussion. The emphasis is on improving skills in identifying, analyzing, evaluating, and formulating arguments. Topics include deductive and non-deductive reasoning, causal analysis, analogical arguments, logical fallacies, vagueness and ambiguity, methods of definition, and argumentative writing.

101 Western Traditions (3)

Prerequisite: Consent of the dean of the Honors College. A seminar based on the reading and discussion of a few major works of exceptional importance. The works discussed will cover all eras of Western civilization from ancient times to the present and will range over several fields of study. These works will convey diversity within Western traditions and will not represent any single perspective.

102 American Traditions (3)

Prerequisite: Consent of the dean of the Honors College. A seminar based on the reading and discussion of a few major works of exceptional importance. The works discussed will cover all eras of American history from the colonial era to the present and will range over several fields of study. These works will convey diversity within American traditions and will not represent any single perspective. This course satisfies the American history and government requirement.

103 Non-Western Traditions (3)

Prerequisite: Consent of the dean of the Honors

College. A seminar based on the reading and discussion of a few major works of exceptional importance. The works discussed may represent a single region of the non-Western world, but they will cover all eras from the ancient times to the present and will range over several fields of study. These works will not represent any single perspective. This course satisfies the non-Euro-American studies requirement.

201 Inquiries in the Humanities (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies by which various disciplines in the humanities approach their subjects and achieve their goals. This is demonstrated through the close examination of specific topics and issues as illustrated in key texts.

202 Inquiries in the Fine and Performing Arts (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies by which various disciplines in the arts approach their subjects and achieve their goals. This is demonstrated through the close examination of specific topics and issues as illustrated in key works of creative art. Students will also take part in various cultural activities (e.g., museum and gallery visits, concerts, theatrical performances).

203 Inquiries in the Social and Behavioral Sciences (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies by which various disciplines in the social and behavioral sciences approach their subjects and achieve their goals. This is demonstrated by the close examination of specific topics and issues as illustrated in central texts, case studies, etc.

204 Inquiries in Business and Economics (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to engage students in the discussion and analysis of some topics of special importance and interest in the fields of business and economics, with attention to the methodologies used to deal with these issues.

205 Inquiries in Mathematics and the Natural Sciences (3)

Prerequisite: Consent of the dean of the Honors College. A seminar intended to introduce students to some of the particular methodologies used by mathematicians and natural scientists to deal with their subjects and achieve their goals. This is demonstrated by an examination of theories and experiments.

300 Advanced Honors Seminar (3)

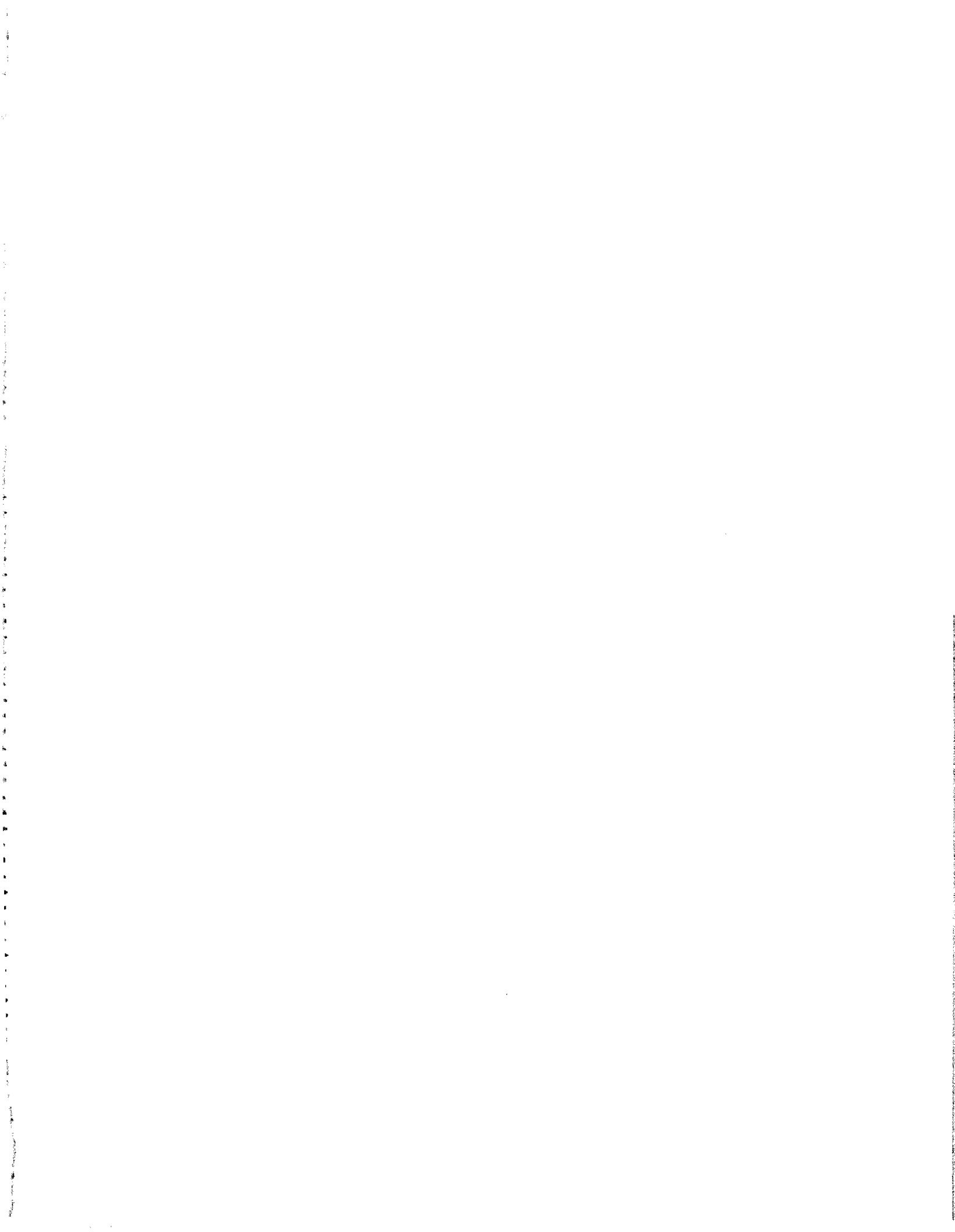
Prerequisite: Consent of the dean of the Honors College. This interdisciplinary seminar examines a specific topic from various perspectives and underscores the value of making connections between diverse areas of study. The course may be repeated for credit whenever the topic is substantially different.

Other Programs



1995-96 Bulletin

Louis



UM-St. Louis/Washington University Joint Undergraduate Engineering Program

Administration

William P. Darby, Dean
Ph.D., Carnegie Mellon University
Nancy Shields, Associate Dean
Ph.D., Southern Illinois University - Carbondale
Marie I. Cuccia-Brand, Director of Academic and
Student Services
M.A., Washington University

Faculty

James C. Ballard, Associate Professor
M.A., Washington University
Harold J. Brandon, Affiliate Professor
Sc.D., Washington University
Christopher I. Byrnes, Professor
Ph.D., University of Massachusetts
Roger D. Chamberlain, Assistant Professor
D.Sc., Washington University
John D. Corrigan, Affiliate Assistant Professor
Ph.D., University of Missouri
Richard A. Gardner, Associate Professor
Ph.D., Purdue University
Phillip L. Gould, Professor
Ph.D., Northwestern University
H. Richard Grodek, Assistant Professor
D.Sc., Washington University
Raimo J. Hakkinen, Professor
Ph.D., California Institute of Technology
I. Norman Katz, Professor
Ph.D., Massachusetts Institute of Technology
Michael I. Miller, Professor
Ph.D., The Johns Hopkins University
William J. Murphy, Affiliate Professor
D.Sc., Washington University
Michael T. Pauken, Assistant Professor
Ph.D., Georgia Institute of Technology
David A. Peters, Professor
Ph.D., Stanford University
Seymour V. Pollack, Professor
M.S., Brooklyn Polytechnic Institute
Barry E. Spielman, Professor
Ph.D., Syracuse University
S.P. Sutera, Professor,
Ph.D., California Institute of Technology
Kevin Z. Truman, Associate Professor
Ph.D., University of Missouri - Rolla
Jonathan S. Turner, Professor
Ph.D. Northwestern University
Alan C. Wheeler, Affiliate Professor
Ph.D., Stanford University

General Information

The Joint Undergraduate Engineering Program of UM-St. Louis and Washington University was approved in 1993 by the University of Missouri and the Coordinating Board for Higher Education. While a pre-engineering curriculum has been in place for more than ten years, the new program will support non-traditional, place-bound students who wish to pursue a bachelor's degree in engineering.

The program is designed to offer course work beyond the pre-engineering courses at UM-St. Louis and the area community colleges. Pre-engineering and general education courses are offered at UM-St. Louis and

upper-level engineering courses are offered on the Washington University campus. Students will be admitted to the upper division program only after they have completed an acceptable pre-engineering program. They can earn a Bachelor of Science in Civil Engineering (BSCE), a Bachelor of Science in Electrical Engineering (BSEE), or a Bachelor of Science in Mechanical Engineering (BSME).

Professional engineering degree programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). The BSEE and BSME have been designed to meet ABET accreditation requirements. However, ABET does not consider degree programs for accreditation before there are graduates. Thus, the first graduates of any new engineering degree program do not technically receive ABET-accredited degrees. Once the program is accredited by ABET, previous graduates are typically treated as if they had received accredited degrees for matters such as professional engineering licensure.

Admission

Admission to candidacy for these degrees is granted jointly by the University of Missouri-St. Louis and Washington University.

Normally admission is granted to persons who have completed the pre-engineering program with a minimum grade point average of 2.75 over all mathematics, chemistry, physics and introductory engineering courses (statics, dynamics, and engineering graphics).

Degree Requirements

Bachelor of Science in Civil Engineering Bachelor of Science in Electrical Engineering Bachelor of Science in Mechanical Engineering

A program of 137 semester hours is required for the Bachelor of Science in Civil Engineering, a program of 131 semester hours is required for the Bachelor of Science in Electrical Engineering, and a program of 137 semester hours is required for the Bachelor of Science in Mechanical Engineering, as shown below.

All majors must complete the University General Education Requirements, the Pre-Engineering Requirements and the Core Engineering Requirements. Except with special permission of the program faculty, students must first complete JEMT 217, Engineering Mathematics, and JEE 180, Introduction to Electrical Networks (Mechanical and Electrical Engineering majors only), with minimum grades of C, to be eligible to take the other upper-level engineering courses (those with course numbers starting with the letter "J"). A minimum grade of C is necessary to meet the prerequisite requirement for any course.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

Pre-Engineering Requirements

Mathematics 80, Analytic Geometry/Calculus I
Mathematics 175, Analytic Geometry/Calculus II
Mathematics 180, Analytic Geometry/Calculus III
Mathematics 202, Differential Equations
Chemistry 11, Introductory Chemistry I
Chemistry 12, Introductory Chemistry II
Physics 111, Physics: Mechanics & Heat
Physics 112, Physics: Electricity, Magnetism & Optics
Engineering 30, Engineering Graphics
Engineering 144, Statics
Engineering 145, Dynamics
English 10, Composition

Humanities Electives*
 Social Sciences Electives*

Engineering Core Requirements

JCS 36, Introduction to Computing
JEMT 217, Engineering Mathematics
JEC 210, Engineering Communications
JME 220, Thermodynamics
JME 225, Materials Science
JME 331, Control Systems I**
JEE 180, Introduction to Electrical Networks** OR
JCHE 343, Environmental Engineering Chemistry
JEE 150, Electrical Laboratory I**

**Required for electrical and mechanical engineering majors only.

Civil Engineering Major Requirements

JCE 116, Surveying
JCE 241, Structural Analysis
JCE 242, Structural Design
JCE 252, Environmental Engineering Science
JCE 274, Hydraulics and Hydrology
JCE 319, Soil Mechanics
JCE 320, Soil Exploration and Testing
JCE 374, Economic Decisions in Engineering
JCE 375, Introduction to Urban Planning
JCE 376, Site Planning and Engineering OR
JCE 382, Design of Water Quality Control Facilities
JCE 384, Probabilistic Methods in Civil Engineering Design
JCE 399, Senior Civil Engineering Seminar
JCE 372, Legal Aspects of Construction OR
JEP 361, Introduction to Environmental Law and Policy
JME 141, Mechanics of Deformable Bodies
JME 270, Fluid Mechanics
JME 280, Fluid Mechanics Laboratory
 Civil Engineering Electives (200-399)

Electrical Engineering Major Requirements

JEE 160, Digital Logic
JEE 190, Introduction to Digital and Linear Electronics
JEE 214, Electromagnetic Fields
JEE 227, Power, Energy, and Polyphase Circuits
JEE 279, Signal Analysis for Electronic Systems and Circuits
JEE 316, Electrical Energy Laboratory
JEE 355, Digital Systems Laboratory
JEE 380, Senior Design
 Electrical Engineering Electives (200-399)

Mechanical Engineering Major Requirements

JME 141, Mechanics of Deformable Bodies
JME 218, Elements of Mechanisms and
JME 219, Mechanisms Laboratory
JME 221, Energetics for Mechanical Engineers
JME 222, Machine Design and

JME 223, Machine Design Laboratory
JME 270, Fluid Mechanics
JME 280, Fluid Mechanics Laboratory
JME 271, Principles of Heat Transfer
JME 281, Heat Transfer Laboratory
JME 317, Dynamic Response of Physical Systems and
JME 318, Dynamic Response Laboratory
JME 390, Senior Design
 Mechanical Engineering Electives (200-399)

*Humanities and Social Sciences Electives

The student's choice of humanities and social sciences electives must meet both the UM-St. Louis General Education Requirements and the Humanities and Social Sciences Requirements of the Joint Undergraduate Engineering Program. Check with your adviser for details. In particular:

- A course in American history or government, or in Missouri history or government must be included.
- The cultural diversity requirement must be fulfilled.
- At least 8 credit hours must be in one department or area within humanities or social sciences; of these 8 credit hours, at least 1 credit hour must be in a course at the junior level or higher, taken at a four-year institution.
- Some courses that fulfill the humanities [H] or social sciences [SS] breadth of study requirement do not count as Humanities and Social Sciences Electives; an example would be a statistics course taught in economics or psychology. See the Office of the Joint Undergraduate Engineering Program for a listing of courses that do not count as Humanities or Social Sciences Electives in this program, or check with your adviser.

Minor in Environmental Engineering Science

A program of 18 semester hours is required to earn the Minor in Environmental Engineering Science. The minor is designed to provide formal recognition to recipients of bachelor's degrees in civil, electrical, or mechanical engineering that they have acquired the education necessary for entry-level careers as environmental professionals. They will also have a solid foundation to undertake graduate-level education in environmental engineering and science.

Enrollment in all courses in the Minor in Environmental Engineering Science is limited to students who have been admitted to candidacy for the Bachelor of Science in Civil Engineering, the Bachelor of Science in Electrical Engineering, or the Bachelor of Science in Mechanical Engineering in the UM-St. Louis/Washington University Joint Undergraduate Engineering Program. The minor may only be awarded to students who earn the Bachelor of Science in Civil Engineering, the Bachelor of Science in Electrical Engineering, or the Bachelor of Science in Mechanical Engineering in the UM-St. Louis/Washington University Joint Undergraduate Engineering Program.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

JCHE 343, Environmental Engineering Chemistry
JCE 252, Environmental Engineering Science
 (EE, ME Majors) **OR**
JCE 375, Introduction to Urban Planning (CE Majors)
JCE 308, Environmental Engineering Laboratory - Water/Soil
OR
JCE 309, Environmental Engineering Laboratory - Air
JCE 382, Design of Water Quality Control Facilities
JEP 337, Environmental Risk Assessment
JEP 361, Introduction to Environmental Law and Policy

Engineering Design and Engineering Science Requirements

The number of semester hours assigned to each engineering course in the Joint Undergraduate Engineering Program is further divided into four categories of content: engineering design, engineering science, basic science, and other, as shown below.

Each engineering student must complete a curriculum that contains at least 18 semester hours of engineering design and 36 semester hours of engineering science content, including all courses: pre-engineering requirements, engineering core requirements, major requirements, and electives. Civil, electrical, and mechanical engineering majors should consult with their advisers to select electives at the 200 and 300 level that include sufficient engineering design and engineering science content to produce the required totals. Transfer courses from other institutions do not necessarily have the same engineering science and engineering design content as their equivalents in the UM-St. Louis/Washington University Joint Undergraduate Engineering Program. Students who include transfer courses in their curricula should consult with their advisers to be sure that these requirements are met.

Course Number	Semester Hours	Engineering Design	Basic Science	Science
Engineering 10	1.0	0.0	1.0	0.0
Engineering 30	3.0	1.0	2.0	0.0
Engineering 124	3.0	0.0	3.0	0.0
Engineering 125	3.0	0.0	3.0	0.0
Engineering 126	3.0	0.0	3.0	0.0
Engineering 144	3.0	0.0	3.0	0.0
Engineering 145	3.0	0.0	3.0	0.0
Engineering 146	3.0	0.5	2.5	0.0
Engineering 147	3.0	0.0	3.0	0.0
Engineering 180	3.0	0.75	2.25	0.0
Engineering 201	3.0	0.0	3.0	0.0
Engineering 202	3.0	0.0	3.0	0.0
JCE 116	3.0	0.0	3.0	0.0
JCE 241	3.0	0.5	2.5	0.0
JCE 242	3.0	2.5	0.5	0.0
JCE 252	3.0	1.0	2.0	0.0
JCE 274	3.0	0.0	3.0	0.0
JCE 308	3.0	0.0	2.0	1.0
JCE 309	3.0	0.0	2.0	1.0
JCE 310	3.0	3.0	0.0	0.0
JCE 319	3.0	1.0	2.0	0.0
JCE 320	1.0	0.0	1.0	0.0
JCE 364	3.0	3.0	0.0	0.0
JCE 369	3.0	3.0	0.0	0.0
JCE 372*	3.0	0.0	0.0	0.0

Course Number	Semester Hours	Engineering Design	Basic Science	Science
JCE 373	3.0	0.0	2.0	0.0
JCE 374	3.0	0.75	2.25	0.0
JCE 375	3.0	1.5	1.5	0.0
JCE 376	3.0	1.5	1.5	0.0
JCE 378	3.0	1.0	2.0	0.0
JCE 382	3.0	3.0	0.0	0.0
JCE 384	3.0	1.5	1.5	0.0
JCE 399	1.0	0.0	0.0	0.0
JCHE 343	3.0	0.0	0.0	3.0
JCS 36	4.0	2.0	2.0	0.0
JEC 210*	3.0	0.0	0.0	0.0
JEE 150	3.0	1.0	2.0	0.0
JEE 160	3.0	1.5	1.5	0.0
JEE 180	3.0	0.75	2.25	0.0
JEE 190	3.0	0.75	2.25	0.0
JEE 214	3.0	1.0	2.0	0.0
JEE 227	3.0	1.2	1.8	0.0
JEE 262	3.0	1.0	2.0	0.0
JEE 279	3.0	1.0	2.0	0.0
JEE 280	3.0	1.0	2.0	0.0
JEE 290	3.0	1.0	2.0	0.0
JEE 292	3.0	1.0	2.0	0.0
JEE 310	3.0	1.0	2.0	0.0
JEE 316	3.0	1.5	1.5	0.0
JEE 332	3.0	1.0	2.0	0.0
JEE 345	3.0	1.0	2.0	0.0
JEE 355	3.0	2.2	0.8	0.0
JEE 358	3.0	1.5	1.5	0.0
JEE 360	3.0	1.2	1.8	0.0
JEE 368	3.0	1.0	2.0	0.0
JEE 380	3.0	3.0	0.0	0.0
JEMT 217	4.0	0.0	0.0	4.0
JEP 281	3.0	1.5	1.5	0.0
JEP 337	3.0	0.75	2.25	0.0
JEP 361*	3.0	0.0	0.0	0.0
JME 141	3.0	0.5	2.5	0.0
JME 218 and 219	4.0	2.0	2.0	0.0
JME 220	3.0	0.0	3.0	0.0
JME 221	3.0	0.5	3.0	0.0
JME 222 and 223	4.0	4.0	0.0	0.0
JME 225	4.0	0.0	4.0	0.0
JME 261	3.0	0.0	3.0	0.0
JME 270	3.0	0.0	3.0	0.0
JME 271	3.0	0.0	3.0	0.0
JME 280	1.0	0.0	1.0	0.0
JME 281	1.0	0.0	1.0	0.0
JME 317 and 318	4.0	1.0	3.0	0.0
JME 331	3.0	1.0	2.0	0.0
JME 390	4.0	4.0	0.0	0.0

*Other, 3.0

Fees

Students register on the UM-St. Louis campus and pay UM-St. Louis fees plus an engineering fee for both Pre-engineering and Engineering courses. Limits on enrollments are determined by the availability of resources.

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.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

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 twenty-first century. Besides tackling challenging technical problems, roughly two-thirds of all engineers will have some level of management responsibility within ten years of receiving their bachelor's degrees. Many practicing engineers will eventually continue their education by pursuing graduate degrees on a part-time basis. Typical areas of graduate study include all advanced technical and scientific fields and management.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

Course Descriptions

Prerequisites may be waived by consent of the Joint Program faculty.

Engineering

10 Introduction to Engineering (1)

Course consists of a series of lectures on engineering, fields of study within engineering, the engineering profession, types of work activities, and professional registration. Guest lecturers will participate.

30 Engineering Graphics (3)

Prerequisites: Mathematics 30 and 35 or equivalent (may be taken concurrently). The course covers the principles of scales, geometric construction, orthographics, auxiliaries, sections, dimension, tolerancing, descriptive geometry, vector graphics, developments and intersections. Examples and problems are solved manually and with computer graphics.

124 Circuits I (3)

Prerequisites: Physics 112 and Mathematics 180 (may be taken concurrently). Circuit elements, signals, Kirchhoff's laws, network theorems, and mesh and nodal analysis. Transient and complete response of RL, RC, LRC circuits will also be studied.

125 Circuits II (3)

Prerequisites: Engineering 124, Physics 112; Mathematics 202 (may be taken concurrently). Analysis of steady state AC circuits, phasor notation, polyphase circuits, complex frequency and frequency response, magnetically coupled circuits, and two-part networks.

126 Digital Circuits (3)

Prerequisites: Engineering 124; Mathematics 202 (may be taken concurrently). Course consists of a study of circuits having application in digital equipment such as electronic calculators and computers. The engineering concepts of circuits for logical design, digital arithmetic, and digital systems are introduced.

144 Statics (3)

Prerequisites: Math 175 and Physics 111. Fundamentals of statics; static equilibrium and introduction to elements of mechanics of elastic materials.

145 Dynamics (3)

Prerequisite: Engineering 144. Basic fundamentals of particle and rigid-body dynamics; energy and momentum methods.

146 Strength of Materials (3)

Prerequisite: Engineering 144. Course consists of a study of force systems applied to elastic members. The concepts of stress, strain, and deflection of bodies in tension, shear, torsion, and bending are introduced.

147 Thermodynamics (3)

Prerequisite: Engineering 144. Course consists of a study of heat and energy, effects of heat energy on matter, and heat transfer including the laws of thermodynamics. The concepts of conduction, convection, and radiation for engineering systems are introduced.

180 Introduction to Electrical Networks (3)

(Same as JEE 180.) Prerequisite: Physics 112 and Mathematics 202 (may be taken concurrently). Elements, sources, and interconnects. Ohm's and Kirchhoff's laws, superposition and Thevenin's theorem; the resistive circuit, transient analysis, sinusoidal analysis, and frequency response.

201 Elementary Electronics (3)

(Same as Physics 201.) Prerequisite: Physics 112. Primarily a laboratory study of characteristics of standard circuit elements, amplifier circuits, power supplies, operational amplifiers, digital and switching circuits, servo systems, shielding and noise problems, transducers and oscilloscopes. Six hours of laboratory per week.

202 Elementary Electronics II (3)

(Same as Physics 202.) Prerequisite: Engineering 201. Continuation of Engineering 201. Six hours of laboratory per week.

Chemical Engineering

JCHE 343 Environmental Engineering Chemistry (3)

Prerequisite: Chemistry 12. Introduction to the engineering aspects of air, water, soil, and geosphere chemistry. Toxicology and hazardous wastes. Pollution sources, dynamic, and ultimate fates. Sampling, control strategies, and regulations.

Civil Engineering

JCE 116 Surveying (3)

Horizontal and vertical control surveys, including traverses, triangulation, trilateration, and leveling; basic adjustments of observations; geodetic data; coordinate systems. Basic route surveying, including horizontal and vertical curves.

JCE 241 Structural Analysis (3)

Prerequisite: JME 141. A review of the calculation of reactions, shear, and bending moment. Definition, construction and use of influence lines. Deflections for statically determinate structures using the virtual work method. Analysis of statically indeterminate trusses using the method of consistent deformations. Analysis of continuous beams and planar frames using the consistent deformation, slope-deflection and moment distribution methods. The influence of span on strength, stability, and economy of structures. An introduction to structural analysis software.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

JCE 242 Structural Design (3)

Prerequisites: JME 225, JCE 241. Fundamentals of structural design in steel, reinforced concrete, and timber. Familiarization with the sources of various design codes and practice in interpreting them. Computer graphics applications.

JCE 252 Environmental Engineering Science (3)

Prerequisite: JME 270 (may be taken concurrently), or permission of instructor. Application of the basic principles of chemistry, microbiology, and fluid mechanics to the analysis of environmental problems, especially those involving control of water and land contamination. Properties of municipal and industrial waste water, solid waste, and hazardous waste. Estimation of assimilative capacity and other characteristics of receiving waters. Introduction to unit processes and unit operations used in the treatment of municipal and industrial waste water. Design of processes and facilities used for treating drinking water, waste water, and sludge disposal. Waste minimization and recycling in both industrial and municipal settings.

JCE 274 Hydraulics and Hydrology (3)

Prerequisite: JME 270 (may be taken concurrently). The concepts and theory of hydraulics and hydrology are discussed through lectures and practical engineering applications. Open channel flow, hydrograph analysis, watershed hydrology, frequency concepts, hydraulic design, and sedimentation are addressed.

JCE 308 Environmental Engineering Laboratory - Water/Soil (3)

Prerequisite: JCHE 343. Laboratory experiments to illustrate the application of engineering fundamentals to environmental systems. Characterization and control of water/soil pollutants. Introduction to relevant analytical instrumentation and laboratory techniques. Laboratory work supported with theoretical analysis and modeling as appropriate.

JCE 309 Environmental Engineering Laboratory - Air (3)

Prerequisite: JCHE 343. Laboratory Experiments to illustrate the application of engineering fundamentals to environmental systems. Characterization and control of air pollutants. Introduction to relevant analytical instrumentation and laboratory techniques. Laboratory work supported with theoretical analysis and modeling as appropriate.

JCE 310 Design of Timber Structures (3)

Prerequisites: JCE 241, JCE 242. Study of basic physical and mechanical properties of wood and design considerations. Design and behavior of wood beams, columns, beam-columns, connectors, and fasteners. Introduction to plywood and glued laminates members. Analysis and design of structural diaphragms and shear walls.

JCE 319 Soil Mechanics (3)

Prerequisites: JME 141, JME 270. Basic geology as it relates to index and classification properties of soil.

Exploration, sampling, and testing techniques. Soil classification systems. Clay minerals and soil structures. Compaction and stabilization. Capillary, shrinkage, swelling, and frost action in soils. Effective stress, permeability, seepage, and flow nets. Consolidation and consolidation settlements. Stresses in soil. Time rate of consolidation. Mohr's circle, stress path, and failure theories. Shearing strength of sand and clays.

JCE 320 Soil Exploration and Testing (1)

Prerequisite: JCE 319 (may be taken concurrently). Soil exploration; in-situ testing, laboratory testing of soil; processing of test data using a microcomputer; statistical analysis of test data; use of test results in the decision-making process.

JCE 364 Foundations (3)

Prerequisites: JCE 242, JCE 319, JCE 320. Principal problems in design and construction of foundations for bridges and buildings. Bearing capacity of deep and shallow foundations; pressure on retaining walls and slope stability; modern developments in piling, cofferdams, open caissons, pneumatic caissons.

JCE 369 Construction Management Project (3)

Prerequisites: JCE 373, JEP 281. The course entails the study of principles and steps involved in the development of a project from design through bidding and construction with emphasis on preconstruction planning and construction operations. The students will be required to submit a report on project budget, bidding strategy and construction schedule. Lecture topics will be supplemented by a resource pool of consultants on estimating, scheduling and contracting who will provide advice and guidance to the students.

JCE 372 Legal Aspects of Construction (3)

Prerequisite: Junior standing. A survey of the legal problems of the construction manager. Including but not limited to, liability in the areas of contracts, agency, torts, assurance, bad judgment and oversight.

JCE 373 Construction Operations and Management (3)

Prerequisites: Junior standing. The construction industry, its development, components, and organization. Contracting methods. Applications and limitations. Selection of equipment using production analysis and economics. Field engineering, including form design, shoring, embankment design. Purchasing and change orders. Safety and claims.

JCE 374 Economic Decisions in Engineering (3)

Prerequisite: Junior standing. Principles of economics involved in engineering decisions. Decisions between alternatives based on the efficient allocation of resources. Topics include the time element in economics, analytical techniques for economy studies, and taxes.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

JCE 375 Introduction to Urban Planning (3)

Prerequisite: Senior standing. A focus on the fundamental factors and techniques that the civil engineer must consider: population, economic base, land use, urban design, regional analysis, fiscal analysis, zoning, and public facilities analysis. Synthesis of these techniques into a major student project, typically involving groups of three to six students. Each project is assigned by the instructor and usually involves a real-life situation or problem that requires original data collection. In-class presentation, discussion, and critique of each group project.

JCE 376 Site Planning and Engineering (3)

Prerequisite: Senior standing. A focus on the legal, engineering, and economic aspects of planning and design of facilities at a site-specific level. Concepts of legal and economic feasibility of site design are developed in conjunction with the study of civil engineering activities involved in dealing with urban design alternatives for residential, commercial, industrial, and recreational land uses. Case studies and review of current legislation affecting site planning and engineering are undertaken, culminating in a major design project.

JCE 378 Knowledge-Based Expert Systems in Civil Engineering (3)

Prerequisite: JCS 36 or equivalent. Topics relating to the development of expert systems discussed with emphasis on application in civil and structural engineering. Subjects include knowledge engineering, frame- and rule-based expert systems, use of expert shells and tools, prototyping, and reasoning with uncertainty. Case studies and computer exercises supplement lectures. Students are expected to develop a prototype expert system.

JCE 382 Design of Water Quality Control Facilities (3)

Prerequisite: JCE 252. Application of environmental engineering principles to design of water and wastewater treatment facilities. Critical review of process design issues associated with physical, chemical, and biological treatment processes. Definition of problems and objectives, evaluation of alternatives, and use of these concepts in process design. Design-oriented class/group project.

JCE 384 Probabilistic Methods in Civil Engineering Design (3)

Prerequisite: JCE 242 (may be taken concurrently). Probability concepts. Analytical models of random phenomena. Functions of random variables. Estimating parameters from data. Empirical determination of distribution models. Regression and correlation analysis. Monte Carlo simulation. Detailed examples of the application of probabilistic methods to structural, transportation, hydrologic, and environmental system design.

JCE 399 Senior Civil Engineering Seminar (1)

Prerequisite: Senior standing. Students will research assigned topics of importance to graduates entering

the Civil Engineering profession and prepare oral presentations and a written report. Student presentations will be augmented by lectures from practicing professionals. Topics include professional registration, early career development, graduate study, effective presentations, construction quality, and case histories of civil engineering projects.

Computer Science

JCS 36 Introduction to Computing (4)

Workshop course (lectures and supervised laboratories) covering the fundamental organization and operating principles of digital computers and the systematic development of well-structured programs. Students start with the simple von Neumann simulator to learn about internal data representation and program execution at the machine level. With this as background, they undertake a variety of programming projects, using both the Pascal and FORTRAN languages, to acquire experience in modular construction and static and dynamic data structures, graphic display, and database handling. There is continuing emphasis on sound design and documentation practices.

Electrical Engineering

JEE 150 Electrical Laboratory I (3)

Prerequisite: JEE 180. Lectures and laboratory exercises related to sophomore topics in introductory networks and basic electronics.

JEE 160 Digital Computers I: Organization and Logical Design (3)

Prerequisite: JCS 36. Digital computers and digital information-processing system; Boolean algebra, principles and methodology of logical design; machine language programming; register transfer logic; microprocessor hardware, software, and interfacing; fundamentals of digital circuits and systems; computer organization and control; memory systems; arithmetic unit design.

JEE 180 Introduction to Electrical Networks (3)

Prerequisite: Physics 112 and Mathematics 202 (may be taken concurrently). Elements, sources, and interconnects. Ohm's and Kirchhoff's laws, superposition and Thevenin's theorem; the resistive circuit, transient analysis, sinusoidal analysis, and frequency response.

JEE 190 Introduction to Digital and Linear Electronics (3)

Prerequisite: JEE 180. Introduction to contemporary electronic devices and their circuit applications. Terminal characteristics of active semiconductor devices. 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.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

JEE 214 Engineering Electromagnetics I: Fundamentals (3)

Prerequisite: Mathematics 202. Electromagnetic theory as applied to electrical engineering: vector calculus; electrostatics and magnetostatics; Maxwell's equations, including Poynting's theorem and boundary conditions; uniform plane-wave propagation; transmission lines - TEM modes, including treatment of general, lossless line, and pulse propagation; introduction to guided waves; introduction to radiation and scattering concepts.

JEE 227 Power, Energy, and Polyphase Circuits (3)

Prerequisite: JEE 180. Fundamental concepts of power and energy; electrical measurements; physical and electrical arrangement of electrical power systems; polyphase circuit theory and calculations; principle elements of electrical systems such as transformers, rotating machines, control, and protective devices, their description and characteristics; elements of industrial power system design.

JEE 262 Digital Computers II: Architecture (3)

Prerequisite: JEE 160 or equivalent. Study of interaction and design philosophy of hardware and software for digital computer systems: Machine organization, data structures, I/O consideration. Comparison of minicomputer architectures.

JEE 279 Signal Analysis for Electronic Systems and Circuits (3)

Prerequisites: JEE 180 and JEMT 217. Processing of signals in electronic systems and circuits; time-domain methods using impulse response and convolution; frequency-domain methods using Fourier, Laplace, and Z-transforms and frequency-response functions; discrete- and continuous-time models; principles of sampling and modulation. Each student presents both written and oral reports on a subject related to the course material.

JEE 280 Network Analysis (3)

Prerequisite: JEE 279. Theoretical and practical aspects of electrical networks. Loop and nodal analysis of multiport networks. Transfer functions, admittance and impedance functions, and matrices. Magnitude and phase relations. Butterworth, Chebyshev, and other useful network response functions. Network theorems. Computer-aided design. Synthesis of passive (LC, RC, RLC) networks and of active (RC) networks.

JEE 290 Principles of Electronic Devices (3)

Prerequisite: Physics 112. Introduction to the solid-state physics of electronic materials and devices, including semiconductors, metals, insulators, diodes and transistors. Crystal growth technology and fundamental properties of crystals. Electronic properties and band structure of electronic materials, and electron transport in semiconductor materials. Fabrication of pn junction diodes, metal-semiconductor junctions, and transistors and integrated-circuit chips. Fundamental electrical properties of rectifying diodes and light-emitting diodes, bipolar transistors and field-effect transistors.

Device physics of diodes and transistors, large-signal electrical behavior and high-frequency properties.

JEE 292 Electronic Devices and Circuits (3)

Prerequisite: JEE 190. Introduction to semiconductor electronic devices: transistors and diodes. Device electrical DC and high-frequency characteristics. Bipolar transistors, field-effect transistors, and MOS transistors for analog electronics applications. Transistors fabrication as discrete devices and as integrated-circuit chips. Large-signal analysis of transistor amplifiers: voltage gain, distortion, input resistance and output resistance. Analysis of multitransistor amplifiers: Darlington, Cascode, and coupled-pair configurations. Half-circuit concepts, differential-mode gain, common-mode gain, and differential-to-single-ended conversion. Transistor current sources, active loads, and power-amplifier stages. Applications to operational amplifiers and feedback circuits.

JEE 310 Engineering Electromagnetics II: Applications (3)

Prerequisite: JEE 214. Study of important applications of electromagnetic theory. Solution of electrostatic and magnetostatic problems involving Laplace and Poisson's equations subject to boundary conditions. Maxwell's equations, including boundary conditions for dielectrics and conductors, reflection and transmission characteristics with effects due to losses. Study of guided waves in rectangular and optical wave guides, including effects of dispersion. S-parameters and transmission networks, including S-matrix properties, relation to impedance, reflection coefficient, VSWR, and Smith chart. Study of antennas, including exposure to terminology and thinwire antennas.

JEE 316 Electrical Energy Laboratory (3)

Prerequisite: JEE 150 (may be taken concurrently). Experimental studies of principles important in modern electrical energy systems. Topics: power measurement, transformers, power supplies, batteries, static frequency converters, thermoelectric heating and cooling, photovoltaics, electrical lighting, induction machines, commutator machines.

JEE 332 Control Systems II (3)

Prerequisite: JEE 331. The control of physical systems with a digital computer, microprocessor, or special-purpose digital hardware is becoming very common. Course continues JEE 331 to develop models and mathematical tools needed to analyze and design these digital, feedback-control systems. Linear, discrete dynamic systems. The Z-transform. Discrete equivalents to continuous transfer functions. Sampled-data control systems. Digital control systems design using transfer and state-space methods. Systems comprised of digital and continuous subsystems. Quantization effects. System identification. Multivariable and optimum control.

JEE 345 Digital Signal Processing (3)

Prerequisite: JEE 279. Introduction to analysis and synthesis of linear, discrete-time systems with applica-

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

tions in sampled-data and digital signal processing. Time-domain analysis using discrete convolution. Frequency-domain analysis using the Fourier and Z-transforms. Discrete Fourier transforms and fast Fourier transforms. Design of digital filters. Finite-register effects. Hardware architecture for processing implementations.

JEE 355 Digital Systems Laboratory (3)

Prerequisites: JEE 160 and JEE 190. Procedures for reliable digital design, both combinational and sequential; understanding manufacturers' specifications; use of special test equipment; characteristics of common SSI, MSI, and LSI devices; assembling, testing, and simulating design; construction procedures; maintaining signal integrity. Several single-period laboratory exercises, several design projects, and application of a microprocessor in digital design. Microprocessor programs are written in assembly language on a host computer and down loaded to the laboratory station for debugging. One lecture and one laboratory period a week.

JEE 358 Computer-Aided Design of Electronic Systems (3)

Prerequisites: JEE 190 and 279. Introduction to computer-aided techniques in the solution of network and electronic design problems, including filters; analysis of linear and nonlinear circuits; methods for numerical integration, evaluation of the Fourier integral; numerical methods for solving differential equations, automated methods for design; sparse matrix techniques. Use of problem-oriented languages such as SPICE. Methods for the analysis and design of digital circuits and systems.

JEE 360 Digital Computers: Switching Theory (3)

Prerequisite: JEE 160 or equivalent. Advanced topics in switching theory as employed in the analysis and design of various information- and material-processing systems. Combinational techniques; minimization, logic elements, bilateral devices, multiple output networks, symmetrical and iterative functions, threshold logic, state identification and fault detection, hazards, and reliable design. Sequential techniques: synchronous circuits, state tables, machine minimization, state assignment, asynchronous circuits, finite state machines.

JEE 368 Applied Optics (3)

Prerequisite: JEE 214 or equivalent. Topics relevant to the engineering and physics of conventional as well as experimental optical systems and applications explored. Items addressed include geometrical optics, Fourier optics such as diffraction and holography, polarization and optical birefringence such as liquid crystals, and nonlinear optical phenomena and devices.

JEE 380 Senior Design Project (3)

Prerequisite: senior standing. Working in groups of three, students address design tasks assigned by faculty. Each group completes three design projects in a semester. Projects are chosen to emphasize the

design process, with the designer choosing one of several paths to a possible result. Collaboration with industry and all divisions of the University is encouraged.

Engineering and Policy

JEP 281 Topics in Engineering Management (3)

Prerequisite: Junior standing. Techniques relating to managing engineering professionals and engineering activities are introduced and discussed. The engineer's transition into project and project team management. Role of engineering and technology in major corporations. Engineering managerial functions, including production and use of financial information in planning, scheduling, and assessing engineering projects. Motivation of individual and group behavior among technical professionals. Macroeconomic factors influencing technical decision-making and engineering project management. Additional topics will vary from year to year, but will typically include government relations, regulation, compensation, ethics, production, operations, the quality function, and technological innovation. Extensive use of case study analysis, including written reports and in-class presentations by students.

JEP 337 Environmental Risk Assessment (3)

Prerequisite: JCE 374. Definition of risk and uncertainty. Common probability models and their application to environmental risk assessment. Principles of epidemiology and toxicology. Bioassays. Exposure characterization and measurement. Qualitative and quantitative evaluation of human and animal studies. Tests of significance. Estimation of response rates. Dose-response models and parameter estimation. Low-dose extrapolation. Prediction error. Estimating individual risk and aggregate risk. Risk assessment methods in regulatory decision making; standard setting.

JEP 361 Introduction to Environmental Law and Policy (3)

Prerequisite: Junior standing. Survey of the most prominent federal laws governing environmental compliance and pollution control. Examines laws applicable to environmental impact statements, air pollution, water pollution, and hazardous waste. Addresses policy concerning the relative merits of using technological capabilities as compared to health risks in setting environmental standards. Discusses the need for environmental regulation to protect societal resources.

Engineering Communications

JEC 210 Engineering Communications (3)

Prerequisite: English 10 or equivalent and junior standing. Persistent concerns of grammar and style. Analysis and discussion of clear sentence and paragraph structure and of organization in complete technical documents. Guidelines for effective layout and graphics. Examples and exercises stressing

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

audience analysis, graphic aids, editing, and readability. Videotaped work in oral presentation of technical projects. Writing assignments include descriptions of mechanisms, process instructions, basic proposals, letters and memos, and a long formal report.

Engineering Mathematics

JEMT 217 Engineering Mathematics (4)

Prerequisite: Mathematics 202 or equivalent. The Laplace transform and applications; series solutions of differential equations, Bessel's equation, Legendre's equation, special functions; matrices, eigenvalues, and eigenfunctions; vector analysis and applications; boundary value problems and spectral representation; Fourier series and Fourier integrals; solution of partial differential equations of mathematical physics.

Mechanical Engineering

JME 141 Mechanics of Deformable Bodies (3)

Prerequisites: Mathematics 175 and Engineering 144. Normal and shear stresses and strains. Stress-strain diagrams. Hooke's law and elastic energy. Thermal stresses. Stresses in beams, columns, torsional members, and pressure vessels. Elastic deflection of beams and shafts. Statically indeterminate structures. Mohr's circle of stress. Stability concepts.

JME 218 Elements of Mechanisms (2)

Prerequisites: Engineering 145 and JCS 36; Mathematics 202 and JME 141 (may be taken concurrently); JME 218 and JME 219 must be taken during the same semester. Kinematic and dynamic principles of simple and complex planar mechanisms. Gear theory and design of gear trains.

JME 219 Mechanisms Laboratory (2)

Prerequisite: JME 218 and JME 219 must be taken during the same semester. Laboratory problems focusing on materials covered in JME 218 and emphasizing utilization of numerical methods of solution and computer programs as design tools.

JME 220 Thermodynamics (3)

Prerequisites: Mathematics 175, Chemistry 11, Physics 111. Classical thermodynamics, thermodynamic properties, work and heat, first and second laws. Entropy, irreversibility, availability. Application to engineering systems.

JME 221 Energetics for Mechanical Engineers (3)

Prerequisite: JME 220. Thermodynamic cycle analysis: vapor power, internal combustion, gas turbine, refrigeration. Maxwell relations and generalized property relationships for non ideal gases. Mixtures of ideal gases, psychrometrics, ideal solutions. Combustion processes, first and second law applications to reacting systems. Chemical equilibrium. Compressible flow in nozzles and diffusers.

JME 222 Introduction to Machine Design (2)

Prerequisites: JCS 36, JME 141, Mathematics 202; JME 222 and JME 223 must be taken during the same semester. Design of machines and machine components using advanced concepts and analytical tools. Overview and definition of feasibility, synthesis, and analysis as used in design. Determination of loads, material properties, factors of safety and their statistical distributions. Analysis of stress and performance. Failure criteria: yielding, fracture, fatigue, stress-corrosion cracking, creep, etc. Formulation of solutions and optimization of design. Applications to design of shafts, springs, fasteners, belts, chains, bearings, gears, and screws. Use of computer techniques to determine velocities, accelerations, and forces in mechanisms and in stress analysis of components.

JME 223 Machine Design Laboratory (2)

Prerequisite: JME 222 and JME 223 must be taken during the same semester. Laboratory problems focusing on materials covered in JME 222.

JME 225 Materials Science (4)

Prerequisite: Chemistry 11. Introduces the chemistry and physics of engineering materials. Emphasis on atomic and molecular interpretation of physical and chemical properties, the relationships between physical and chemical properties, and performance of an engineering material.

JME 261 Physical Metallurgy (3)

Prerequisite: JME 225. Study of structure, constitution, properties of metals and alloys. Theory of alloying and heat treatment. Laboratory applications of atomic and crystal structure and thermodynamics to metallurgy.

JME 270 Fluid Mechanics (3)

Prerequisites: Mathematics 202 and Engineering 145. Fundamental concepts of fluids as continua. Viscosity. Flow field: velocity, vorticity, streamlines. Fluid statics: hydrostatic forces manometers. Conservation of mass and momentum. Incompressible inviscid flow. Dimensional analysis and similitude. Flow in pipes and ducts. Flow measurement. Boundary-layer concepts. Flow in open channels.

JME 271 Principles of Heat Transfer (3)

Prerequisites: JME 220, JME 270, and Mathematics 202. Introductory treatment of the principles of heat transfer by conduction, convection, or radiation. Mathematical analysis of steady and unsteady conduction along with numerical methods. Analytical and semiempirical methods of forced and natural convection systems. heat exchangers: LMTD and e-NTU analysis. Boiling and condensation heat transfer. Radiation between black-body and real surfaces. Radiation network analysis.

JME 280 Fluid Mechanics Laboratory (1)

Prerequisite: JME 270. Physical laboratory exercises focusing on fluid properties and flow phenomena covered in JME 270. Calibration and use of a variety of equipment; acquisition, processing, and analysis of data by manual as well as automated methods.

UM-St. Louis/Washington University Joint Undergraduate Engineering Program

JME 281 Heat Transfer Laboratory (1)

Prerequisite: JME 280 and JME 271. Physical laboratory exercises, including some numerical simulations and computational exercises, focusing on heat-transfer phenomena covered in JME 271. Calibration and use of variety of laboratory instrumentation; acquisition, processing, and analysis of data by manual as well as automated methods; training in formal report writing.

JME 316 Advanced Strength and Introductory Elasticity (3)

Prerequisite: JME 141. Introduction to elasticity; indicial notation, stress and strain, material laws. Plane stress and strain problems and illustrations. Torsion of prismatic bars. Energy principles: virtual work, potential energy and complementary energy theorems, reciprocal theorems. Introduction to plates and shells.

JME 317 Dynamic Response of Physical Systems (2)

Prerequisites: Engineering 145 and JEMT 217; JME 317 and JME 318 must be taken during the same semester. Free and forced vibration of mechanical systems with lumped inertia, springs, and dampers. Methods of Laplace transform, complex harmonic balance, and Fourier series. Electrical analogs. Introduction to Lagrange's equations of motion and matrix formulations. Transient response of continuous systems by partial differential equations, by Rayleigh methods, and by lumped parameters.

JME 318 Dynamic Response Laboratory (2)

Prerequisite: JME 317 and JME 318 must be taken during the same semester. Laboratory problems focusing on materials covered in JME 317.

JME 324 Manufacturing Processes (3)

Prerequisite: senior standing. Introduction to the processes used in making basic components for machines and structures. Emphasis is on the underlying scientific principles for such manufacturing processes as casting, forging, extrusion and machining.

JME 325 Materials Selection in Engineering Design (3)

Prerequisite: senior standing. Analysis of the scientific bases of material behavior in the light of research contributions of the last 20 years. Development of a rational approach to the selection of materials to meet a wide range of design requirements for conventional and advanced applications. Although emphasis will be placed on mechanical properties, other properties of interest in design will be discussed, e.g., acoustical, optical and thermal.

JME 326 Experimental Stress Analysis (3)

Prerequisite: JME 222. Basic methods of experimental determination of stresses in structures and machines. Mechanical, optical, and electrical gauges. Use of brittle lacquer, photoelasticity, moiré methods, and auxiliary techniques for plane and three-dimensional problems.

JME 331 Control Systems I (3)

Prerequisite: Mathematics 202. 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 347 Mechanical Metallurgy (3)

Prerequisite: JME 261. Elastic and plastic properties of metals used in static and dynamic design. Various testing methods correlated with metal properties, statistical analysis of testing methods, fundamentals of mechanical working processes.

JME 372 Fluid Mechanics II (3)

Prerequisites: JME 220 and 270. Mechanics and thermodynamics of incompressible and compressible flows: varying-area adiabatic flow, standing normal and oblique shock waves, Prandtl-Meyer flow, Fanno flow, Rayleigh flow, turbulent flow in ducts and boundary layers.

JME 376 The Engineering Properties of Materials (3)

Prerequisite: junior standing. A detailed look at the mechanical, chemical, and surface properties of materials. Topics include elastic properties; plastic deformation; viscoelastic behavior; chemical resistance; corrosion resistance; and the electromagnetic properties of metal, plastic, ceramic, and composite systems.

JME 381 Air-Conditioning Systems and Equipment I (3)

Prerequisite: senior standing. Survey of air conditioning systems. Moist air properties and conditioning processes. Adiabatic saturation. Psychrometric chart. Environmental indices. Indoor air quality. Heat balances in building structures. Solar radiation. Space heating and cooling loads.

JME 382 Air-Conditioning Systems and Equipment II (3)

Prerequisite: JME 381. Fluid flow, pumps, and piping design. Room air distribution. Fans and building air distribution. Mass transfer and measurement of humidity. Direct control of heat and mass transfer. Heat exchangers. Refrigeration systems. Absorption refrigeration.

JME 390 Senior Design Project (4)

Prerequisite: senior standing. Working in small groups, students address design tasks assigned by faculty. Each group completes three design projects in a semester. Projects are chosen to emphasize the design process, with the designer choosing one of several paths to a possible result. Collaboration with industry is encouraged.

UM-Rolla Engineering Education Center

Faculty

James H. Hahn, P.E., Associate Professor; Interim Director
Ph.D., University of Missouri-Rolla

C. Ben Basye, P.E., Professor Emeritus
Ph.D., Iowa State University

Victor Birman, Associate Professor
Ph.D., Israel Institute of Technology

Anton deS. Brasunas, P.E., Professor Emeritus
Sc.D., Massachusetts Institute of Technology

Chaman L. Sabharwal, Professor
Ph.D., University of Illinois-Urbana

Daniel C. St. Clair, Professor
Ph.D., University of Missouri-Rolla

David A. Shaller, Assistant Professor
J.D., Cleveland State University

General Information

The UM-Rolla Engineering Education Center was started in 1964 at the request of St. Louis industry and with the encouragement of local universities. It offers Master of Science degrees in the following areas:

Aerospace Engineering
Civil Engineering
Computer Science
Electrical Engineering
Engineering Management
Engineering Mechanics
Environmental Engineering
Mechanical Engineering

Admission to candidacy for these degrees is granted by the University of Missouri-Rolla. Normally admission is granted to persons holding B.S. degrees in engineering from ABET-accredited schools (this does not apply to Computer Science) and whose undergraduate GPA places them in the upper third of their graduating class.

An appropriately selected program of 30 credit hours is required for the Master of Science degree with thesis, and a 33 credit hour program is required for the nonthesis Master of Science degree.

Course Listings

Course listings for the various semesters may be obtained by writing or phoning the Engineering Education Center. Course descriptions are listed in the UMR graduate catalog.

The Engineering Education Center also provides information to St. Louis area residents about UMR programs in Rolla. The Center can assist area pre-engineering students with transfer to the Rolla campus and with entry into the Cooperative Training Programs that exist between UMR and numerous U.S. industries. This co-op program allows engineering students to gain valuable industrial experience during their school years and to be partially or totally self-supporting.

Fees

Fees for Engineering Center programs are different from those on the UM-Rolla or UM-St. Louis campus. For information about the Engineering evening program on the UM-St. Louis campus, write to Engineering Education Center, University of Missouri, 8001 Natural Bridge Road, St. Louis, Missouri 63121, or phone (314) 516-5431.

ROTC

Students interested in Reserve Officer Training Corps (ROTC) programs may enroll in either the Army ROTC program at UM-St. Louis or the Air Force ROTC program sponsored at UM-St. Louis through Parks College of St. Louis University. These programs provide undergraduate and graduate students with the opportunity to combine academic study with a military officer training program.

For further information concerning the Army ROTC program, contact the ROTC department at Washington University, telephone 935-5546. For information on the Air Force ROTC program, contact the Air Force ROTC Department at Parks College of St. Louis University, telephone (800) 851-3048, Ext. 311. In Illinois, call (800) 851-7878, Ext. 311.

Army ROTC

The purpose of the Military Science Department is to develop young men and women into junior commissioned officers for positions of responsibility in the Army Reserve, Army National Guard, or Active Army.

Benefits

Army ROTC offers UM-St. Louis students:

1) A challenging, important, well-paid job at graduation in one of the many professional fields that the modern Army has to offer. Army officers serve in such fields as aviation, procurement, personnel management, intelligence, military police, communications, engineering, transportation management, finance, combat arms, hospital administration, nursing, and research and development. Starting salary with allowances of an active duty Second Lieutenant is approximately \$23,300. Within four years he/she should be promoted to Captain with a salary with allowances of nearly \$38,600. Reserve officers attend one weekend per month and an annual two-week training camp.

2) College financing. All students receive \$150/month during the final two years of college (up to \$3,000), plus another \$750 for attendance at summer camp. Also, advanced course students may join the Reserves as an officer trainee and receive Sergeants' pay (currently \$147/month) while in college.

3) Fully enrolled students may compete for the many ROTC scholarships available every year. These scholarships pay for tuition, fees, and books, and also provide \$150/month.

4) Option of two careers. Upon graduation and commissioning as officers in the U.S. Army, students may fulfill their obligation by serving on active duty or be guaranteed reserve duty if requested. This is an important option for those students who want to pursue a civilian career but would like to serve as reserve officers. Officers who serve on active duty receive 30 days paid vacation every year, free medical and dental care, travel, and the opportunity to pursue advanced degrees with educational assistance from the Army on a fully funded or partially funded basis.

The Program

College students who complete the Reserve Officer Training Corps program will earn commissions as Second Lieutenants in the U.S. Army. The ROTC program may be completed in several different ways as outlined below.

1) Four-Year Program. The Military Science program is traditionally offered as a four-year program. It is best to start as a freshman, but special arrangements can be made for those who start as sophomores. The first two years of Military Science are voluntary without service obligation, and are designed to give the student a perspective of their leadership ability and what the Army can offer them. The student who decides to continue in ROTC and pursue a commission signs an agreement with the Department of the Army to accept a commission upon completion of the last two years of Military Science. In return the Army agrees to provide a subsistence allowance (up to \$3,000) and to provide all necessary uniforms and Military Science books.

2) Two-Year Program. The two-year program is designed to provide greater flexibility in meeting the needs of students desiring commissions in the U.S. Army. UM-St. Louis students who did not participate in the four-year program and junior college transfer students are eligible for enrollment. Basic prerequisites for entering the two-year program are:

A) Students must be in good academic standing (minimum 2.0 GPA) and pass an Army medical examination; and

B) The student must have two academic years of study remaining (undergraduate, graduate, or combination). The student will attend a six-week summer camp to catch up with the students in the four-year program. Attendance at the basic camp does not obligate the student in any way and is only intended to give the student a look at Army life and opportunities. The student will be paid approximately \$750 for attendance at basic camp.

Veterans

Veterans of any of the Armed Forces may qualify for advanced placement and should contact the Military Science Department for details.

Scholarships

The Army Reserve Officer Training Corps currently has 12,000 scholarships in effect, which pay toward tuition, fees, and books, and provide \$150/month for the academic year. These scholarships cover periods of four years, three years, and two years. UM-St. Louis freshmen and sophomores should apply in January for the two- and three-year scholarships. Special consideration for scholarships is given to students in engineering, nursing, business, and any physical science. Scholarship students may incur a four-year active duty obligation; however, they may request reserve duty to serve with the National Guard or Army Reserve.

ROTC

Qualifications

All students who desire to enter the Army Reserve Officer Training Corps must be United States citizens, in good physical condition, and have high moral character. Students must be at least 17 years old to enroll and not over 30 when they receive their commission. Additional qualifications to be admitted into the advanced course include an academic average of C or better, and passing an Army medical examination.

Academics

UM-St. Louis Army Reserve Officers' Training Corps academics consists of two parts:

- 1) earning a degree in the student's chosen academic subject, and
- 2) completing 18 credit hours (four-year program) or 12 credit hours (two-year program) of the Military Science curriculum. The courses in Military Science are college-level academic courses which receive full academic credit toward the student's elective degree requirements in the Business School and the School of Education. The curriculum consists of classroom instruction and a leadership laboratory in which students receive leadership experience.

Leadership Laboratory

Leadership Laboratory is required of all students enrolled in Military Science courses. Classes are two hours every week and are held on Thursday afternoon from 4 p.m. to 6 p.m., unless otherwise designated. In addition, students attend one Field Training Exercise (FTX) each semester. Leadership Laboratory develops individual military skills and leadership ability through participation in drill and ceremonies, survival training, mountaineering, field-training exercises, and exposure to progressively greater responsibilities within the Cadet Corps organization.

Graduate Study

The Army realizes the importance of a graduate degree for its personnel. There are several programs available to assist ROTC graduates in obtaining an advanced degree. The Army sends selected Second Lieutenants immediately to graduate school (with full pay and allowances) to pursue advanced degrees in engineering and the physical sciences. Other officers may postpone active duty for two years to continue graduate study. Students who are accepted into medical school may take up to four years to complete their studies. There are numerous opportunities for an officer to complete a master's degree in service and receive financial assistance from the Army.

Special Training

Selected volunteers may attend one of several special schools during the summer: the Airborne Course at Fort Benning, GA; Air Assault School at Fort Campbell, KY; or the Northern Warfare School in Alaska. Successful course completion earns the coveted badge (such as the jump wings or air assault wings) associated with

each school. Special Cadet Troop Leadership Training is available on a limited basis. Students participating in the program live and work with an active Army unit during part of one summer.

Cadet Activities

Army ROTC students may participate in many extra-curricular activities during the year. Social activities include the Army/Air Force Military Ball, a fall canoe trip down the Meramec River, picnics, and informal parties. Army ROTC students also support various campus and community service activities. Interested students also participate in the Raider Club, Drill Team, Color Guard, and Marksmanship Team.

The mission of the Army Reserve Officer Training Corps is to commission the future officer leadership of the United States Army. While there is much to be learned in the classroom, at leadership laboratories and during summer camp, there are still other opportunities for self-enrichment and personal satisfaction to be found through active participation in the various extracurricular activities sponsored by ROTC and through interaction and association with fellow cadets and cadre. Cadre instructors are active Army officers and noncommissioned officers working full time as instructors and mentors at the University. To inquire about ROTC and apply for a scholarship call the Military Science Department at Washington University; 935-5546 or 263-6780.

Air Force ROTC

The objective of the Air Force Reserve Officer Training Corps (AFROTC) is to qualify students for appointment as active duty second lieutenants in the United States Air Force. However, any student may enroll in the freshman/sophomore-level aerospace studies courses, and students may also enroll in the junior/senior-level courses with permission of the professor of Aerospace Studies.

UM-St. Louis offers the two- and four-year AFROTC programs through an agreement with Parks College of St. Louis University.

The four-year program is tailored for students with three or more years of undergraduate studies remaining. Student with junior standing or above may apply for entry into the two-year program. Entry into the two-year program is competitive and is based on standardized test scores, academic major, grade-point average, physical examination, personal interview with the professor of Aerospace Studies, and successful completion of a summer field training session at an Air Force base. Applicants must be full-time students and must remain in good academic standing.

ROTC

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:

Pass a medical exam at a military medical facility.

- Obtain a favorable evaluation on an Armed Forces personal history security investigation.
- Flying applicants must complete commissioning requirements before age 26-1/2, and nonflying applicants must complete commissioning requirements by age 30. However, the age limit for nonflying applicants may be extended to age 35 for outstanding individuals.
- Be of good character (as determined by a favorable record with law enforcement authorities).
- Successfully complete all AFROTC course requirements.
- Complete at least a baccalaureate degree.

Air Force ROTC textbooks are loaned to all AFROTC students without charge. Students in the POC will receive a monthly subsistence allowance of \$100 per month for a maximum of 20 months, an Air Force uniform, in excess of \$700 for the summer field training course, and a travel allowance to and from the training location.

In addition to the AFROTC courses offered for academic credit, the Aerospace Studies Department sponsors the Arnold Air Society and Angel Flight. Arnold Air Society is a national honorary service organization, and membership is open to anyone interested in bringing to the local community a better understanding of the Air Force mission and its leaders.

Field Training AFROTC Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Students in the four-year program participate in four weeks of field training. Major areas of study include junior officer training, aircrew/aircraft orientation, career orientation, survival training, base functions and Air Force environment, and physical training.

Students applying for entry into the two-year program must successfully complete six weeks of Field Training prior to enrollment in the Professional Officer Course. The major areas of study included in the six-week Field Training Program are essentially the same as those conducted at four-week field training, plus the academic curriculum of the General Military Course including Leadership Laboratory. POC cadets are eligible for a \$1000 per semester Federal AFROTC Scholarship.

Leadership Laboratory Leadership Laboratory is taken once per week throughout the student's enrollment in AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies, drill and ceremonies, career opportunities in the Air Force, and the life and work of an Air Force junior officer. It also includes field trips to Air Force installations throughout the United States.

Other Training Volunteers may attend various special cadet training programs such as light aircraft training, parachute jump training, and advance cadet training. Students participating in the latter, work with an Air Force unit during part of the summer.

Air Force Scholarships The Air Force offers four-, three-, and two-year scholarships to qualified students. These scholarships pay tuition, certain fees, and textbook cost. Scholarship recipients receive \$100 per month subsistence allowance.

For further information on the Air Force ROTC program at UM-St. Louis, call (618) 337-7575, ext 328, or 800-851-3048, ext 328. In Illinois call 800-851-7878, ext 328, or at Southern Illinois University at Edwardsville (SIUE), call (618) 692-3180.

ROTC

Course Descriptions

Military Science

101 Introduction to Military Science (1)

Provides an overview of the organization and role of the U.S. Army and the Army ROTC. Initiates an appreciation of the military profession and its customs, traditions, and courtesies. Introduces the student to the responsibilities and obligations of an Army officer. Develops leadership and managerial abilities. Provides fundamentals of military history, customs and traditions, and training of the U.S. Army.

102 Introduction to Military Operations (1)

Prerequisite: Military Science 101, equivalent, or consent of Professor of Military Science (PMS). Provides an introduction to theoretical and practical aspects of supervision. Emphasizes the need for proper motivation and cooperative attitudes as they pertain to both individual and group interaction. Continues development of leadership and managerial abilities and provides fundamentals of common military training and tasks that are essential at the tactical level of military operations. Tasks performed as an individual are emphasized.

201 Small Unit Leadership (2)

Prerequisite: Military Science 101, Military Science 102, equivalent, or consent of Professor of Military Science (PMS). Provides basic background in the skills necessary for military map reading and land navigation to include: (1) military grid reference system; and (2) map scale, distance, elevation, and relief. Continues development of leadership and managerial skills. Provides fundamentals of orienteering. Introduces the student to basic communication skills and develops basic awareness on how these skills affect other people.

202 Small Unit Leadership II (2)

Prerequisite: Military Science 201, equivalent, or consent of Professor of Military Science (PMS). Develops principles and techniques of applied leadership through discussion of some of the processes and procedures used by the leader to accomplish organizational objectives to include: (1) decision making; (2) communication; and (3) counseling. Provides practical experience in leadership of small units in the military environment. Examines principles and techniques of small-unit military tactical patrolling operations with emphasis on development of pre-planning and execution concepts. Applies concepts practiced through in-class map exercises and field training practicum. Provides an overview of the Army ROTC advanced course. Continues development of leadership and managerial abilities. Provides fundamentals of marksmanship.

301 Military Leadership and Management I (3)

Prerequisite: Military Science 101 through Military Science 202 or equivalent and selection by Professor of Military Science (PMS). Covers the functional roles of the military leader and basic principles of management with emphasis on problem analysis and decision making, span of control, delegation of authority and responsibility, planning and coordinating. Provides fundamentals of effective methods of instruction and includes practical exercises where each student plans, prepares, and presents part of instruction. Continues to develop the student's ability to communicate orally and in writing. Provides additional insight into areas of Army officer specialization. Stresses practical application in the development of leadership abilities in that students are placed in positions of leadership within the ROTC student structure.

302 Advanced Leadership and Management II (3)

Prerequisite: Military Science 301. Provides a review of basic military land navigation and map-reading techniques. Examines more advanced principles and techniques of small unit military offensive and defensive tactical operations with concentrated study of such factors as command and control, communications, weapons systems, and military geography. Continues emphasis on practical application exercises to develop students' leadership abilities. Solidifies student's preparation for attendance at the ROTC advanced camp during the upcoming summer.

401 Military Administration (3)

Prerequisites: Military Science 301 and Military Science 302. Explores the practical aspects of military law. Examines the organization, responsibilities, and management of the military unit staff. Provides a working knowledge of proper staffing procedures. Continues development of leadership and managerial abilities through placement of students into key leadership positions within the ROTC student organizational structure. Students plan and conduct the majority of leadership practicum for all ROTC students.

402 Seminar in Leadership and Ethics (3)

Prerequisite: Military Science 401. Examines military professional ethics and the ideal American values as a basis for military values. Examines techniques of resource management with particular emphasis on the military environment. Teaches proper application of tactical military doctrine at the company/team level and the planning necessary between elements of the team. Reviews the various roles of the newly commissioned Army officer. Students continue to be assigned positions of leadership within the ROTC student organizational structure.

These courses are taught at Parks College, St. Louis University, Washington University, or University of Missouri-St. Louis. Students should check the *Schedule of Courses* each semester for locations.

AFROTC

AEROSPACE STUDIES

The Aerospace Studies program (AFROTC) is divided into two parts; The General Military Course (GMC), the freshman/sophomore level curriculum, and the Professional Officer Course (POC), the junior/senior level curriculum. The GMC covers two main themes: The Air Force Today and The Air Force Way. The courses of the POC emphasize the professional development of the future Air Force Officer. The curriculum covers Air Force Leadership and Management and Preparation for Active Duty. Field trips to Air Force bases supplement classroom instructions and familiarizes the cadet with Air Force operations and organizations.

Leadership laboratory is taken two hours per week throughout the student's enrollment in the AFROTC. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. The first two years of the Leadership Laboratory includes a study of Air Force customs and courtesies, drill and ceremonies, issuing military commands, instructing, directing and evaluating the preceding skills, studying the environment of an Air Force officer and learning about areas of opportunity available to commissioned officers. The last two years of LLab consist of activities classified as advanced leadership experiences. They involve the planning and controlling of military activities of the cadet corps, the preparation and presentation of briefings and other oral and written communications; and the providing of interviews, guidance, and information which will increase the understanding, motivation, and performance of other cadets.

AFROTC cadets must also successfully complete supplemental courses to enhance their utility and performance as commissioned officers. These include university courses in English composition and mathematical reasoning. Specific courses are designated by the Professor of Aerospace Studies.

Field Training (FT): Cadets in the four-year program participate in four weeks of field training. Cadets in the two or three year programs (exception for prior AF service) must attend the six week FT session, which is identical to the four week program plus 90 hours of GMC curriculum. Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Major areas of study include: Air Force Orientation, Officer Training, aircrew/aircraft orientation, survival training, base functions and physical training.

Students applying for entry into the two or three year program must successfully complete six weeks of field training prior to enrollment in the Professional Officer Course. The major areas of study included in the six week Field Training program are essentially the same

as those conducted at four-week Field Training, plus the academic curriculum of the General Military Course including Leadership Laboratory. No direct academic credit is awarded for Field Training.

Federal scholarships are available for AFROTC cadets--any academic major may apply. Applications are to be submitted by detachment personnel to Head Quarters Reserve Officers Training Corps (AFROTC), Maxwell Air Force Base, AL.

Participation in AFROTC is not required to take Aerospace courses.

Lower Division (General Military)

Aerospace Studies courses (AS-101 through AS-202) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average, but credit hours for these courses will not be included in the total hours for graduation.

AS-101/102 The Air Force Today (2)

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

AS-201/202 The Air Force Way (2)

Survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class. Classroom activity, two hours per week; Leadership Laboratory two hours per week, each semester.

Upper Division(Professional Officer) Courses

Aerospace Studies courses AS-301 through AS-402 are advanced courses designed to improve communication and management skills required of Air Force officers. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AFROTC

AS-301/302 Air Force Leadership and Management (3)

The study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory leadership laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week, each semester.

AS-401/402 Preparation For Active Duty (3)

Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week, each semester.

Field Training

Field Training provides leadership and officership training in a military environment, which demands conformity to high physical and moral standards. Within this structured environment, cadets are screened for officer potential as measured against field training standards. Motivation and professional development is achieved through various programs such as flight orientation, marksmanship, and survival training. Students in the four-year program participate in four weeks of field training. Field training is offered during the summer months at selected bases throughout the United States, usually between a student's sophomore and junior years. Major areas of study include: Air Force Orientation, Officer Training, aircrew/ aircraft orientation, survival training, base functions and physical training.

Programs at Other Universities

Reciprocal Programs

Unless otherwise stated, students interested in one of the following programs should contact the admissions office at the school where the program is offered.

Nebraska

The University of Nebraska in Lincoln offers programs for a limited number of Missouri residents in architecture, community and regional planning, construction management, and actuarial science where students may pursue bachelor's degrees.

Illinois

A cooperative agreement exists between Southern Illinois University-Edwardsville and UM-St. Louis which permits students of one institution to take courses at the other institution as a regular part of their academic program. For further information consult the registrar's office or the dean's office.

Kansas

The following programs are offered to Missouri residents at various Kansas universities:

Humanities University of Kansas, Lawrence, with an M.A. in Oriental languages and literature, and a B.A. and M.A. in Slavic languages and literature (not Russian). A Ph.D. in Slavic languages and literature is also offered.

Grain milling and technology Kansas State University, Manhattan, with a B.S., M.S., or Ph.D. in bakery science and management, feed science and management, or milling science and management.

Horticulture Kansas State University, Manhattan, with a B.S. in horticulture therapy.

Joint Programs in Law and Dentistry

The University of Missouri-St. Louis and the University of Missouri-Kansas City provide joint programs in law and dentistry for academically able students who are committed to public service. These special programs are designed to serve students seeking a career in public-service law or students who wish to practice dentistry in medically underserved communities.

UM-Kansas City will hold a reserved seat in its School of Law or in the School of Dentistry for qualified UM-St. Louis entering freshmen and make it available to them after they complete the required undergraduate studies at UM-St. Louis.

Study Abroad Programs

Through agreements of academic cooperation with international universities, special opportunities for study abroad are available to qualified UM-St. Louis students. Agreements are in force with universities in Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Mexico, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland; and the United Kingdom. Also, other exchange programs may accept UM-St. Louis students.

Fees UM-St. Louis students may pay standard UM-St. Louis fees during their term of study abroad. Transportation and living expenses abroad are the responsibility of the student, but in general, no further academic fees are required by the foreign university. Terms of study may not coincide with the regular academic calendar of the University of Missouri-St. Louis.

Application The UM-St. Louis student must be recommended by the Center for International Studies. The student's qualifications typically include upper-division standing with a high grade point average, recommendations by faculty members, approval of the proposed course of studies via the departmental/divisional advisory process, and familiarity with or willingness to learn the foreign language of instruction/study. If selected, students must furnish evidence of good health, emotional maturity, and stability.

Expressions of interest are welcome throughout the year. Since the nomination process involves international mails, generally, formal applications should be submitted not later than the beginning of class work of the Winter term for the following Fall term.

For further information contact the Study Abroad Office, Center for International Studies, 349 SSB, 516-6497.

Universities Participating in Student and Faculty Exchange

Australia

Flinders University, Adelaide
University of Southern Queensland, Toowoomba

Austria

Karl-Franzens-University Graz, Graz

Belgium

University of Antwerp, Antwerp

Canada

Carleton University, Ottawa
McMaster University, Hamilton
Technical University of Nova Scotia, Halifax
University of Montreal, Montreal
University of Waterloo, Waterloo
York University, North York

Programs at Other Universities

Denmark

Aarhus University, Aarhus
Finland
University of Helsinki, Helsinki

France

Ecole Supérieure de Commerce, Saint Etienne
University Jean Moulin, Lyon
University Louis Pasteur, Strasbourg
University of Human Sciences, Strasbourg
University Robert Schuman, Strasbourg
University of Sciences and Technologies of Lille,
Villeneuve d'Ascq

Germany

Ruhr University Bochum, Bochum
University of Frankfurt, Frankfurt
University of Leipzig, Leipzig
University of Stuttgart, Stuttgart

Greece

Aristotle University of Thessaloniki, Thessaloniki

Hungary

Kossuth Lajos University, Debrecen

Iceland

University of Reykjavik, Reykjavik

Ireland

University College Cork, Cork
University College Galway, Galway

Italy

Academy of Fine Arts of Bologna, Bologna
University of Bologna, Bologna
University of Parma, Parma

Japan

Obirin University, Tokyo
Semester in Japan Program, Nakajo
Toyo University, Tokyo

Mexico

El Colegio de Jalisco, Guadalajara
ITESM-Guaymas Campus, Guaymas
University Autonoma of Baja California, Mexicali
University Autonoma of San Luis Potosi, San Luis Potosi
University Nacional Autonoma de Mexico, Mexico City

Netherlands

Hogeschool Holland Business School, Amsterdam
Utrecht School for the Arts, Utrecht
University of Utrecht, Utrecht

Norway

University of Bergen, Bergen

Portugal

University of Coimbra, Coimbra

Spain

Universidad Autónoma, Madrid
Complutense University, Madrid

Sweden

Lund University, Lund

Switzerland

University of Basel, Basel

United Kingdom

University of East Anglia, Norwich
University of Hull, Hull

Other Programs

The Center for International Studies cosponsors the Missouri-London Program, a semester abroad program offered during the Fall, Winter, and Summer Semesters, the Business Internship in London Program, a semester abroad program offered during the Winter and Summer Semesters, and has information on more than 2000 Study Abroad programs offered by other universities. For further information, contact the Study Abroad Office.

CBHE Articulation Agreement

The Coordinating Board of Higher Education Articulation Agreement outlines statewide undergraduate general education requirements which satisfy the general requirements for students transferring into UM-St. Louis and students transferring out of UM-St. Louis to other public higher education universities in the state.

- 1) Communication skills in the English language, three (3) courses—at least two (2) of which must be written; one (1) oral communication course is recommended;
- 2) Humanities, three (3) courses from at least two (2) disciplines;
- 3) Physical and/or biological sciences, two (2) courses including at least one (1) with its associated laboratory component;
- 4) Mathematics, one (1) course—college algebra, an alternative course that includes a significant component of college algebra, or a course which has college algebra as a prerequisite; and
- 5) Social and behavioral sciences, three (3) courses from at least two (2) disciplines.

All institutions shall recognize the validity of other institutions' general education requirements when the minimum requirements as specified above are met. However, some foreign language and/or upper division general education courses or upper division graduation requirements may be required by the receiving institution whenever all native students are obligated to satisfy the same requirements.

Baccalaureate professional schools or programs may specify exceptions to the credit hour and course distribution minimums established in this section by promulgating these exceptions and by establishing specialized articulation programs related to associate of science degrees as detailed in that section of these transfer guidelines. In these instances, transferring students are not exempted from satisfying the specialized lower division requirements of departments or divisions of an institution into which a student wishes to transfer.

Video Instructional Program

The Video Instructional Program offers flexible, self-paced learning for students who are far from campus or whose schedules make it difficult to attend regular classes. Video lessons for various courses are available for viewing over cable television stations. Tapes are available in UM-St. Louis libraries.

St. Louis Area Cable Stations

Crown Media I, II, and III (formerly Cencom I, II, and III), Continental Cable, American, and United Video in St. Louis County; STL Cable and City Cable in the city will air courses over the Higher Education Channel (HEC).

Course Listings

The following courses from the UM-St. Louis curriculum are offered:

History

100 Topics In History: Science and Culture in the Western Tradition (3)

This course deals with history, philosophy, religion, art, architecture, mathematics, technology, and other topics to explain the unique contributions of science to Western civilization. The BBC programs, "The Day the Universe Changed," have received international acclaim. The series' host is James Burke, Professor Emeritus of History, UCLA. Discussion programs are hosted by Benjamin Dunlap with content consultants expanding on the concepts and issues presented by Burke. Programs identify key figures and describe their contributions to the development of Western Civilization; social and cultural conditions during periods; prevalent ideas, attitudes, and views; related factors that contributed to the development of new knowledge, discoveries, and technologies; and significant turning points in the development of science and knowledge in Western culture. History is not offered over cable. Tapes are available in the library.

Philosophy

210 Significant Figures in Philosophy (3)

This course offers a survey of the development of philosophy through a study of seven major thinkers: Plato, Aristotle, Aquinas, Descartes, Locke, Kant and Nietzsche. Each author is considered not only a product of his own time and culture, but also the creator of ideas of enduring relevance. Topics include Plato's theory of forms and his delineation of an ideal state, Aristotle's formulation of an all-embracing scientific and metaphysical view, Aquinas' adaptation of Aristotle to a Christian framework, Descartes' inauguration of a new approach to philosophy, Locke's attempt to base all our ideas in experience, Kant's attempt to redeem philosophy from the extremes of dogmatism and skepticism, and Nietzsche's radical rejection of the values that had prevailed until his time.

290 Philosophical Issues in Other Disciplines: Humanities in the Arts (3)

An examination of selected philosophical issues in film, drama, music, literature, painting, sculpture, and architecture. The historical development of each of these art forms is presented, and then excerpts and examples are provided, together with analysis and interpretation. For each art form, there is a program on critical evaluation in which the series host and established artists and critics apply their particular areas of expertise. The series also includes an introduction, which explains the approach taken by the academic designers, and an epilogue that retrospectively examines the knowledge acquired.

Political Science

11 Introduction to American Politics (3)

Introduction to basic concepts of government and politics with special reference to the United States, but including comparative material from other systems. Course fulfills the state requirement.

Psychology

245 Abnormal Psychology (3)

Ten of the 13 programs feature specific disorders, including anxiety disorders, personality disorders, the schizophrenias, sexual disorders, substance abuse, and the disorders of childhood. The first program concerns assessment, while the last two provide information on treatment and prevention. The telecourse introduces the major theoretical models for explaining and treating disorders—psychodynamic, behavioral, cognitive, and biological. This approach serves the introductory abnormal- psychology student, while allowing individual faculty latitude to underscore the approach to which they subscribe.

Education

308 Foundations of Adult Basic Education (3)

This course considers problems which are characteristic of the adult learner, needs and interests, physiological factors affecting the adult learner, and interpersonal relations and communications. The video demonstrations, produced by Maryland Public Television, focus on modern teaching practices in adult basic education. The course will focus on topics in teaching basic reading, word recognition, comprehension, writing from the point of view of the student's needs, selection and use of materials, learning contracts, learning styles, and other methods to individualize instruction. Methods are presented to develop basic and intermediate mathematics skills, recruit and retain students, and manage corporate classrooms.

Video Instructional Program

340 Selection and Utilization of Educational Media (3)

This telecourse trains teachers in the selection and use of media for learning. It includes all forms of media, with on-location segments showing the proper use for each. Topics include an introduction to media, discussion of learning and communications, learning management, instructional environments, and trends in instructional technology. Graphic design, graphics utilization, and lettering are covered. Specific instructional media covered include overhead transparencies, display devices, photography, audio, planning and producing multimedia programs, film and video, motion picture, TV, models, demonstrations, game simulations, computers, print, copyright, and community resources.

341 Teaching Science in the Elementary School (3)

Prerequisites: Completion of science requirements in general education, ED FND 111, and consent of instructor. In this course, students will apply the methods, materials, and strategies for teaching science in the elementary classroom. Science is presented as a dynamic process developing knowledge about observable phenomena. Piaget's work on the cognitive growth of learners is discussed and related to the need to teach science as a "hands-on" subject. In addition to a review of the psychological and philosophical bases for teaching science, methods for teaching inquiry science are explored—such as questioning techniques.

Appendix

Contents

Code of Student Conduct	431
Student Disciplinary Matters	432
Appeals Procedures	435
Policy on Student Organizations	435
University of Missouri Plan for Equal Opportunity and Affirmative Action	437
Other Procedures or Regulations	440
Index	446

Code of Student Conduct

200.010 Standard of Conduct Amended March 20, 1981;
August 3, 1990; May 19, 1994

A student enrolling in the University assumes an obligation to behave in a manner compatible with the University's function as an educational institution.

A. JURISDICTION OF THE UNIVERSITY OF MISSOURI generally shall be limited to conduct which occurs on the University of Missouri premises or at University-sponsored or University-supervised functions. However, nothing restrains the administration of the University of Missouri from taking appropriate action, including, but not limited to, the imposition of sanctions under Section 200.020(C), against students for conduct on or off University premises in order to protect the physical safety of students, faculty, staff and visitors.

B. CONDUCT for which students are subject to sanctions falls into the following categories:

1. Academic dishonesty, such as cheating, plagiarism or sabotage. The Board of Curators recognizes that academic honesty is essential for the intellectual life of the University. Faculty members have a special obligation to expect high standards of academic honesty in all student work. Students have a special obligation to adhere to such standards. In all cases of academic dishonesty, the instructor shall make an academic judgment about the student's grade on that work and in that course. The instructor shall report the alleged academic dishonesty to the Primary Administrative Officer.

a. The term **cheating** includes but is not limited to (i) use of any unauthorized assistance in taking quizzes, tests, or examinations; (ii) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (iii) acquisition or possession without permission of tests, or other academic material belonging to a member of the University faculty or staff; or (iv) knowingly providing any unauthorized assistance to another student on quizzes, tests, or examinations.

b. The term **plagiarism** includes, but is not limited to: (i) use by paraphrase or direct quotation of the published or unpublished work of another person without fully and properly crediting the author with footnotes, citations or bibliographical reference; (ii) unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials; or (iii) unacknowledged use of original work/material that has been produced through collaboration with others without release in writing from collaborators.

c. The term **sabotage** includes, but is not limited to, the unauthorized interference with, modification of, or destruction of the work or intellectual property of another member of the University community.

2. Forgery, alteration, or misuse of University documents, records or identification, or knowingly furnishing false information to the University.

3. Obstruction or disruption of teaching, research, administration, conduct proceedings, or other University activities, including its public service functions on or off campus.

4. Physical abuse or other conduct which threatens or endangers the health or safety of any person.

5. Attempted or actual theft of, damage to, or possession without permission of property of the University or of a member of the University community or of a campus visitor.

6. Unauthorized possession, duplication or use of keys to any University facilities or unauthorized entry to or use of University facilities.

7. Violation of University policies, rules or regulation or of campus regulations including, but not limited to, those governing residence in University-provided housing, or the use of University facilities, or the time, place and manner of public expression.

8. Manufacture, use, possession, sale or 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 (c) that procedures shall be definite and determinable within the University of Missouri.

B. DEFINITIONS. As used in these rules, the following definitions shall apply:

1. Primary Administrative Officers. As used in these procedures, "Primary Administrative Officer" is charged with the responsibility for the administration of these student conduct procedures and refers to the person or persons on each campus designated.

2. Student Panel. A panel of students appointed by the Chancellor, from which shall be selected by the Chair, upon the request of a student charged before the Student Conduct Committee, not more than three students to serve with the Student Conduct Committee.

3. Student. A person having once been admitted to the University who has not completed a course of study and who intends to or does continue a course of study in or through one of the campuses of the University. For the purpose of these rules, student status continues whether or not the University's academic programs are in session.

4. Student Conduct Committee. As used in these procedures, "Student Conduct Committee," hereinafter referred to as the Committee, is that body on each campus which is authorized to conduct hearings and to make dispositions under these procedures or a Hearing Panel of such body as herein defined.

C. SANCTIONS.

1. The following sanctions may be imposed upon any student found to have violated the Student Conduct Code; more than one of the sanctions may be imposed for any single violation:

a. Warning. A notice in writing to the student that the student is violating or has violated institutional regulations.

b. Probation. A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe sanctions if the student is found to be violating any institutional regulation(s) during the probationary period.

c. Loss of Privileges. Denial of specified privileges for a designated period of time.

d. Restitution. Compensation for loss, damage or injury to the University or University property. This may take the form of appropriate service and/or monetary or material replacement.

e. Discretionary Sanctions. Work assignments, service to the University or other related discretionary assignments.

f. Residence Hall Suspension. Separation of the student from the residence halls for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.

g. Residence Hall Expulsion. Permanent separation of the student from the residence halls.

h. University Dismissal. An involuntary separation of the student from the institution for misconduct apart from academic requirements. It does not imply or state a minimum separation time.

i. University Suspension. Separation of the student from the University for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.

j. University Expulsion. Permanent separation of the student from the University.

2. Temporary Suspension. The Chancellor or designee may at any time temporarily suspend or deny readmission to a student from the University pending formal procedures when the Chancellor or designee finds and believes from available information that the presence of a student on campus would seriously disrupt the University or constitute a danger to the health, safety or welfare of members of the University community. The appropriate procedure to determine the future status of the student will be initiated within seven calendar days.

D. RECORDS RETENTION. Student conduct records shall be maintained for five years after University action is completed.

E. POLICY AND PROCEDURES.

1. Primary Administrative Officers. The Chief Student Affairs Administrator on each campus or designee is the primary officer except in cases of academic dishonesty, where the Chief Academic Administrator responsible for administering the Student Conduct Code or designee is the primary administrative officer.

2. Preliminary Procedures. The Primary Administrative Officer shall investigate any reported student misconduct before initiating formal conduct procedures and give the student the opportunity to present a personal version of the incident or occurrence. The Primary Administrative Officer may discuss with any student such 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 Committee members, which may include a maximum of two students, present at the hearing, including a designated chair. A Hearing Panel has the authority of the whole Committee in those cases assigned to it. The Chair of the Committee or of a Hearing Panel shall count as one member of the Committee or Hearing Panel and have the same rights as other members.

(3) Each Chancellor shall appoint a panel of students, to be known as the Student Panel. Upon written request of a

Student Disciplinary Matters

student charged before the Committee, made at least seventy-two (72) hours prior to the hearing, the Chair of the Committee or Hearing Panel shall appoint from the Student Panel not more than three students to sit with the Committee or two students to sit with the Hearing Panel (as stated in 4.a.(2)) for that particular case. When students from the Student Panel serve at the request of a student charged, they shall have the same rights as other members of the Committee or Hearing Panel.

b. General Statement of Procedures. A student charged with a breach of the Student Conduct Code is entitled to a written notice and a formal hearing unless the matter is disposed of under the rules for informal disposition. Student conduct proceedings are not to be construed as judicial trials and need not wait for legal action before proceeding; but care shall be taken to comply as fully as possible with the spirit and intent of the procedural safeguards set forth herein. The Office of the General Counsel shall be legal adviser to the Committee and the Primary Administrative Officer.

c. Notice. The Primary Administrative Officer shall initiate student conduct proceedings by arranging with the Chair to call a meeting of the Committee and by giving written notice by certified mail or personal delivery to the student charged with misconduct. The notice shall set forth the date, time and place of the alleged violation and the date, time and place of the hearing before the Committee. Notice by certified mail may be addressed to the last address currently on record with the University. Failure by the student to have a current correct local address on record with the University shall not be construed to invalidate such notice. The notice shall be given at least seven (7) consecutive days prior to the hearing, unless a shorter time be fixed by the Chair for good cause. Any request for continuance shall be made in writing to the Chair, who shall have the authority to continue the hearing if the request is timely and made for good cause. The Chair shall notify the Primary Administrative Officer and the student of the new date for the hearing. If the student fails to appear at the scheduled time, the Committee may hear and determine the matter.

5. Right to Petition for Review (other than University expulsion, University dismissal or University suspension).

a. In all cases where the sanction imposed by the Committee is other than University expulsion, University dismissal, or University suspension, the Primary Administrative Officer or the Student may petition the Chancellor or designee in writing for a review of the decision within five (5) calendar days after written notification. A copy of the Petition for Review must also be served upon the nonappealing party within such time. The Petition for Review shall state the grounds or reasons for review, and the nonappealing party may answer the petition within five (5) calendar days.

b. The Chancellor or designee may grant or refuse the right of review. In all cases where the Petition for Review is refused, the action of the Committee shall be final. If the Chancellor or designee reviews the decision, the action of the Chancellor shall be final unless it is to remand the matter for further proceedings.

6. Right of Appeal (University expulsion, University dismissal or University suspension only).

a. When a student is expelled, dismissed or suspended from the University by the Committee, the Primary Administrative Officer or the student may appeal such decision to the Chancellor or designee by filing written notice of appeal with the Chancellor within ten (10) calendar days after notification of the decision of the Committee. A copy of the Notice of Appeal will contemporaneously be given by the student to the Primary Administrative Officer or by the Primary Administrative Officer to the student. The appealing party may file a written memorandum for consideration by the Chancellor with the Notice of Appeal, and the Chancellor may request a reply

to such memorandum by the appropriate party.

b. The Chancellor or designee shall review the record of the case and the appeal documents and may affirm, reverse or remand the case for further proceedings and shall notify each party in writing of the decision on the appeal. The action of the Chancellor shall be final unless it is to remand the matter for further proceedings.

7. Status During Appeal. In cases of suspension, dismissal or expulsion where a Notice of Appeal is filed within the required time, a student may petition the Chancellor in writing for permission to attend classes pending final determination of appeal. The Chancellor may permit a student to continue in school under such conditions as may be designated pending completion of appellate procedures, provided such continuance will not seriously disrupt the University or constitute a danger to the health, safety or welfare of members of the University community. In such event, however, any final sanctions imposed shall be effective from the date of the action of the Committee.

8. Student Honor System. Forums under the student honor systems established for investigating facts, holding hearings, and recommending and imposing sanctions are authorized when the student honor code or other regulations containing well defined jurisdictional statements and satisfying the requirements of Article V of the Bylaws of the Board of Curators have been reduced to writing and have been approved by the Chancellor and the Board of Curators and notice thereof in writing has been furnished to students subject thereto. Procedures shall satisfy the requirements of the Board of Curators' Bylaws, Article V, and shall contain procedures herein before stated insofar as appropriate and adaptable to the particular situation and shall be approved by the Chancellor and the General Counsel. Students subject to student honor systems shall have the rights of appeal as set forth in Section 200.020 E.6 and 7.

F. HEARING PROCEDURES.

1. Conduct of Hearing. The Chair shall preside at the hearing, call the hearing to order, call the roll of the Committee in attendance, ascertain the presence or absence of the student charged with misconduct, read the notice of hearing and charges and verify the receipt of notices of charges by the student, report any continuances requested or granted, establish the presence of any adviser or counselor of the student, and call to the attention of the student charged and the advisor any special or extraordinary procedures to be employed during the hearing and permit the student to make suggestions regarding or objections to any procedures for the Conduct Committee to consider.

a. Opening Statements

(1) The Primary Administrative Officer shall make opening remarks outlining the general nature of the case and testify to any facts the investigation has revealed.

(2) The student may make a statement to the Committee about the charge at this time or at the conclusion of the University's presentation.

b. University Evidence.

(1) University witnesses are to be called and identified or written reports of evidence introduced as appropriate.

(2) The Committee may question witnesses at any time.

(3) The student or, with permission of the committee, the advisor 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

Student Disciplinary Matters

any time. The Primary Administrative Officer may question the student or witnesses.

d. **Rebuttal Evidence.** The Committee may permit the University or the student to offer a rebuttal of the other's presentation.

e. **Rights of Student Conduct Committee.** The Committee shall have the right to:

(1) Hear together cases involving more than one student which arise out of the same transaction or occurrence, but in that event shall make separate findings and determinations for each student;

(2) Permit a stipulation of facts by the Primary Administrative Officer and the student involved;

(3) Permit the incorporation in the record by a reference of any documentation, produced and desired in the record by the University or the student charged;

(4) Question witnesses or challenge other evidence introduced by either the University or the student at any time;

(5) Hear from the Primary Administrative Officer about dispositions made in similar cases and any dispositions offered to the student appearing before the Committee;

(6) Call additional witnesses or require additional investigation;

(7) Dismiss any action at any time or permit informal disposition as other wise 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.

Appeals Procedures

Financial Aid Appeals

The University of Missouri-St. Louis has an established financial aid waiver (appeals) procedure. An aid applicant can raise questions or appeal the offer, or lack of an offer, of financial aid if not satisfied. The general provisions for appeals procedures are as follows:

1) An aid applicant who is not satisfied with the fact that no aid was offered, or was not pleased with the type and/or amount of aid that was offered, may make a written appeal to the Student Financial Aid Appeals Committee for reconsideration of the aid request and/or ask for a personal hearing.

2) If on review of all the facts of the case, including any new information which the applicant may provide, the Committee can (a) approve an exception to University policy; (b) deny the request; (c) approve a modified version of the request.

3) If the Appeals Committee cannot provide a satisfactory solution, he/she may refer the written appeal with all pertinent information to the Director of Financial Aid. Where academic progress is an issue, the student may ask an academic adviser or counselor to write or speak in the student's behalf. If a satisfactory solution is worked out, the case is closed.

4) If step three did not solve the problem, it is referred to the campus Faculty-Student Committee on Student Aid. In ordinary practice it is rare for a case to be appealed beyond this step.

5) If, however, the applicant is still not satisfied after review by committee, the case is to be referred to the Chancellor.

6) The next appeal is the President.

7) The final University appeal would be for the President to refer a case to the Board of Curators.

Grievance About Grade

Recourse for a Student Who Has a Grievance About a Given Grade

The following grievance procedure is to be followed by any student who believes he/she has received an unjustified grade in a course and wants a review of the matter. It is to be understood that the establishment of criteria for grades is the responsibility of the instructor. The purpose of this grievance procedure is to determine whether the criteria for grading were fairly applied. If these procedures lead to the conclusion that the grading criteria were improperly applied, then the instructor is to be requested to reconsider the grade.

1) The student's first recourse is to review the issue fully with the instructor involved and then with the department chairperson. This must be done within, at most, one month after the beginning of the succeeding regular academic semester.

2) If the issue has not been resolved within, at most, two weeks, the student should bring the matter to the dean of the School for adjudication by whatever appeals committee the dean's office has established. It is anticipated that nearly all cases would be settled at the department or College or School level.

3) A student may take his/her case to the Chancellor.

Student Organization Policy

Policy on Student Organizations

The University recognizes that the acquisition of knowledge is not confined to the formality of the classroom and that much can be gained through the activities of student organizations. To assure maximum freedom for students and to assure that organizational activities are orderly, responsible, and appropriate to the mission of the University, certain principles and procedures are established through which organizations gain University recognition.

I Procedures for Recognition

A. To obtain recognition or to register, an organization shall submit to the Vice Chancellor for Student Affairs, through the Office of Student Activities, a recognition or registration form which shall include:

1) The name of the organization.

2) A statement of the general purpose of the organization and the means for accomplishing it. The statement should demonstrate that the organization's purpose is to broaden the scope of general learning, extend knowledge of specialized areas, or to serve the professional, cultural, social or recreational interests of the University community, consistent with the educational goals of the University. The statement must not conflict with policies governing recognized organizations as listed below.

3) The names of at least three officers or responsible representatives, including student numbers, addresses and telephone numbers; these persons must be students registered at the University of Missouri-St. Louis.

4) A statement of any affiliation with any other organization not registered with the University, and a copy of the organization's constitution.

5) Organizations seeking recognition must include a copy of their constitution and/or by-laws, the name of a UM-St. Louis faculty or staff member who agrees to serve as an advisor, and the name of a student member of the organization who will serve as the organization's representative on the Student Government Association.

6) Upon submission of the recognition or registration form, the organization shall be granted temporary privileges until the request for recognition is acted upon by the Senate Student Affairs Committee or the request to register is approved by the Director of the University Center or his/her designee.

B. To maintain recognition or registration, an organization must update their recognition form or reregister with the Office of Student Activities no later than two weeks following the beginning of the fall semester.

II Privileges of Recognized Organizations

Student Organization Policy

- 1) Use of campus facilities and services for organizational activities as provided in the University regulations.
- 2) Use of the University name in connection with publicity, but only for identification purposes, and in no way to imply support of the University for any position of the organization.
- 3) Participation in University-sponsored events.
- 4) Application for supplemental financial assistance.
- 5) Participation as a voting member of Student Government Association. Organizations who register may not apply for supplemental assistance and may not be voting members of Student Government Association.

III Policies Governing Recognized or Registered Organizations

- 1) Organizations shall comply with the Rules and Regulations of the University of Missouri and the St. Louis campus.
- 2) Organizations' membership policy shall not discriminate for reasons of color, creed, national origin or sex. Any organization may petition to the Vice Chancellor for Student Affairs for exemption from the requirement as it applies to sex. Academic and professional organizations which have discriminatory membership policy based on sex shall not be recognized.
- 3) Organizations' membership shall not be subject to approval by anyone other than the local campus membership.
- 4) Organizations are expected to maintain fiscal responsibility.
- 5) Registered organizations are encouraged to seek the advice of faculty and other members of the University community.
- 6) Recognized organizations are required to seek the advice of faculty and other members of the community.
- 7) Recognized organizations are required to participate in the Student Governance process.

IV Procedure for Review of Grievances

- A. Any member of the University community may bring charges against a recognized organization for breach of the above policies or procedures.
- B. Such charges, except those pertaining to discrimination, are brought initially to the Vice Chancellor for Student Affairs, who may:
 - 1) Dismiss the charges, in which case an appeal may be made to the Senate Student Affairs Committee.
 - 2) Settle the charges in a way acceptable to both parties or,
 - 3) Refer the charges to the Senate Student Affairs Committee.
- C. Penalties may range from withdrawals of one or more privileges to withdrawal of recognition or registration. Assessment of penalties shall also provide for the conditions leading to reinstatement of such privileges for recognition.
- D. Either party to the charges may appeal the decision of the Senate Student Affairs Committee to the Chancellor.

Policy on Hazing

Hazing, defined by the Fraternity Executive Association and accepted by the University of Missouri-St. Louis, is any intentional action taken or situation created, whether on or off University premises, that produces mental or physical discomfort, embarrassment, harassment, or ridicule. This includes but is not limited to: paddling in any form, creation of excessive fatigue, physical or psychological shocks, wearing apparel publicly which is conspicuous and not normally in good taste, engaging in public stunts and buffoonery, morally degrading or humiliating games and activities, involuntary labor, or any activity not consistent with the University of Missouri Board of Curators Standard of Student Conduct.

The University of Missouri-St. Louis does not condone or tolerate hazing of any type by an organization, or by an individual against another individual.

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 Policy

Equal Opportunity Policies of the University of Missouri-St. Louis

The University of Missouri-St. Louis is an affirmative action/equal opportunity employer committed to excellence through diversity.

Therefore, the University enthusiastically complies with and vigorously enforces each Federal and State Executive Order, law and regulation, University of Missouri Rules and Regulations and University of Missouri-St. Louis directive that prohibits discrimination against employees, students, and others based upon age, ancestry, color disability, national origin, race, religion, sex, or veteran status.

The above compliance is established upon, but not limited to, the following employment and education related equal opportunity laws:

Civil Rights Act of 1964, Title VII, as amended
Executive Order 11246, Equal Employment Opportunity Equal Pay Act of 1963, as amended
Age Discrimination in Employment of 1967, as amended
Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended

Executive Order 11141, Age Discrimination Rehabilitation Act of 1973, Section 503, as amended
Rehabilitation Act of 1973, Section 504, as amended
Civil Rights Act of 1964, Title VI, as amended
Education Amendments of 1972, Title IX
Americans with Disabilities Act of 1990

Based upon the foregoing documents, the Board of Curators of the University of Missouri has adopted the appropriate equal opportunity policies and procedures.

The Chancellor is responsible for the implementation of equal opportunity at UM-St. Louis. Assisting the Chancellor and each Vice Chancellor is the Office of Equal Opportunity (OEO). All equal opportunity functions for the campus are centralized in the OEO.

Equal Opportunity Policies of the University of Missouri-St. Louis

The following University policies govern the Office of Equal Opportunity (OEO):

Equal Employment/Educational Opportunity Policy—The Curators of the University of Missouri do hereby reaffirm and state the policy of the University of Missouri on Equal Employment/Educational Opportunity, Sexual Harassment.

- Equal Opportunity is and shall be provided for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of their race, color, religion, sex, national origin, age, disability, or status as a Vietnam era veteran.
- Equal opportunity is and shall be also provided for all students and applicants for admission in compliance with existing legislation.

University of Missouri Equal Opportunity Statement

The University of Missouri-St. Louis is committed to equal employment and educational opportunities without regard to conditions of race, color, sex, religion, national origin, age, physical ability, veteran status, or individuals with HIV, AIDS, or ARC.

Each administrative unit of the University employing personnel, admitting students, or entering into contracts is charged with implementation of the University's commitments, and maintenance of records to demonstrate good faith efforts, in admission and training, recruiting and hiring, compensating and promoting, layoff and dismissal, granting of tenure, contracting and purchasing, and access to facilities and programs.

As an employer of persons and as an institution accountable to taxpayers and the general public, the University must have administrative and management practices that are designed for the best use of talent for operational effectiveness and efficiency.

(1) Recruitment and employment of personnel

a. Recruitment of professors and academic personnel in research and continuing education/extension is primarily the responsibility of deans, directors, chairpersons, and department heads.

b. Recruitment of administrative, service, and support staff, except for top-ranking administrative personnel, is primarily the responsibility of the personnel office of each campus, and the director of Human Resources for the University of Missouri-St. Louis administration. Selection is the responsibility of the administrative head of the employing unit.

c. Administrative efforts are made to recruit and employ minorities, women, the handicapped, and members of protected age groups.

d. The University maintains relationships with governmental agencies, community groups, and other organizations which may be of assistance in furthering recruitment and employment of minority groups, handicapped persons, and women into departments and units which have imbalances. Personnel sources are advised of the University's commitment to equal opportunity and affirmative action.

e. Imbalances exist when available talent among specified minorities, women, handicapped, or protected age group members is proportionately underrepresented in a particular personnel category in the University. Underrepresentation is determined by an analysis of the appropriate employment market which is generally national or regional for major administrators, professors, and academic personnel in research and continuing education/extension. The appropriate employment market is generally the state or local community for most administrative positions and for service and support staff.

f. Advertisement and notices of employment opportunities indicate a filing date for consideration.

g. Notice of employment and training opportunities are made to existing personnel.

h. Employment applications meet federal and state requirements relating to equal opportunity.

i. The Office of Affirmative Action maintains records to demonstrate efforts and results of efforts to achieve equity and to act affirmatively and reasonably to correct imbalances.

(2) Salaries, wages, and benefits

a. University compensation and benefit programs are administered without regard to conditions of race, color, sex, religion, national origin, age, physical ability, or veteran status.

b. The salary range for academic positions is determined in advance of recruitment on the basis of prevailing national levels and departmental scales for the educational attainment, experience, and specialty desired.

(3) Facilities, activities, and working conditions

a. University facilities are maintained on an equitable and nondiscriminatory basis.

b. Physical facilities have been adapted within the limits of the financial resources available to insure access to the University by the physically handicapped.

c. Opportunities for involvement in University activities are provided on an equitable or nondiscriminatory basis.

(4) Promotion and training

a. Promotions, contract renewals, the granting of tenure, and reductions in force of academic personnel are handled in

Equal Opportunity Policy

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 Affirmative Action Office.

(8) Reviewing and monitoring

a. A University Committee on Equal Employment Opportunity and Affirmative Action (EEO/AA) is appointed annually by the Chancellor.

b. EEO/AA committee membership includes a reasonable cross section of personnel, including a representation of women, minorities, and the handicapped.

c. The EEO/AA committee advises the Director of Affirmative Action on matters relating to affirmative action and University equal employment policy.

d. Administrative officers (chancellor, vice chancellors, deans, directors, department chairpersons, and all other supervisory personnel) are responsible for implementation of equal opportunity and affirmative action policies and practices within their areas of jurisdiction, and the effectiveness of implementation will be an element in the evaluation of the performance of each officer.

(9) Dissemination

a. Equal opportunity and affirmative action policies and programs are disseminated throughout the University and discussed at appropriate school, college, departmental, management, and supervisory meetings. The subjects covered include attraction, admission, and retention of students; recruitment, employment, training, promotion, and transfer of employees.

b. University employees, faculty, staff, and students are kept informed of equal opportunity programs and affirmative action goals through campus publications and communications, the Personnel Policy Manual, the Faculty Handbook, divisional and departmental meetings, staff orientation programs, and posters.

c. Copies of the Equal Employment and Affirmative Action policies are available to a cross section of community organizations, news media, area colleges, secondary schools, and recruiting sources.

d. Copies of the Affirmative Action Policy will be made available on request to employees, applicable governmental agencies, and contractors or subcontractors.

e. University invitations to bid, purchase orders, and specifications to architects and engineers contain the University's equal opportunity policy.

f. University correspondence, employment notices and advertising, academic information, and other public notices contain the University's equal opportunity phrase.

Equal Opportunity Policy

• Sexual Harassment

This University of Missouri policy aims for an increased awareness regarding sexual harassment by making available information, education and guidance on the subject for the University community.

A. Policy Statement—It is the policy of the University of Missouri, in accord with providing a positive discrimination-free environment, that sexual harassment in the work place or the educational environment is unacceptable conduct. Sexual harassment is subject to discipline, up to and including separation from the institution.

B. Definition—Sexual harassment is defined for this policy as either:

(i) unwelcome sexual advances or requests for sexual activity by a University employee in a position of power or authority to a University employee or a member of the student body, or

(ii) other unwelcome verbal or physical conduct of a sexual nature by a University employee or a member of the student body to a University employee or a member of the student body, when:

1. Submission to or rejection of such conduct is used explicitly or implicitly as a condition for academic or employment decisions; or

2. The purpose or effect of such conduct is to interfere unreasonably with the work or academic performance of the person being harassed; or

3. The purpose or effect of such conduct to a reasonable person is, to create an intimidating, hostile, or offensive environment.

C. Non-Retaliation—This policy also prohibits retaliation against any person who brings an accusation of discrimination or sexual harassment or who assists with the investigation or resolution of sexual harassment. Notwithstanding this provision, the University may discipline an employee or student who has been determined to have brought an accusation of sexual harassment in bad faith.

D. Redress Procedures—Members of the University community who believe they have been sexually harassed may seek redress, using the following options:

1. Pursue appropriate informal resolution procedures as defined by the individual campuses. These procedures are available from the campus Affirmative Action/Equal Opportunity Officer.

2. Initiate a complaint or grievance within the period of time prescribed by the applicable grievance procedure. Faculty are referred to Section 370.010, "Academic Grievance Procedures"; staff to Section 380.010, "Grievance Procedure for Administrative, Service and Support Staff" and students to Section 390.010, "Discrimination Grievance Procedure for Students".

Pursuing a complaint or informal resolution procedure does not compromise one's rights to initiate a grievance or seek redress under state or federal laws.

E. Discipline—Upon receiving an accusation of sexual harassment against a member of the faculty, staff, or student body, the University will investigate and, if substantiated, will initiate the appropriate disciplinary procedures. There is a five-year limitation period from the date of occurrence for filing a charge that may lead to discipline.

An individual who makes an accusation of sexual harassment will be informed:

1. at the close of the investigation, whether or not disciplinary procedures will be initiated; and

2. at the end of any disciplinary procedures, of the discipline imposed, if any.

• Auxiliary Aids for Students w/Disabilities

The University maintains its commitment to the education of qualified handicapped students by providing them an equally effective opportunity to participate in or benefit from its educational programs as afforded non-handicapped students.

As a part of this commitment and upon the request of a qualified disabled student, the Vice Chancellor for Student Affairs or designee will arrange for an assessment of the student's abilities and his or her need for some type of auxiliary aid.

This assessment will include an evaluation of the extent of the student's disability and the requirements of the particular course or education program in which the student is enrolled or plans to be enrolled.

If after the assessment of the student and the course, the University determines that some type of auxiliary aid is required, it will assist the qualified disabled student in obtaining the necessary auxiliary aid from other sources.

If the necessary auxiliary aid is not available from other sources, the University, at its option, shall provide the necessary auxiliary aid or reimburse the student for the reasonable cost of the necessary auxiliary aid.

Requests by students for such assessments must be made no later than six weeks prior to the beginning of the next semester in order to provide sufficient time for the assessment and for obtaining any necessary auxiliary aid.

Unfavorable determinations made pursuant to this policy may be appealed by the handicapped student through the University of Missouri Discrimination Grievance Procedures for Students, a copy of which will be provided to any student whose request for auxiliary aid is denied.

(Additional resource materials are available through the Office of Equal Opportunity.)

• AIDS Policy Statement

Current knowledge indicates college and university students or employees with AIDS, ARC, or a positive antibody blood test do not pose a health risk to either students or employees in a usual academic or residential setting. The policy of the University of Missouri is to permit students and employees with AIDS to continue to engage in as many of their normal pursuits as their condition allows. Managers should be sensitive to the medical problem and ensure that such employees are treated consistent with the treatment of other employees. Students will be allowed to continue their enrollment and activities (including continued residency in student housing) as long as they continue to meet academic standards and medical evidence indicates their conditions are not a threat to themselves or others. Every effort will be made to maintain confidentiality at all times.

The University also has a legitimate interest in the welfare of all students, employees, and visitors to the campus. Every reasonable precaution will be taken to minimize the risk that an employee's or student's condition will present a health and/or safety hazard to others.

The University will not discriminate against individuals with HIV infection, AIDS or ARC, but this protection does not include individuals with secondary infections or diseases that would constitute a direct threat to the health or safety of others or who may because of the disease or infection be unable to perform duties of their employment. In such cases, the appropriate University personnel or student policy will determine what changes, if any, will be made in the student's or employee's academic or work program.

Equal Opportunity Policy

In the event of public inquiry concerning AIDS on campus, the Chancellor or the Chancellor's designee will provide appropriate information on behalf of the University. Existing policies regarding confidentiality of employee and student records will be followed.

Consistent with its concern for students and employees with AIDS, the University offers a range of resources through the AIDS Task Force on each campus and through other campus services.

- a. Student, employee, and management education and information;
- b. Referral to agencies and organizations that offer supportive services for life-threatening illnesses;
- c. Consultation to assist employees in effectively managing health, leave, and other benefits.

The AIDS Task Force on each campus will continue to meet periodically to review and update policy and to make recommendations as new medical facts become available. Each Task Force will continue to encourage programs to educate all members of the campus community about the reality of AIDS.

To address specialized needs, each campus is authorized to adopt and implement special policies related to AIDS which are consistent with this policy statement.

The Affirmative Action Office is located in 414 Woods Hall. The telephone number is 516-5695.

- **Affirmative Action on Committee Appointments Policy**—As a part of the implementation of the Affirmative Action Plan of the University of Missouri, any person appointing any committee for the University or any campus, in selecting the membership, shall give due consideration to the inclusion in such membership of women and minorities unless membership thereon is ex-officio.

Other Procedures or Regulations

Discrimination Grievance Procedure for Students

390.010

December 17, 1982, and January 25, 1990

A. GENERAL

1. It is the policy of the University of Missouri to provide equal opportunity for all enrolled students and applicants for admission to the University on the basis of merit without discrimination on the basis of their race, color, religion, sex, national origin, age, or disability, or Vietnam era veteran status. Sexual harassment shall be considered discrimination because of sex.

2. To insure compliance with this policy, all University of Missouri prospective or enrolled students shall have available to them this student discrimination grievance procedure for resolving complaints and/or grievances regarding alleged discrimination.

3. This grievance procedure neither supersedes nor takes precedence over established University procedures of due process for any and all matters related to Academic Dishonesty, Grade Appeals, Traffic Appeals, Disciplinary Appeals, or other specific campus procedures which are authorized by the Board of Curators and deal with faculty/staff responsibilities.

4. These proceedings may be terminated at any time by the mutual agreement of the parties involved.

NOTE: A grievance concerning specific incidents filed under this discrimination grievance procedure shall not be processed on behalf of any student who elects to utilize another University grievance procedure. In addition, the filing of a grievance under these procedures precludes the subsequent use of other University grievance or appeals procedures for the same incident.

B. DEFINITIONS

1. A complaint is an informal claim of discriminatory treatment. A complaint may, but need not, constitute a grievance. Complaints shall be processed through the informal procedure herein set forth.

2. A grievance is the written allegation of discrimination which is related to:

- a. Recruitment and admission to the institution.
- b. Admission to and treatment while enrolled in an education program.
- c. Employment as a student employee on campus.
- d. Other matters of significance relating to campus living or student life, including, but not limited to:
 - Assignment of roommates in resident halls
 - Actions of fraternities and sororities
 - Membership in and/or admission to clubs/organizations
 - Student Health Services
 - Financial aid awards

3. A student is any person who has applied for admission or readmission, or who is currently enrolled, or who was a student of the University of Missouri at the time of the alleged discrimination.

4. Persons with disabilities—For the purpose of this student discrimination grievance procedure, a "person with a disability" has been substituted for "handicapped individual" (Section 504, Rehabilitation Act of 1973) and shall be defined as "...any person who

- a. Has a physical or mental impairment which substantially limits one or more of such person's major life activities,
- b. Has a record of such impairment, or
- c. Is regarded as having such an impairment."

Other Procedures or Regulations

For purpose of this definition, "major life activity" means any mental or physical function or activity which, if impaired, creates a substantial barrier to employment and/or education.

Any reference in this document to written materials or to written or oral presentations within the student discrimination grievance procedure may be adjusted to accommodate persons with disabilities for whom the stated materials or required presentations would not be appropriate. Cost of such accommodation will be borne by the University, with no charge to the individual.

5. Appropriate Administrative Officer—The primary administrative officer on the staff of the Chancellor (in the area of Student Affairs/ Services, Administrative Services, Development, and Academic Affairs) having administrative responsibility for the unit in which the discrimination is alleged to have occurred.

6. Grievance Consultant—At any step the Director of Equal Opportunity or of Affirmative Action may be asked to serve as a consultant by any of the parties involved in this grievance procedure.

C. COMPLAINTS

1. Policies and Procedures—A student with a complaint will be provided with copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief Student Personnel Administrator or his/her designee and the 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 advisor participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.

2. Joint Complaint—If more than one student is aggrieved by the same action, these students may, by mutual written agreement among themselves, file with the Chief Student Personnel Administrator a complaint and pursue their complaints jointly under this grievance procedure. If the number of students in such a case is so large as to make it impracticable for them to be heard individually in a joint proceeding, they may, by mutual agreement, elect one or more of their number to act on behalf of them all.

3. Students may informally discuss a complaint with the relevant supervising administrator. Every reasonable effort should be made to resolve the matter informally at this administrative level. If a satisfactory resolution is not reached, the student may pursue the matter through each level of administrative jurisdiction up to and including the Appropriate Administrative Officer, or file a grievance within the time specified in D.1.b.

4. Complaints Involving Recruitment

a. Undergraduate applicants must first present 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 School or College, depending upon where the application was originally filed.

b. This University official shall compare the person's

academic qualifications against the official University admissions criteria and review the denial. If the denial is sustained, the applicant may appeal this decision to the official's immediate supervisor or to the appropriate admissions committee.

6. Complaints Involving Admissions (Graduate)—Applicants to the Graduate School may ask for a meeting with the academic department head of the program to which the applicant was seeking admission. This official shall explain the reasons for the denial of recommendation for admission. If a satisfactory resolution is not reached, the applicant may then appeal to the Dean of the Graduate School or to the appropriate admissions committee. If the denial is upheld, the applicant may appeal the decision to the appropriate administrative officer.

7. Complaints Involving Admissions to or Treatment in an educational Program or in the Granting of Assistantships—An undergraduate or graduate student enrolled at the institution who has a discrimination complaint involving admission to or treatment in an educational program or in the granting of assistantships may request a conference with the appropriate department head and with the Dean of the School or College (or the Dean's designee) to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 F.

8. Complaints Involving Nonacademic Matters Related to Campus Living and Student Life—A currently enrolled student who has a University-related complaint concerning discrimination in nonacademic matters including but not limited to assignment of roommates, actions of fraternities and sororities, membership in and/or admissions to clubs/organizations, student health services and financial aid awards may request a conference with the appropriate administrative supervisor, department head and/or director to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 D.

9. Complaints Involving Student Employment on Campus—A student enrolled at the University who alleges that discrimination occurred either in applying for work or while working as a student employee at a University job may request a conference with the supervisor, department head or director of the employing unit to discuss the matter informally. If a satisfactory resolution is not reached, the student may present a grievance pursuant to Section 390.010 D.

10. Complaints Involving Financial Aid (Undergraduate, Graduate, Professional):

a. Undergraduate, graduate, and professional student aid applicants shall present complaints to the Director of Student Financial Aid where the application was originally filed or the award originally made.

b. This University official shall compare the person's financial and academic qualifications against the official University financial aid criteria and review the award, amount, or denial of the aid. If the original judgment is sustained, the applicant may appeal this decision to the official's immediate supervisor or to the appropriate financial aid committee.

D. INITIATING A GRIEVANCE

1. Policies and Procedures—A student with a grievance will be provided copies of appropriate policies and procedures pertaining to student complaints and grievances, and the Chief of Student Personnel Administrator or designee and the Office for Equal Opportunity or for Affirmative Action shall be available to assist the student in understanding the opportunities afforded through such policies and procedures. The student may choose to have an advisor participate in any stage of the grievance procedure, subject to the restrictions of the hearing procedures set forth in Section 390.010 F.

Other Procedures or Regulations

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.I.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.I.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.I.

E. FORMATION OF GRIEVANCE COMMITTEE

1. It is the Appropriate Administrative Officer's responsibility to initiate the selection of the grievance committee within fifteen (15) working days after the request for the formation of a grievance committee or after the completion of the informal hearing provided for in Section 390.010 F.5 without satisfaction to the grievant.

2. A grievance hearing panel shall be established by October 1 of each year from which a grievance committee should be constituted. The panel shall consist of ten (10) faculty, ten (10) staff and ten (10) students. Selection of the panel will be made by the Chief Student Personnel Administrator from recommendations by the appropriate faculty, staff and student associations. Selection of membership will consider sex, race, disability, academic rank, student classification and employee classification. Membership on the

hearing panel shall be for two years. A member's term shall expire on September 30 of the second year unless he/she is serving at that time on a hearing committee still in the process of reviewing an unresolved grievance. In such case, the member's term shall expire as soon as the committee has submitted a written report of its findings and recommendations to the Appropriate Administrative Officer.

3. A hearing committee shall be composed of five (5) members. The grievant shall select two (2) members from the grievance hearing panel provided by the Chief Student Personnel Administrator. The responding faculty/staff/organization shall select two (2) members from the grievance hearing panel. Both parties should have their selections made within 15 working days of the receipt of the request. The four committee members shall then select an additional member from the grievance hearing panel to serve as chair. Neither members of the immediate departmental unit nor student members of pertinent student organizations involved in the grievance shall be eligible to serve on the committee.

4. Any person selected to a grievance committee will be expected to serve on such committee and to be present at all sessions. If a member is absent from a single session, he/she will be required to review all tapes or transcribed proceedings of that session prior to the next meeting of the committee. Should a member be absent from two sessions or should a member request to be excused from service for reasons of illness, necessary absence from the campus or other hardship, then that member shall be replaced in the same manner used in the original selection (see Section 390.010 E.3). If a member is unable or ineligible to serve for whatever reason, the replacement shall review all tapes or written transcripts and all submitted evidence prior to service on the committee. Five members of the hearing committee, duly selected as in Sections 390.010 E.3 and E.4 must attend the opening and closing session of the hearing.

F. HEARING PROCEDURES FOR FORMAL GRIEVANCES

1. It shall be the responsibility of the Appropriate Administrative Officer to coordinate the procedures contained herein, to make provisions for hearing rooms, to coordinate secretarial and recording services and to otherwise serve the grievance committee as needed.

2. At the first organizational meeting of the grievance committee, the committee shall elect a chairperson from among the members to preside over subsequent meetings. Then the chairperson shall schedule a hearing at the earliest convenient time when all affected parties can be present.

3. A quorum consists of a minimum of four members of the committee except as provided by Section 390.010 E.4.

4. The grievance committee shall invite the grievant and the responding person to all hearings. Attendance at the hearings shall be limited to persons who have an official connection with the case as determined by the chairperson. The grievant and the responding person may choose to be accompanied by an advisor. Others whose participation in the hearing is considered essential in order to assist the committee in establishing the facts of the case shall appear before the committee only long enough to give testimony and to answer questions of committee members.

5. It is within the duties and responsibilities of all members of a grievance committee to commit themselves to observe procedures consistent with fairness to all parties concerned. For example, it is a matter of principle that members of the grievance committee will not discuss a case with anyone outside of the hearing process and that their finding will not be 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

Other Procedures or Regulations

herein. The chairperson may, for good cause and with the concurrence of a majority of the entire committee, authorize deviation from the suggested format, in which case the principal parties shall be notified.

a. The grievant shall be heard first in all phases of a grievance hearing and shall be primarily responsible for the presentation of his/her position.

b. The advisor of the grievant or respondent may advise that person and may briefly explain his or her position but shall not be permitted to testify or to cross-examine.

c. A reasonable time limit should be established for opening and closing statements and shall be announced prior to the hearing.

d. Length of hearing sessions may be established in advance; every effort should be made to conduct the hearing as expeditiously as possible, with equal fairness to both parties.

e. The interested parties shall provide the chairperson with the names of the advisor and potential witnesses at least forty-eight (48) hours prior to the hearing. It is the responsibility of the interested party, working with the chairperson, to ensure the presence of these individuals in a timely manner.

f. After initial witnesses for both parties have been heard, such witnesses may be recalled for additional questioning if requested by either party or the grievance committee. The committee may call new witnesses whose testimony it deems relevant or helpful.

g. In order to promote the truthful, unfettered exchange of information and ideas, all testimony pertaining to the grievance hearing shall be held in confidence.

h. Only evidence relevant to the grievance may be introduced. Questions regarding the admissibility of evidence shall be decided by the chairperson.

7. At any point in the proceedings prior to the time at which the committee reaches its final decision, the grievant may withdraw any portion or all of the grievance with the consent of a majority of the committee members and of the respondent. In all cases of withdrawal at the consent of the committee and of the respondent, the grievant shall not have the privilege of reopening the same grievance at any time in the future. In the event that the student refuses to participate further in the committee hearing, the committee may choose to continue the case or to move to closure with an appropriate closing statement as per Section 390.010 F.9.

8. A confidential tape recording of the grievance hearing shall be made and will be accessible to the parties involved, the committee, the Appropriate Administrative Officer, the Chancellor, the President, members of the Board of Curators and authorized representatives on a need-to-know basis.

Either party to the grievance may request that the committee provide a written transcript of testimony. The cost of preparation of such a transcript is to be paid by the party making such request unless Section 390.010 B.4 is applicable. After the report of the grievance committee has been prepared, the tapes and relevant materials will be sealed and filed in the Appropriate Administrative Office. Unless extraordinary circumstances apply, these materials will be destroyed at the end of five years.

9. At the conclusion of the grievance hearing, the members of the grievance committee shall meet in closed session to deliberate upon their findings. A majority vote of the entire committee shall be required on all decisions. The grievance committee shall make a written report on findings and recommendations to the Appropriate Administrative Officer of the University, with copies to the grievant(s) and the responding person(s). The written report will contain:

a. A statement of the purpose of the hearing,

b. Issues considered,

c. A summary of the testimony and other evidence presented,

d. Findings of fact as developed at the hearing, and

e. Recommendations for final disposition of the case.

10. The Appropriate Administrative Officer will make his/her decision. This decision and the actions that have been taken shall be presented to both parties in writing. If the administrative officer does not accept the recommendations of the grievance committee, a written statement of the reasons for so ruling must be given to both parties and to the chairperson of the committee.

11. If requested by the grievant or the responding party, normally within seven (7) calendar days of the notification of the decision, the decision of the Appropriate Administrative Officer may be subject to a review of the records by the Chancellor. Any review and decision by the Chancellor shall be made normally within thirty (30) calendar days. The decision of the Chancellor can be appealed to the President, who shall have thirty (30) calendar days in which to make a decision, which shall be final.

12. Grievances shall receive prompt attention. The hearing and the report of the grievance committee shall normally be completed within sixty (60) calendar days of the formation of the grievance committee, and a final decision shall be made by the Appropriate Administrative Officer normally within ten (10) calendar days thereafter. In any case in which these time schedules should prove to be inadequate, the committee shall present, in writing, an amended time schedule to all parties involved.



Index



1995-96 Bulletin

St. Louis

Index

- A.B. degree.** See Bachelor of Arts
- Absence regulations,** 24
- Academic Calendar,** 12
- Academic Development, Center for,** 31, 53
- Academic Dishonesty,** 26
- Academic Honors.** See Honors
- Academic policies,** 16-40; College of Arts and Sciences, 63-65; general University policies, 23-24; Graduate School, 34-36
- Academic probation, suspension, and dismissal,** 25-26, 35-36
- Academic standing,** as a course prerequisite, 24
- Access to Success Program,** 52
- Accounting,** scholarships, 40. See also Business Administration
- Accreditation, of the University,** 5
- Activities fee,** student, 27, 39
- Administration, University,** 10-11
- Admission requirements and procedure,** undergraduate study, 16-19; Graduate School, 31-33. See also individual College departments and/or Schools
- Adult Education (ADU ED),** 301, 321-322; certification in, 322. See also Continuing Education & Outreach
- Advanced placement,** tests for, 17; transfer students, 18. See also College level examination program
- Advance registration,** undergraduate, 20; graduate students, 34
- Advising, Academic,** Evening College, 21, 351; undergraduate students, 20-21. See also Center for Academic Development; individual departments and/or Schools; and Preprofessional Programs
- Aerospace studies.** See Air Force ROTC
- Affirmative Action policies,** 437-438
- Aging, Adult Development and.** See Gerontology Studies
- AIDS Policy Statement,** 439-440
- Air Force Reserve Officers Training (ROTC),** 425-426
- Alpha Sigma Lambda,** Evening College scholastic society, 351
- Alumni Association,** UM-St. Louis, 49
- American history/government requirement,** 22
- American Studies,** minor in, 255-256
- Anthropology,** Department of, 66-67; career outlook, 67; faculty, 66; minor in, 66-67; undergraduate studies, 67
- Appeals procedures,** 435
- Application for admission,** graduate study, 31-33; undergraduate study, 16-19
- Application for candidacy,** for doctoral degree, 37. See also individual degree programs
- Application for financial aid.** See Financial Assistance
- Applied art.** See Studio Art
- Applied mathematics,** Bachelor of Science in, 174-175
- Applied music** (private lessons), credit for, 64, 185
- Applied (Industrial/Organizational) Psychology,** psychology degree focus area, 228
- Aptitude tests required,** 16
- Archaeology.** See Anthropology
- Architecture,** degree programs for Missouri residents at other universities, 76, 266
- Archives and manuscripts collections,** 43
- Army Reserve Officers Training (ROTC),** 30-31, 421-424
- Art, Department of,** 74-76; career outlook, 76; faculty, 74; undergraduate studies, 74-76
- Art gallery.** See Gallery 210
- Art and art history,** minor in, 75
- Arts and Sciences, College of,** 14, 63-269; academic advising, 20; certificate programs, 65, 260-265; Continuing Education & Outreach, 55; general information on degree requirements, 63-65, preprofessional programs, 266-269; Sophomore Honors program, 65. See also names of individual departments
- Asian studies,** East Asian certificate program, 50, 368. See also History, Department of
- Assessment,** 22-23
- Assistantships, Graduate,** 40; in biology, 84, in chemistry, 108; in English, 143; in mathematical sciences, 177; in political science, 215. See also Internships
- Astronomy.** See Physics and Astronomy
- Astrophysics,** Bachelor of Science in physics option, 203
- Athletic Coaching,** minor in, 344
- Athletics,** 15, 47. See also Physical education
- Atmospheric science.** See Physics and Astronomy
- Attendance regulations,** 24
- Auditor,** 19
- Auxiliary aids and services,** 42
- B.A., B.G.S., B.M., B.S., B.S.W. degrees.** See Bachelor of: individual name of degree
- Baccalaureate (bachelor's degrees):** College of Arts and Sciences requirements, 63-65; degrees offered (list), 59-60; University requirements, 21-23

Index

- Bachelor of Arts degree, 59**, in anthropology, 67; in art history, 74-75; in biology, 84-86; in chemistry, 106-107; in communication, 116; in economics, 131; in English, 141; in Evening College, 351-352; in history, 165; in mathematics, 174; in foreign languages and literatures, 153-155; in music, 185-187; in philosophy, 196-197; in physics, 202; in political science, 212-213; in psychology, 227-228; in sociology, 244; with teacher certification, 303, 319-320
- Bachelor of General Studies degree, 14, 59, 352-353**
- Bachelor of Music degree, 59, 64, 185-187**
- Bachelor of Science degree, 59, 64**; in applied mathematics, 174; in biology, 85; in chemistry, 107; in computer science, 175; in economics, 131; in Evening College, 351; in physics, 203; in sociology, 244
- Bachelor of Science in Business Administration degree, 276**
- Bachelor of Science in Criminology and Criminal Justice degree, 123**
- Bachelor of Science in Education degree, 301, 320-321**; in early childhood education, 335; in elementary education, 335; in secondary education: with biology major, 86; chemistry major, 107; English major, 142; history major, 165; mathematics major, 174; foreign language (French, German, or Spanish) major, 153; physical education emphasis, 343-344; physics major, 203; political science major, 211; social studies major, 165; special education emphasis, 309. *See also* Certification; Education, School of; Teacher Education
- Bachelor of Science In Nursing degree, 376-377**
- Bachelor of Science in Public Administration degree, 213**
- Bachelor of Social Work degree, 238**; in Evening College, 351
- Basic skills requirement, 22**
- Behavioral disorders**, emphasis in, 308-309; recommended curriculum, 308-309, 308-309. *See also* Special Education
- Behavioral Studies**, Department of, 308-311; career outlook, 311; faculty, 308; graduate studies, 309-311; undergraduate studies, 309
- Biochemistry**, certification, 87, 107-108, 260
- Biology**, Department of, 83-91; career outlook, 91; faculty, 83; graduate studies, 88-91; minor in, 86; undergraduate studies, 84-88
- Biotechnology**, certification, 87, 260
- Black Culture Room, 44**
- Black Studies**, minor in, 256
- Bookstore, UM-St. Louis, 44**
- Botany research, 51**
- Breadth of study requirement, 22**
- Bridge Program, 52**
- James T. Bush, Sr. Center, 53**
- Business Administration, School of, 273-284**; admission to, 274; advising, 20-21; career outlook, 284; and Continuing Education & Outreach, 55; cooperative program with chemistry, 105, 107; degree requirements, 276-277; faculty, 273-274; graduate studies, 280-282; minor in, 279-280; undergraduate studies, 274-276. *See also* Business Development Center
- Business and Industrial Studies, Center for, 50**
- Business education**, major in, 320
- Business option with chemistry degree, 105, 107**
- Calendar, Academic, 12**
- Campus directory, map, 6-7**; offices, 8-9
- Cancellation of classes, 44**
- Career Placement Services Office, 46**
- CBHE Articulation Agreement, 18, 428**
- Center for Academic Development, 31, 53**
- Center for Business and Industrial Studies, 50**
- Center for Entrepreneurship and Economic Education, 50**
- Center for Excellence in Urban Education, 52**, *Access to Success, 52 Bridge Program, 52, Engelmann Institute, 52, Junior Science, Engineering, and Humanities Symposium, 52*
- Center for International Studies, 50**
- Center for Metropolitan Studies, 53**
- Center for Molecular Electronics, 50**
- Center for Science and Technology, 50, 55**
- Centers, Specialized, 50-54**. *See also* name of individual center
- Certificate programs, 65**, 260-265; in biochemistry, 87, 107-108, 260; in biotechnology, 87, 260; with communication, 117; in gerontological studies, 363; in international studies, 370-371 (graduate), 368-369 (undergraduate); in photographic studies, 260-261; with political science major, 212; in studies in religions, 261; in trauma studies, 263-264; in women's and gender studies, 263 (graduate), 261-262

Index

- (undergraduate); in writing, 142, 263
- Certification**, in adult education, 321; in educational administration, 323; in reading, 322, 336-337; in school counseling, 308, 310-311; in teaching, 302-303; with M.Ed. degree, 321-324, 336-337. *See also* Education, School of and Teacher education
- Chemistry**, Department of, 105-109; career outlook, 109; faculty, 105; graduate studies, 108-109; minor in, 107; undergraduate studies, 106-108
- Child care and development**, psychology degree focus area, 227
- Child Development Center**. *See* University Child Development Center
- Chinese**, 152. *See* Foreign Languages
- Classical Studies**, minor in, 256
- Clinical Psychology**, Ph.D. in, 226, 229
- College Level Examination Program (CLEP)**, 17, 352
- College of Arts and Sciences**. *See* Arts and Sciences, College of
- Commencement**, 27
- Communication**, Department of 115-117; career outlook, 117; faculty, 115; minors in, 117; undergraduate studies, 115-117
- Communication Theory**. *See* Communication
- Communicative skills requirement**, 22
- Community education**, emphasis in education degree, 302; M.Ed. program in, 324
- Community mental health**, psychology degree focus area, 227
- Community Psychological Service**, 229
- Community Services**, 55-56; projects in, 352-353. *See also* Continuing Education & Outreach
- Comparative politics**. *See also* Political Science
- Composition, English**. *See* English, Department
- Comprehensive Examinations**, for doctoral degree, 37
- Computing**, Office of, 51, 212, 357
- Computer Science**, Bachelor of Science in, 175-176. *See also* Mathematics and Computer Science; Management Information Systems; UM-Rolla Engineering Education Center
- Confidentiality Policy**, 42
- Concerts**. *See* Music, Department of
- Continuing Education & Outreach**, 55-56; in graduate study, 33
- Cooperative Programs**, in biology, 84; in chemistry, 105; in criminology and criminal justice, 123; in doctoral degree programs, 37; in economics, 130; in engineering, 266-277; in history, 164; in foreign language study, 152; in political science, 212; in public policy administration, 357; in secondary education programs, 319; in business, 274
- Counseling**, degree programs in, 301, 309-311. *See also* Behavioral Studies
- Counseling service**, 45, 227, 229
- Counselor Education (CNS ED)**, 301, 308
- Course-load regulations**, graduate students, 34; undergraduate students, 24
- Course numbering system**, 5; in education, 301
- Course prerequisite**, explanation of, 24
- Credit for experience**, 17, 352
- Credit hours**, explanation of, 22
- Criminal justice courses**. *See* Criminology and Criminal Justice
- Criminology and Criminal Justice**, Department of, 123-124; career outlook, 124; faculty, 123; graduate studies, 124; minor in, 124; undergraduate studies, 123-124
- Cultural Diversity Requirement**, 63
- Cultural opportunities**, 44. *See also* Art; Communication; Music
- Curators, Board of**, 10; Award Program, 29
- Dean's list**, 26
- Degree programs**, list of, 59-60
- Degree requirements**. *See* name of individual degree
- Delayed grade**, 23, 35
- Diploma**. *See* Commencement
- Directory**, University Programs and Offices, 8-9; campus map, 6-7
- Disabled students**, auxiliary aids and services to, 42, 439
- Discrimination Grievance Procedure for Students**, 440-443
- Dissertation**, academic policies on, 37-38
- Doctoral degrees**, academic policy on, 36-38; degrees offered (list), 60; in biology, 89-90; in chemistry, 109; in nursing, 378; in optometry, 392; in physics, 204; in physiological optics, 392; in political science, 215; in psychology, 229
- Doctor of Education degree**, 304-305
- Doctor of Optometry degree**, 388-390
- Double major degree program**, in philosophy, 196, 197
- Dropping/adding courses**, graduate students, 34; undergraduate students, 25

Index

- Drug and Alcohol Prevention Program**, 46
- Dual high school/University enrollment**, 17
- Dual master's degrees**, 36
- Early Childhood Education (ECH ED)**, 301; B.S.Ed. degree program, 335; M.Ed. emphasis in Early Childhood-Special Education, 304
- East Asian Studies Certificate**, 50, 368
- Economics**, Department of, 130-133; career outlook, 133; faculty, 130; graduate studies, 132-133; minor in, 132; undergraduate studies, 130-132
- Ed.D. degree**. *See* Doctor of Education
- Educational Administration (ED ADM)**, 301; Advanced Certification Studies, 323; Ed.D. degree, 304; M.Ed. program, 323-324
- Educational Fees**. *See* Fees
- Educational Foundations (ED FND)**, 301. *See* Educational Studies
- Educational Psychology (ED PSY)**, 301. *See* Behavioral Studies
- Educational Research and Evaluation Methods (ED REM)**, 301. *See* Behavioral Studies
- Educational Studies**, Department of, 319-324; career outlook, 324; faculty, 319; graduate studies, 321-324; undergraduate studies, 319-321. *See also* Education, School of
- Educational Support Services**, 305
- Educational Technology (ED TEC)**, 301. *See* Educational Studies
- Education courses**, abbreviations used, 301
- Education, School of**, 14, 301-348; admission to, 301-303; advising, 21; and Continuing Education & Outreach, 55; graduate studies, 304-305; undergraduate studies, 301-303. *See also* Behavioral Studies; Educational Studies; Elementary and Early Childhood Education; and Physical Education
- Eldercare Center**, 52, 55
- Elementary and Early Childhood Education**, Department of, 334-337; career outlook, 337; faculty, 334; graduate studies, 336-337; undergraduate studies, 334-335
- Elementary Education (ELE ED)**, 301; B.S. degree program in, 335-336; M.Ed. degree program in, 336-337
- Employee Training and Development**, minor in, 353
- Employment**. *See* Career Placement Services
- Engelmann Institute**, 52
- Engineering**, 54, 409-412, 420, astrophysics option, 203; engineering physics option, 203; general physics option, 203; pre-engineering program, 266; graduate studies in, 420. *See* Physics and Astronomy
- Engineering Program**, UM-St. Louis/Washington University Joint Undergraduate, 409-412
- Engineering Education Center**, UM- Rolla, 54, 420
- English composition requirement**, 22
- English**, Department of, 140-143; career outlook, 143; faculty, 140; graduate studies, 143; minor in, 142; undergraduate studies, 140-142
- Enrollment information**, graduate studies, 33-34; undergraduate studies, 24-25
- Entrepreneurship and Economic Education**, Center for, 50
- Equal Educational Opportunity**. *See* Affirmative Action Policies
- Evening College**, 14, 351-353; admission to, 351; advising, 21; Bachelor of General Studies degree, 352-353
- Evening College Council**, 48
- Examinations**, academic policy on, 24; aptitude tests for admission, 16; for graduate study, 32, 280; proficiency in basic skills, 22; proficiency in foreign language, 64; Test of English as a Foreign Language, (TOEFL), 19, 32
- Excellence in Urban Education**, Center for, 52
- Excused grade**, 23, 24, 25, 35
- Eye Protection Law**, 5
- Faculty**. *See* individual department or School sections
- Fees**, graduate study, 38-39; parking, 28, 39; refund of, 29, 39; School of Optometry, 390; undergraduate study, 27-28. *See also* Financial Assistance
- Fellowships**, 40
- Finance courses**. *See* Business Administration
- Financial aid appeals**, 435
- Financial assistance**, 29-31, 40; optometry, 390
- Food Services**, 44
- Former students**, re-enrollment, 19
- Foreign language requirement**, in College of Arts and Sciences, 64; in Graduate School degree programs, 35
- Foreign Languages and Literatures**, Department of, 152-155; career outlook, 155; faculty, 152; minors in, 154-155; undergraduate studies, 152-154
- Foreign students**, admission requirements, 19, 32
- Foreign Study**, for foreign language students, 152; in Study Abroad programs, 50, 427-428
- French**, Degree program in, 153
- Gallery 210**, 49, 74
- General education requirements**, University, 21-22

Index

- General Studies, Bachelor of**, 14, 352-353
- Geography.** *See* Economics
- Geology.** *See* Physics and Astronomy
- German**, Degree program in, 155
- Gerontology**, 362-364
- Government courses.** *See* Political Science, Department of; *and also* Political Science
- Grade modification**, 24
- Grade-point Average**, Calculation of, 23, 35; requirements for graduation: University, 22; in College of Arts and Sciences, 63
- Grading system**, graduate study, 35; undergraduate study, 23
- Graduate Management Admission Test**, 31-32, 280
- Graduate Record Examination**, 31-32
- Graduate School, The**, 14. *See also* Graduate Study
- Graduate study**, 14, 31-40; academic policy, 34-36; admission to, 31-33; degrees offered (list), 59-60; enrollment in, 33-34; doctoral program, 36-38; fees and financial assistance, 38-40; in engineering, 411; master's degree program, 36; registration, 33-34
- Greek**, 152. *See* Foreign Languages
- Grievance procedure on a grade**, 435
- Guidance and counseling**, 304; degree programs in 308, 309-311. *See also* Behavioral Studies, Department of
- Handicapped students, services for**, 42, 45, 439
- Hazing**, Policy on, 436
- Health Center**, 46
- Health Certificate** for student teaching, 302
- Health Fee**, 28, 39, 390
- Health Sciences.** *See* Nursing and Optometry
- Hebrew**, 152. *See* Foreign Languages
- High school equivalency**, basis for admission, 17
- High school/University**, Dual enrollment in, 17
- History**, Department of, 164-166; career outlook, 166; faculty, 164; graduate studies, 165-166; minor in, 165; undergraduate studies, 164-166
- History of UM-St. Louis**, 13
- Home economics.** *See* Economics
- Honor Societies**, 26
- Honors**, 26; Pierre Laclede Honors College, 14, 21, 26, 403-407
- Horizons**, 45
- Horticulture**, 427
- Hotline phones**, 44
- Housing Information**, 45
- Incomplete grade.** *See* Delayed grade; Y grade
- Institute and workshop courses**, 35; Continuing Education & Outreach, 55-56
- Instructional Computing Fee**, 27, 38
- Instrumental music.** *See* Music, Department of; Applied Music
- Insurance**, Student, 28
- Intercampus exchange students**, 33
- Interdisciplinary Courses.** *See* Interdisciplinary Courses
- Interdisciplinary studies**, gerontology certificates, 363-364; interdisciplinary minors, 255-257; Master of Public Policy Administration degree, 357-359
- International Center for Tropical Ecology**, 51
- International Relations.** *See* Political Science
- International Studies**, Center for, 50, 368; certificate programs, 50, 368-371
- Internships**, in art, 74; in business, 280; in criminology and criminal justice, 123; in education programs, 305, 324; in political science, 216; in psychology, 229; in public policy administration program, 358; at radio and television stations, 117; in sociology, 243, 247
- Inter-campus Exchange Program**, 33
- Inter-School studies**, 357-371
- Inter-University Consortium for Political and Social Research**, 51, 212, 357
- Introduction to UM-St. Louis**, 13-15
- Italian**, 152. Foreign Languages
- Japanese**, 152. *See* Foreign Languages
- Journalism courses.** *See* Preprofessional Programs, Interdisciplinary Studies, *and also* English Composition
- Journalism**, School of, (UMC), 267
- Junior college students.** *See* Transfer Students
- Junior Science, Engineering, and Humanities Symposium, The**, 52
- KWMU radio**, (FM91), 52
- Language and grammar.** *See* Certificate in Writing and *also* English, Language courses
- Latin**, 152. *See* Foreign Languages
- Latin American Studies Certificate**, 50, 369
- Latin honors at graduation**, 26
- Law School preparation**, 268
- Learning Disabilities, M.Ed.**, program emphasis, 308, 311. *See also* Special Education
- Leave of absence** in graduate study, 34
- Legal Studies**, minor in, 257
- Libraries, UM-St. Louis**, 43
- Library Science**, 4
- Lindbergh, UM-St. Louis, extension programs**, 56
- Literature in Translation courses.** *See* Foreign Languages

Index

- Loans**, graduate study, 40; undergraduate study, 29
- M.A., MAcc, MBA, M.Ed., MPPA, or M.S. degrees.**
See Master of: individual name of degree
- Major, change of**, 25
- Management courses**, graduate level. See Business Administration, Management (400-level)
- Map**, campus, 6-7
- Marketing courses**, graduate level. See Business Administration, Marketing (400-level)
- Mark Twain Building**, 15, 47
- Master of Accounting**, 282-83
- Master of Arts**, degrees offered (list), 59; in criminology and criminal justice, 124; in economics, 132; in English, 143; in history, 165-166; in mathematics, 177; in political science, 215; in psychology, 228; in sociology, 247. See also Master's Degree, general information
- Master of Business Administration degree**, 31, 280-281. See also Master's Degree, general information
- Master of Education degree**, 304; in counseling, 310-311; in educational administration, 323-324; in elementary education, 334; 336-337; in secondary education, 321, 322-323; special education, 311. See also Master's Degree, general information
- Master of Public Policy Administration degree**, 212, 284, 357-359. See also Master's Degree, general information
- Master of Science**, degrees offered (list), 60; in biology, 88, 88-89; in chemistry, 108-109; in engineering, 420; in gerontology, 363; in management information systems, 281-282; in nursing, 377; in physics, 204; in physiological optics, 391-393. See also Master's Degree, general information
- Master's degree**, general information, 36
- Math**, tutoring in, 53
- Mathematical skills requirement**, 22
- Mathematics and Computer Science**, Department of, 173-177; career outlook, 177; faculty, 173; graduate studies, 177; minor in, 176; undergraduate studies, 173-176
- Mathematics and Science Education Center**, 52
- Matriculating students**, Graduate School, 32
- Medical school preparation**, 268
- Mental Retardation**, M.Ed. program emphasis, 308, 311. See also Special Education
- Metropolitan Studies**, Center for, 53, 357
- Middle School**, teacher certification, 334, 335-336
- Military Science.** See ROTC
- Military service**, credit for, 17
- Minority students**, 44
- Minors**, 65; in American studies, 255; in anthropology, 66-67; in art history, 75; in athletic coaching, 344; in biology, 89; in black studies, 259; in business administration (two areas), 279-280, 353; in chemistry, 107; in classical studies, 256; in communication (four areas), 117; in computer science, 177; in criminology and criminal justice, 124; in economics, 132; in English, 142; in French, 154; in German, 155; in history, 165; in jazz studies, 187; in legal studies, 257; in mathematics, 176; in music and music education, 187; in philosophy, 197; in physics, 203-204; in political science (seven areas), 214-215; in psychology, 228; in public affairs journalism, 257; in social work, 239; in sociology, 246; in Spanish, 155; in statistics, 176; in studio art, 76; in urban studies, 257
- Mission Statement**, 13-14
- Molecular Electronics**, Center for, 50
- Music**, Department of, 184-188 career outlook, 188; faculty, 184; minors in, 187; undergraduate studies, 184-186
- Non-degree-credit courses**, 22
- Nonmatriculating students**, graduate study, 32
- Nonresident students**, undergraduate study, 17, 27; graduate study, 38
- Nontraditional study**, 352
- North Central Association**, 5
- Nursing, College of**, 15, 21, 56, 375-378; admission to, 376; B.S.N. degree requirements, 376; faculty, 375; graduate studies, 377-378
- Office of Computing**, 51, 212, 357
- Office of Research**, 51
- Optometry, School of**, 14, 56, 387-393; admission to, 389; career outlook, 392-393; college-level prerequisite courses, 391; faculty, 387; fees, 390; financial aid, 390; graduate program in physiological optic, 391
- Organizations**, Student, 15, 44; in Evening College, 351; policies on, 435-436
- Out-of-state students.** See Nonresident Students
- Parking fees**, 28, 39
- Pass-Fail option.** See Satisfactory/Unsatisfactory option, 24
- Penney, J.C.**, Building, 56
- Petitioning, for dropping/adding courses**, 25, 34
- Ph.D. programs.** See Doctoral degrees
- Philosophy**, Department of, 196-197; faculty, 196; minor in, 197; undergraduate studies, 196-197

Index

- Photographic Studies**, certificate in, 260-261. *See* Art and Art History, Educational Technology (ED TEC), and Interdisciplinary
- Physical Education**, Department of, 343-345; career outlook, 345; undergraduate studies, 343-345; M.Ed. with physical education teaching field, 345
- Physics and Astronomy**, Department of, 202-204; career outlook, 204; faculty, 202; graduate studies, 204; undergraduate studies, 202-203
- Pierre Laclède Honors College**, 14, 21, 26, 403-404
- Placement Office**, 46
- Plagiarism**. *See* Academic Dishonesty
- Police administration**. *See* Criminology and Criminal Justice
- Police, Campus**, 9, 49
- Political research**, 212
- Political Science**, Department of, 211-216; career outlook, 216; faculty 211; graduate studies, 215-216; minors in, 214-215; undergraduate studies, 212-215
- Portuguese**, 152. *See* Foreign Languages
- Post-doctoral study**, 32, 33
- Pre-Architecture program**, 76, 266
- Pre-Engineering program**, 266
- Prejournalism program**, 267
- Prelaw program**, 268, with philosophy major, 197
- Premedical sciences program**, 268
- Pre-Optometry**, 88, 268
- Prepharmacy program**, 269
- Preprofessional programs**, 266-269
- Preregistration**, 20, 34
- Prerequisites**, for a course, 24
- Probability and statistics courses**. *See* Mathematics and Computer Science
- Probation, suspension, and dismissal**, 25, 35
- Proficiency examinations**, in basic skills, 22; in foreign language, 64
- Programs at other universities**, 427-428
- Provisional students**, 32
- Psychology**, Department of, 226-229; career outlook, 229; faculty, 226; graduate studies, 228; minor in, 228; undergraduate studies, 227-228
- Psychology Office**, undergraduate, 227
- Public Affairs Journalism**, minor in 257
- Public Administration degrees**. *See* Bachelor of Science in Public Administration and Public Policy Administration degree program
- Public Policy Administration**, degree program, 133, 214-215, 286, 359-361
- Public Policy Research Centers**, 53; James T. Bush, Sr., Center, 53; Center for Metropolitan Studies, 53; Public Policy Extension/Survey and Applied Research, 53
- Radio Station KWMU**, 52
- Radio/Television Studies**. *See* Communication
- Reading**, M.Ed. program emphasis, 322, 336-337
- Recreational facilities**, 47
- Refund of fees**, 28-29, 39; for registration cancellation, 20
- Registration undergraduate**, 20, late registration 28; graduate 33-34; late registration, 39
- Religions studies**, certificate, 261
- Repeating courses**, 24
- Research assistantships**, 40; in chemistry, 108; in political science, 215
- Research**, Office of, 51
- Reserve Officer Training Corps (ROTC)**, 22, 30-31, 421-422
- Residence requirement for degree**, 23, 36-37
- Residency Requirements**, Arts and Sciences, 64
- Restricted students in graduate study**, 32
- Russian**, 152. *See also* Foreign Languages
- Safety glasses**, 5
- Satisfactory/Unsatisfactory option**, 24
- Scholarships**, 30-31, 40, 152, 403, 421, 423
- School administration**, 301; master's degree program, 323-324. *See also* Educational Studies
- Science and Technology**, Center for, 50, 55
- Scientific Language Option**, 64. *See also* German or Russian
- Secondary Education (SEC ED)**, master's degree program 301, 319-323. *See also* Educational Studies
- Section change**, 25
- Senate**, 48
- Smoke-Free Campus Policy**, 47
- Social sciences requirement**. *See* American history and government
- Social Work**, Department of, 238-239 career outlook, 239; faculty, 238; in Evening College, 351; minor in, 239; undergraduate studies, 238
- Sociology**, Department of, 243-247; career outlook, 247; faculty, 243; graduate studies, 246-257; minor in, 246; undergraduate studies, 244-246
- Spanish**, degree program in, 154, 154-155
- Special Education (SPC ED)**, 301; degree programs 308-311; career outlook, 311

Index

- Sports**, 47. *See also* Physical Education, Department of
- Statistics, Probability and**, 175. *See also* Mathematics and Computer Science
- Student Activities**, fee for, 27, 39; Office of, 44
- Student Affairs**, Office of, 45-47
- Student Association**, 48
- Student Conduct**, Code of, 431
- Student Court**, 48
- Student Disciplinary Matters**, 432-436
- Student Employment Program**, 46
- Student Facilities**, fee for, 27, 39
- Student government**, 48
- Student Health Services**, 46
- Student Organization Policy**, 435-436
- Student records**, privacy of. *See* Confidentiality Policy
- Student teaching**, 302-303. *See also* Education, School of
- Studio art**, minor in, 76; regulations of College of Arts and Sciences, 64
- Study Abroad Programs**, 50, 152, 427
- Teacher certification**, 303; in biology, 86; in chemistry, 107; in communication, 117; in English, 142; in foreign languages, 153; in history, 165; in mathematics, 174; in music education, 185-187; in physics, 203; in political science, 211; in sociology, 245
- Teacher education**, 21, 55; admission to, 301-303; resource center, 305. *See also* Education, School of; Teacher certification
- Teaching assistantships**, graduate, 40; in biology, 84; in chemistry, 108; in English, 143; in mathematics, 177; in political science, 215. *See also* Research assistantships
- Test of English as a Foreign Language (TOEFL)**, 19, 32
- The Junior Science, Engineering, and Humanities Symposium**, 52
- Thesis**, in master's program, 36. *See also* Dissertation
- Time limitation in graduate degree programs**, master's degree, 36; doctoral degree, 37
- Transcripts**, UM-St. Louis, 26; high school transcript, 16; transfer students, 18; foreign students, 19
- Transfer students**, within University of Missouri system, 19; scholarships for, 30
- Trauma Studies**, certificate program, 263-264
- Trial admission**, 17
- Tuition**. *See* Fees
- Tutorial lab and service**, 54
- UM-St. Louis Lindbergh**, 56
- UM-Rolla Engineering Education Center**, 54, 420
- UM-St. Louis/Washington University Joint Undergraduate Engineering Program**, 409-411
- Unclassified students**, 33
- Undergraduate Studies in Education**, Office of, 303
- Undergraduate study**, 16-31; academic policy, 23-24; admission to, 16-19; degrees offered (list), 59; enrollment and advising, 20-21; fees and financial assistance, 27-31; in College of Arts and Sciences, 63
- University Center**, 44; funding for, 27
- University Child Development Center**, 52, 305
- University Eye Center**, 53
- University Scholars Program**, 29
- University Senate**, 48
- Urban Information Center**, 52
- Urban problems**, Metropolitan Studies, Center for, 53. *See also* Political Science, Department of; Social Work, Department of; Sociology, Department of
- Urban Studies**, minor in, 257
- Veteran Affairs**, Office of, 17
- Veterans**, 17, 27, 351
- Video Instructional Program**, 429-430
- Visiting students**, 19
- Vocal instruction**. *See* Music, Department of
- Western Historical Manuscript Collection**, 43
- Who's Who Among Students in American Universities and Colleges**, 26
- Withdrawal from the University**, 25
- Women's Center**, 45
- Women's and gender studies**, graduate and undergraduate, certificate programs, 261-263
- Writing certificate program**, 142, 263
- Writing lab**, 53
- Y grade**, 23



